The Effect of Coach-Athlete Relationship upon State-Anxiety Levels of the Athletes

Mevlüt GÖNEN[1], Mehmet GÜÇLÜ[2]

[1]Gazi University, Institute of Health Sciences Department Physical Education and Sport, Ankara, TURKEY
[2]Bartın University, School of Physical Education and Sports, Bartın, TURKEY
Email: mevmt1@gmail.com, mguclun@gmail.com

Abstract

In the sports which competitive, success and performance are prioritized, new researches are constantly being carried out to improve the performance of the athletes and to increase their success. These researches emphasize the importance of psychological factors in sports. The anxiety that each athlete may experience for various reasons may affect the performance of the athlete as one of these psychological factors. However, the coach-athlete relationship is another factor that can affect the performance of the athletes. This study aims to determine the effect of coach-athlete relationship on the state anxiety levels of athletes. İn individual sports taekwondo branch, 107 female and 136 male of the total 243 athletes, and 177 male athletes in team sports American football branch total 420 athletes were voluntarily participated in the study. This research was planned as quantitative research and the survey method was used. İn this study, coach-athlete relationship and Spielberger state-trait anxiety inventories were applied. The collected data were transferred to SPSS package program and Mann Whitney U test, Spearman rank difference correlation coefficient and multiple regression analysis were applied. According to the results of the study, it was determined that the relationship between coach and athlete was related to state anxiety and there was in negative direction correlation between the coach-athlete relationship and the anxiety levels of the athletes. Accordingly, as the level of relationship between the coach and the athlete increases, the anxiety levels of athletes decrease.

Keywords: Coach-athlete relationship, anxiety, state anxiety

Introduction

A human being, which is a social being, needs other people's presence and assistance to meet and reach his/her needs in life. Such a need creates the communication between individuals and thus mutual relationships necessary. People's knowledge of each other, people's knowledge of the needs of each other and people knowledge of requirements of each other and people's mutual effort to meet the requirements and needs of each other materialized thorough positive social relationships established between them. The coach-athlete relationship is at the center of human relations in sport environments. The coach-athlete relationship forms the basis for successful coaching. The aim and focus of the coach-athlete relationship is to improve the physical, social and psychological abilities of the athletes (Jowett and Carpenter, 2015).

Coaches are persons who play an important role in the development of sports, who are responsible for the training and improving of athletes who form the basic building blocks of sports (Sevim, Tuncel, Erol and Sunay, 2001: 16). The coaches who have a direct relationship with the athletes during the long training period strive to improve the mental, emotional and social capacities of the athletes and allow them to reach their highest possible performance levels (Sevim, 2002: 329; Konter, 1996: 102). Jowett and Cockerill (2003), states that positive relationships which will be established between coaches and athletes whose main components will be mutual trust, respect, faith, support, cooperation, communication, (Jowett and Poczwardowski, 2007) is important for both the psycho-social and physical development of athletes. Jowett and Cockerill (2002) made the definition of coach-athlete relationship as social state where the feelings, thoughts and behaviors of the coach and the athlete was connected to each other with the link of causality. The coach-athlete relationship is one of the factors affecting the motivation of the athletes (Jowett, 2017) and the athletes' performance which are shaped by the personal feelings, thoughts and behaviors between the coach and the athlete (Mageau and Vallerand, 2003). In addition, the coach is also important in terms of being a source of help in dealing with the emotional crises that the athlete will experience in difficult situations such as injury and disqualification from important competitions (Jowett and Cockerill, 2002; Jowett, 2005).

Jowett and Ntoumanis, (2004), developed the 3 Cs conceptual model that measures the quality of the relationship between coach and athlete with the dimensions of closeness, commitment and complementarity. According to the model, the closeness defines the emotional aspect of the relationship. It is an expression of positive emotions such as trust, respect and appreciation, and is a sign of positive interpersonal and emotional relationship. Commitment involves the cognitive aspect of the relationship between the coach and the athlete. It reflects the intention to continue the sportive partnership mutually. The complementarity represents the level of interaction and cooperation between the coach and the athlete. It reflects the motivation of commitment to interpersonal behavior and includes behavioral characteristics such as being sensitive, friendly, relaxed and willing (Jowett, 2005).

In addition to the coach-athlete relationship, another psychological element that affects the performance of athletes is anxiety. Anxiety is a feeling that is accepted as normal in low levels when it is experienced in the daily life of every human being. Spielberger (1972) points out two types of anxiety which are trait and state anxiety respectively. Trait anxiety is the tendency of the individual to experience anxiety (Öner and Le Compte, 1985). In such situation, the person acts as if there is a threat at all times and the situation of being anxious becomes a personality trait in the individual. State anxiety is the real and temporary concern experienced in presence or proximity of any danger (Spielberger, 1972). This situation is

disappeared as a result of the disappearance of danger or threat (Öner and Le Compte; 1985, Özgüven, 1999: 340).

Spielberg explained the characteristics of state anxiety as follows:

● State anxiety arises when an individual perceives, and interprets the situation which he/she experiences as dangerous or threatening.

● This situation creates an unpleasant, undesirable affective situation.

● This situation is understandable, noticeable, sensible and perceptible.

● In this process, consciousness is open, alert and aware. In the case of state anxiety, physical reactions such as sweating, tremors, flushing and yellowing are occurred as a result of impulses formed in the nervous system. This situation is an indication of the discomfort, restlessness and tension feelings experienced by the individual (Köknel, 1998: 122).

Martens et al. emphasized three dimensions of state competition anxiety. The first one is the physical state anxiety; expresses the physiological and emotional aspect of anxiety. It causes some physiological symptoms such as increased heart rate, shortness of breath, muscle tension caused by direct stimulation. Cognitive state anxiety; is a mental component of anxiety and results from negative expectations about success or negative self-assessment. Self Confidence is the component that includes the change in self-confidence of the athlete due to the change in the state of physical and cognitive anxiety (Martens, Vealey and Burton, 1990).

Anxiety level can affect athletic performance. A high level of anxiety is required to achieve high performance. Above or below this level may adversely affect the performance (Başer, 1998: 263). Athletes may experience different levels of anxiety before and during the competition. For this reason, many athletes may not be able recreate the performance they had provided in training at competitions where a higher level of stress and pressure is present. One of the reasons for the occurrence of this situation is the increment of the level of anxiety of the athlete (Baser, 1986; Beck and Emery, 2006; Tavacioglu, 1999).

One of the most important factors to help the athlete to cope with the high level of anxiety experienced by the athlete is the coach. Coach is the person who contributes to physical, mental, emotional and social development of athletes. The coach recognizes his/her athlete and tries to ensure that he/she reaches the appropriate anxiety level before the competition (Konter, 1996: 102). In doing so, he tries to develop a positive and high-level coach-athlete relationship with the athletes, thus helping the athletes to reduce their anxiety level (Baker, Cote and Hawes, 2000).

Coaching styles, which can develop positive relationships with athletes and increase cooperation and team compliance, significantly reduce anxiety levels in athletes (Smith, Smoll and Barnett 1995). It is thought that knowledge of the effect of the positive relationship between the coach and the athlete in reducing the state anxiety level in athletes may aid the development of more successful coaching methods.

The aim of this study is to investigate the effect of coach-athlete relationship on state anxiety levels of athletes. The following sub-problems have been utilized in order to provide detailed findings with regard to this purpose.

1. Does the relationship level scores of the athletes differ with gender?

2. Do the athletes' level of relationship with their coaches differ significantly according to whether the sport is individual or team sport?

3. Are there any significant differences between the state anxiety level scores of the athletes according to their gender?

4. Does the state anxiety level of the athletes differ significantly according to whether the sport is individual or team sport?

5. Is there a significant relationship between the relationship level scores of the athletes' coaches and their state anxiety levels?

6. Does the coach-athlete relationship significantly predict the state anxiety level of the athletes?

Method

Research Universe and Sample

The research universe of this study is athletes that compete in American Football Super League of Universities in 2017-2018 academic year and athletes that participated Turkish University Students Taekwondo Championships held at Çanakkale province in the extent of academic activities of the academic year 2017-1-2018. The sample of the study consists of a total of 420 athletes from both sports branches, out of which the total number of athletes in the taekwondo were 136 males and 107 females and 177 all male American football players.

Data Collection Tools

Survey technique was used as data collection technique. Participants participated in the study before the competition was filled the coach-athlete relationship survey and Spielberger state-trait anxiety survey.

The Coach-Athlete Relationship Inventory CART-Q

"The Coach-Athlete Relationship Inventory" which was adapted in Turkish by Altintas, Kazak Cetinkalp and Asci (2012). was developed by Jowett and Ntoumanis (2004) There are two different forms of inventory which measure mutual relations as coach-sportsman and athlete-coach. In this research, the athletes-coach relationship form, in which the athletes scored their relationships with their coaches, was used. The 11-item form measures athletes-coach relationship in three sub-dimensions: closeness, commitment and complementarity. The items of the inventory are scored between 1 and 7 as strongly disagree and strongly agree. The internal consistency coefficients of the inventory are 0.90 in the closeness and commitment sub-dimensions, and 0.82 in the complementarity sub-dimension. In this study, the internal consistency values of the sub-dimensions of the inventory were found to be 0.89 in the closeness sub-dimension, 0.87 in the sub-dimension of commitment, and 0.74 in the complementarity sub-dimension.

Spielberger State-Trait Anxiety Inventory (STAI)

The inventory developed by Spielberger, Gorsuch, and Lushene (1970) was translated into Turkish by Öner and Le Compe (1976) and reliability studies were conducted. The inventory has two scales that measure anxiety as state and continuous. "Trait Anxiety Scale" refers to how the individual feels himself/herself in general, regardless of the circumstances of the current time. The "State Anxiety Scale" is intended to determine how individuals feel in a particular situation and under certain conditions. State anxiety scale of inventory was used in this study. In the State Anxiety Scale, there are a total of 20 expressions that are directly and

inverted. Reversed expressions are items (1, 2, 5, 8, 10, 11, 15, 16, 19 and 20). Scoring is calculated as the total score of direct and reversed expressions.

Scoring on a Likert-type scale consists of (1) no, (2) a little, (3) multiple, and (4) entirely options according to the severity of the feelings and behaviors experienced.

The coefficient of alpha correlation of the scale was between 0.94 and 0.96, the coefficient of item analysis was between 0.42 and 0.85, and the re-test reliability coefficients ranged from 0.26 to 0.68 (Öner, Le Compte, 1985). In this study, reliability coefficient of the scale was calculated as 0.89.

Analysis of Data

In the data analysis stage, it was concluded that the data were not normally distributed according to normality test and non-parametric analyzes were performed. Then, in order to determine whether there is a significant difference between the relationship level of athletes with their coaches according to the gender and the type of sports being performed individually or team sports, and whether the athletes' anxiety levels show a significant difference according to the gender and the type of sport that is performed is the individual or team sports Whitney U test was performed. Spearman correlation coefficient analysis was used to determine the relationship between athletes 'and their coaches and their anxiety levels, and multiple regression analysis was used to predict the effect of the coach-athlete relationship on athletes' anxiety levels.

Findings and Discussion

The results of the Mann-Whitney U test to determine the difference between the coach-athlete relationship according to gender are provided in Table 1.

Table 1. Mann Whitney U test results of coach-athlete relationship level according to gender

Closeness subscale	n	Average	U	*p*
Male	313	216,38	18585,000	,070
Female	107	193,31		
Adherence Sub scale	n	Average	U	*p*
Male	313	213,86	17796,000	,322
Female	107	200,68		
Sub scale	n	Average	U	*p*
Male	313	217,37	18895,000	,043
Female	107	190,41		

The Mann-Whitney U test was used to determine whether there was a significant difference between the coach and athlete relation scores of the athletes according to the gender, and while there was no significant difference in the closeness and commitment sub-dimension, on the other hand according to the closeness($U = 18585,0$; $p > 0.05$); adherence ($U = 17796.0$; $p> 0.05$) complementarity ($U = 18895,0$; $p < 0.05$) a statistically significant difference in favor of male athletes has been determined . According to aforementioned findings, it is understood that the relationship level of the men with their coaches is higher in the complementarity sub-dimension. In a study that examined the factors affecting the coach-athlete relationship conducted by Yücel (2010) on athletes performed wrestling, similar results were obtained with this research according to the differences in the sub-dimensions of the scales used in this study. In the study statistically differences among gender groups were found in coach-athlete relationship with respect to work in harmony, closeness and trust sub scales. It is found that female athletes are more compatible with their coaches than male athletes. Nevertheless, there was no significant difference in terms of mutual understanding and mutual communication subscale.

The results of the Mann Whitney U test to determine the difference between the level of relationship between the coach and the athletes according to the type of sports are provided in Table 2.

Table 2. Mann Whitney U test results regarding the coach-athlete relationship according to type of sport performed (individual, team sport)

Closeness				
Sub-dimension	n	Average	U	p
Taekwondo	243	212,22	21088,500	,717
American football	177	208,14		

Sub dimension	n	Average	U	p
Taekwondo	243	215,15	20376,500	,347
American Football	177	204,12		

Sub dimension	n	Average	U	*p*
Taekwondo	243	201,14	23781,000	,059
American Football	177	223,36		

As a result of the Mann-Whitney U test performed to determine whether the coach-athlete relationship level scores differed significantly according to the type of sport (individual, team sport), it was found that there were no statistically significant differences in the three sub-dimensions of the coach-athlete relationship inventory. Closeness sub-dimension ($U = 21088,500$; $p> 0.05$), commitment sub-dimension ($U = 20376,500$; $p> 0.05$), complementarity sub-dimension ($U = 23781,000$; $p> 0.05$). Sinnott (2015) concluded in his study that the type of sport (individual, team sport) did not have an effect on the level of coach-athlete relationship. It is thought that the difference between the results of our study and

aforementioned studies is aroused as result of difference between the methods used in the studies and the separate evaluation of the inventory of the coach-athlete relationship in this study in which the three sub-dimensions were evaluated separately.

The results of Mann Whitney U test to determine the difference between the state anxiety level mean scores of the athletes according to gender are provided in Table 3.

Table 3. Mann Whitney U test results of state anxiety levels of athletes according to gender

	Gender	n	Average rank	U	p
State	Male	107	220,77	15646,500	
Anxiety level	Female	313	206,99		0,310

In results obtained from Mann Whitney U test which was used to determine whether the state anxiety level scores of the athletes differed significantly according to gender, he found that there was no significant difference between the state anxiety level average scores of female and male athletes (U= 15646,500; p>0,05). Engür (2002) had reached a similar conclusion in his study under the title of "Effect of achievement motivation on state anxiety level in elite athletes" and stated that there was no statistical difference between female and male athletes in terms of the state anxiety average scores. Contrary to aforementioned findings in the study of Bayar Koruç (2009) it is reported that the pre-competition cognitive and bodily anxiety averages of young female athletes were higher than the young male athletes. Başaran, Taşkın, Sanioğlu and Taşkın (2009) found that the state anxiety levels of male athletes were higher than female athletes in their study of investigation of state and constant anxiety levels of athletes according to various parameters. Hacıcaferoğlu, Seçer and Hacıcaferoğlu (2015) found that female athletes' pre-competition state anxiety levels were higher than male athletes in their study on the state anxiety levels of athletes in the folk dances branch. It is thought that the sports branch has an effect on the differentiation of the state anxiety levels of the athletes according to gender. Bozkus et al. (2013) underlined that some of the studies found significant difference between anxiety levels and gender but some others found no significant differences.

The results of Mann Whitney U test conducted for the determination of whether the state anxiety level scores of the athletes differ according to the type of sports performed are shown in Table 4.

Table 4. Mann Whitney U test results of state anxiety levels of athletes according to the type of sport (individual sport, team sport)

	Type of sport	n	Average Rank.	U	p
State Anxiety level	Taekwondo	243	215,28	20344,000	0,344
	American Football	177	203,94		

According to the results of the Mann Whitney U test conducted among the independent groups in order to determine whether there is significant difference in state anxiety levels of athletes according to the type of sport (individual or team sports) it was found that there was no significant difference between the state anxiety levels of the athletes according to the type of sports performed (U= 20344,000;p>0,05). Contrary to our findings, in the study conducted by Civan, Arıcı, Görücü and Özdemir (2010) where state anxiety levels score averages of athletes participated in individual, team and racquet sports before, during and after competitions, a significant difference was found between the state anxiety scores averages of athletes and sport type. According to this result, while the group of individual sport athletes are the group with the highest mean anxiety score; the state anxiety scores of racquet sports and team sports athletes were lower than those of the individual sports group. In the study conducted by Engür (2002), which the state anxiety average scores of the athletes participated in team sports and individual sports were compared, it was concluded that the state anxiety average scores of the athletes participated in team sport were higher.

The results of the Spearman correlation coefficient analysis performed to determine the relationship between the state anxiety level scores of the athletes and the relationship level scores with their coaches are shown in Table 5.

Table 5. Correlation of relationship between coach-athlete relationship and state anxiety levels of athletes

	Closeness	Adherence	Complementarity	State Anxiety
Closeness	1			
Adherence	,879[**]	1		
Complementarity	,819[**]	,814[**]	1	
State Anxiety	-,632[**]	-,653[**]	-,621[**]	1

**p < 0.01

When Table 5 which provides the relationship between the coach-athlete relationship and the state anxiety levels of the athletes, the relationship between the state anxiety levels of the athletes and their coaches according to the sub-dimension of the coach-sportsmen inventory (r =-, 632), in the sub-dimension of engagement (r = -, 653), the complementarity sub-dimension (r = -, 621). According to the Spearman correlation coefficient analysis, there is a moderate and significant relationship between the mean scores of the state anxiety level of the athletes and the mean scores of the sub-dimensions of affinity, adherence and complementarity of the coach-athlete inventory. Accordingly, it can be seen that when the relationship levels of the athletes are increased, the state anxiety levels decrease.

The results of the multiple regression analysis of the scores of the coach-athlete relationship inventory for predicting the state anxiety level scores are shown in Table 6.

Table 6. The coach-athlete relationship's prediction of the state anxiety level in athletes.

	B	SH	β	t	p
Constant	78,725	2,736		28,776	,000
Closeness	,006	,194	,003	,033	,974
Adherence	-,885	,180	-,411	-4,915	,000
Complementarity	-,655	,168	-,271	-3,901	,000

R=,648 R²=,420 p=0,000 F=100,257

As a result of the multiple regression analysis conducted to predict the state anxiety level scores of the coach-athlete relation scores, and when the t-test results related to significance of relationship between the regression coefficients, it can be observed that athlete-coach relationship level inventory is a significant explanatory of the state anxiety level in the adherence and complementarity sub-dimensions. There was no significant relationship in the closeness sub-dimension. In line with these results, it can be seen that the coach-athlete relationship inventory explains %42 of the state anxiety level variance with two of the three sub-dimensions.

Conclusion

In this part of the study, where the effect of the coach-athlete relationship on the state anxiety levels of athletes were investigated, the sub-problems created in order to reach more detailed findings related to the explanation of the main problem were answered. While level of coach-athlete relationship with respect to gender does not show a statistically significant difference according to the subordinate dimension of the coach-athlete relationship inventory; a significant difference was found in favor of the male athletes in the sub-dimensions of the closeness and complementarity of the inventory. While no significant differences are observed in the level of coach athlete relationship, level in coach athlete relationship level according to the type of sport (individual, team sport), in the closeness and adherence sub-dimensions; on the other hand, in the sub-dimension of complementarity, a significant difference was found in favor of American football athletes.

There was no statistically significant difference between the state anxiety levels of the athletes and gender and the type of sports performed were found. There was a statistically significant middle level negative correlation between the coach-athlete relationship and the state anxiety levels of the athletes. There is no significant effect is observed in closeness sub dimension. It was determined that the adherence and complementarity sub-dimensions of the coach-athlete relationship inventory were significant predictors of the state anxiety level in the athletes. As a result of the research, similar findings are obtained with the research conducted by Baker, Cote and Hawes (2000) with the topic of "the relationship between coach behavior and sport anxiety" where they stated the positive and high level coach-athlete relationship have an

effective role in reducing the level of anxiety among athletes, on the other hand, the negative relations between the coach and the athlete increases the state anxiety levels of the athletes.

Recommendations

For athletic success and performance, athletes have psychological needs as well as physiological needs. Decreasing the state anxiety level of athletes before the competition and keep state anxiety level at the optimal level is one of this need. According to the results of this study, high level and positive coach-athlete relations are effective in reducing the state anxiety levels of athletes. In this respect, coaches are advised to consider the importance of the coach-athlete relationship in reducing the state anxiety levels of athletes. In order to develop a more positive and high level of coach-athlete relationship between the parties, the coaches should have more affirmative and positive relationships with the athletes within the framework of mutual respect, be more patient with the athletes and try to understand them better through empathy, especially in team sports, coaches are advised to consider there may be different state anxiety levels observed in every other athlete thus take into account the individual differences between athletes, to deal with each athlete separately if necessary, to motivate them by supporting athletes, to be more relevant and accessible to them. Athletes are also advised to try to build constructive relationships with their coaches within the framework of respect.

It is also recommended that this study is conducted with different sample groups and on professional athletes.

Conflict of Interest

The authors have not declared any conflicts of interest.

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