The relationship of positive and negative perfectionism with competitive state anxiety in adolescent handball players

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ABSTRACT

The present study aims to investigate the relationship of positive and negative perfectionism with competitive state anxiety in adolescent handball players in Khuzestan province in Iran. The study adopts a descriptive-correlational study and was carried out as a field study. The data was collected using a researcher-made personal data sheet, Positive and Negative Perfectionism Scale (PANPS) and Competitive State Anxiety Inventory-I (CSAI-1).The population of the study consisted of a number of eight junior handball teams in Khuzestan including 76 players. Cronbach Alpha formula, Pearson correlation coefficient and multiple regression were used to analyze the data. The level of significance was considered to be α=0.05 for all hypotheses. The results showed no significant negative correlation between positive perfectionism and competitive state anxiety and all its subscales. However, the results revealed a significant positive correlation between negative perfectionism and competitive state anxiety and all its subscales. The results of regression analysis showed that both positive and negative perfectionism may predict competitive state anxiety and all its subscales in adolescent handball players. Therefore, it is recommended that the factors contributing to negative perfectionism be controlled so that competitive state anxiety and all its subscales may decrease in the athletes. High level of competitive state anxiety adversely affects athletic performance. It is recommended that coping techniques be used to reduce anxiety.

Keywords: positive perfectionism, negative perfectionism, competitive state anxiety, handball
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INTRODUCTION

An investigation into human morale shows that people relish perfection and thus perfectionism is a characteristic of human [1]. Many a sports psychologist considers perfectionism as a characteristic of prominent athletes [2], as it is associated with competition at elite levels [3]. Besides, team officials typically set high standards of athletic performance and achievement. In psychology, the standards defined by the athletes or society are referred to as perfectionism [1]. Research has shown that perfectionism is a multifaceted construct consisting of normal and neurotic dimensions [4]. Normal perfectionists are flexible individuals who enjoy their efforts in reaching their goals even though their personal criteria are not met [5]. The latter, however, lack flexibility and do not find satisfaction from their efforts though they are acknowledged by others [4,5]. Negatively perfectionist athletes accept their failures, respond to mistakes, have to deal with more negative thoughts before competitions and experience higher levels of anxiety [6,7].

Competitive state anxiety comprises three dimensions including cognitive, somatic anxiety and self-confidence. The somatic dimension causes such physical responses as palpitations, shortened breathing, sweating hands and muscle stiffness [8]. The cognitive dimension is associated with negative expectations and cognitive anxieties over likely outcomes of failure. Self-confidence dimension refers to the individual's belief in the mastery over tasks and

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successful performance [9]. Handball is a sport that entails man-to-man involvement with opponents, quick recovery following a mistake, acknowledgement of failures, timely perception of the changing environment and mutual effects. Thus, players need a relaxed, prepared spirit to do the tasks so that the lack of such spirit may turn the table in favor of the opponent [10]. Research has shown a negative correlation of cognitive and somatic anxieties with athletic performance but a positive correlation between self-confidence and athletic performance [11]. In this regard, some researchers consider anxiety as a negative construct that hinders performance [9]. However, Clark (2010) contends that anxiety depends on how the individual perceives of situations and events because while a situation seems safe to one, it may sound threatening to another [12]. In view of this, some researchers believe that anxiety is a noxious emotional state the low levels of which are effective in contributing to success while the high levels are detrimental [13]. Research, however, has not provided a clear illustration of anxiety and its effects. Studies on the relationship between perfectionism and competitive state anxiety have provided little empirical evidence, though. Therefore, further studies are needed to shed light on the issue. In the present study, the researcher aims to investigate the relationship between perfectionism and competitive state anxiety and to eventually answer the questions: 'is there any significant relationship of positive and negative perfectionism with competitive state anxiety and its subscales?' and 'can the dimensions of perfectionism predict competitive state anxiety in adolescent handball players?' Answering these questions would help the athletes control their anxiety both before and during the competitions. Besides, understanding the favorable amounts of anxiety may help develop procedures to either increase or decrease anxiety so that athletes may reach a level of emotional balance. This may help athletes achieve personal and team success.

MATERIALS AND METHODS

The present study adopts a descriptive-correlational method and was conducted as a field study. The data was collected using a researcher-made personal data sheet, Positive and Negative Perfectionism Scale (PANPS) and Competitive State Anxiety Inventory-I (CSAI-1). The population of the study consisted of eight handball teams of adolescents in Khuzestan including 76 players. Cronbach Alpha formula, Pearson correlation coefficient and multiple regression were used to analyze the data. The level of significance was considered to be $\alpha=0.05$ for all hypotheses. The reliability of PANPS was calculated to range between 0.70 and 0.77. The reliability of CSAI-1 was shown to be 0.84. In this regard, either scale showed acceptable reliability indices.

RESULTS

The results of statistical analysis of the data are as follows:

1.There was not any significant negative correlation between positive perfectionism and competitive state anxiety in adolescent handball players(r=-0.02, P=0.891)(Table 1).

2.There was no significant correlation between positive perfectionism and the components of competitive state anxiety including somatic, cognitive anxiety and self-confidence in adolescent handball players (Table 1).

3. There was a significant positive correlation between negative perfectionism and competitive state anxiety in adolescent handball players (r=0.52, P=0.0001). In other words, with higher levels of negative perfectionism in adolescent handball players, they felt higher levels of competitive state anxiety (Table 1).

4. There was a significant positive correlation between negative perfectionism and the components of competitive state anxiety including somatic, cognitive anxiety and self-confidence in adolescent handball players (Table 1).

5. The results of regression analysis to examine the predictability of competitive state anxiety through positive and negative perfectionism in adolescent handball players produced a positive regression coefficient (F=14.73, P<0.0001). Negative perfectionism ($\beta=0.55$) could predict competitive state anxiety in a significant, positive manner. The value of coefficient of determination (R^2) shows that these factors could predict 29 percent of competitive state anxiety variance in adolescent handball players (Table 1).

6. The results of regression analysis to examine the predictability of somatic anxiety through positive and negative perfectionism showed a significant regression coefficient (F=4.55, P<0.014). Negative perfectionism ($\beta=0.34$) could predict somatic anxiety in adolescent handball players in a significant, positive manner. The value of coefficient of determination (R^2) shows that these factors could predict 11 percent of somatic anxiety variation in adolescent handball players (Table 2).

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7. The results of regression analysis to examine the predictability of cognitive anxiety through positive and negative perfectionism showed a significant regression coefficient (F=14.43, P<0.0001). Negative perfectionism (β=0.55) could predict cognitive anxiety in adolescent handball players in a significant, positive manner. The value of coefficient of determination (R^2) shows that these factors could predict 28 percent of cognitive anxiety variance in adolescent handball players (Table 2).

8. The results of regression analysis to examine the predictability of self-confidence through positive and negative perfectionism showed a significant regression coefficient (F=16.17, P<0.0001). Negative perfectionism (β=0.56) could predict self-confidence in adolescent handball players in a significant, positive manner. Besides, the value of coefficient of determination (R^2) shows that these factors could predict 30 percent of self-confidence variance in adolescent handball players (Table 2).

Table 1. Simple correlation coefficients of positive and negative perfectionism with competitive state anxiety in adolescent handball players

Predictive variable	Statistics Criterion variable	r	P	No.
Positive perfectionism	Competitive state anxiety	-0.02	0.891	
	Somatic anxiety	0.03	0.751	
	Cognitive anxiety	-0.02	0.883	
	Self-confidence	0.05	0.671	76
Negative perfectionism	Competitive state anxiety	0.52	0.0001	
	Somatic anxiety	0.33	0.0001	
	Cognitive anxiety	0.51	0.0001	
	Self-confidence	0.55	0.0001	

Table 2. Multiple regression coefficients of positive and negative perfectionism with competitive state anxiety in adolescent handball players using enter method

Method	Predictive variable	Statistical indices	R	R^2	F	P	β	t	P
Enter	Positive perfectionism	Competitive state anxiety	0.53	0.29	14.73	0.0001	-0.11	-1.12	0.264
	Negative perfectionism						0.55	5.42	0.0001
	Positive perfectionism	Somatic anxiety	0.33	0.11	4.55	0.014	-0.04	0.84	0.702
	Negative perfectionism						0.34	3.00	0.004
	Positive perfectionism	Cognitive anxiety	0.53	0.28	14.43	0.0001	-0.14	-1.43	0.154
	Negative perfectionism						0.55	5.37	0.0001
	Positive perfectionism	Self-confidence	0.55	0.30	16.17	0.0001	0.08	0.846	0.400
	Negative perfectionism						0.56	5.66	0.0001

DISCUSSION AND CONCLUSION

The present study set to investigate the relationship of positive and negative perfectionism with competitive state anxiety and its subscales including somatic, cognitive anxiety and self-confidence in adolescent handball players. The results showed that there was not any significant negative correlation between positive perfectionism and competitive state anxiety and its subscales in the participants. This is consistent with the findings of Pasha (2011) but inconsistent with the findings of Shaji et al. (2011), Bieling et al. (2003), Abdekhodaie et al. (2011) and Besharat (2011) [14, 15, 16, 17, 9]. Research has shown that the more important the competition, the higher the anxiety levels in the athletes will be so that they are vulnerable to higher anxiety [18]. It is also reported that speed, endurance and strength athletes show lower levels of anxiety, respectively. This may relate to sufficient recovery time in these athletes [19]. Moreover, since research has shown that team athletes have lower anxiety [8], it seems that adolescent handball competitions in Khuzestan did not maintain a high level of speed and importance; thus, they have provoked low levels of anxiety in the athletes.

The results showed a significant positive correlation between negative perfectionism and competitive state anxiety in adolescent handball players. This is consistent with the findings of Frost and Di Bartolo (2002), Gregersen and Horwitz (2002), Franz and Rice (2004) as cited by Ghafar Samar (2010), Accordino et al. (2008), Flett et al. (2009), Shirizadeh (2009), Besharat (2002), Ghafar Samar (2010) and Abdekhodaie et al. (2011) but inconsistent with the findings of Bieling et al. (2003) [20, 21, 22, 23, 24, 25, 26, 17, 16]. The interface between the present and previous findings may be in that it is not self-actualization but excellence that stimulates negative perfectionists because they have to reach a level of perfection in any situation or they may feel discontented. Lack of perfection exposes them to a sense of serious anxiety and guilt because they typically fail to achieve their goals and experience a sense of worthlessness. They, therefore, think that they are considered as such by others. They feel they have lost their validity so that they feel more anxiety [17]. Since handball players need to maintain a calm, relaxed mood, the lack of such mood may result in the opponent taking the advantage [10]. Thus, it is recommended that athletes try to

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change their relations with the environment, disregard the sources of anxiety, manage and regulate stressed-induced emotional states, pray and rely on God to balance their anxiety.

The results of regression analysis showed that negative perfectionism could predict competitive state anxiety in the adolescent handball players in a positive, significant manner. This is consistent with the findings of Hewitt and Flett (2002), Rice and Dellwo (2002), Shirizadeh (2009) and Abdekhodaie et al. (2011) [27,28,25, 17]. The factors that may provoke competitive state anxiety include poor health, fear of failure, lack of security, high stress, a sense of instability, reliance of individuals' personality on accurate task performance and preoccupation with chronic problems [29]. Negative perfectionists possess such traits as inflexibility, dissatisfaction with their performance, no tolerance for mistakes, criticalness and negative emotions induced by stress and anxiety. It seems that there is an overlap between the factors contributing to competitive state anxiety and the factors affecting negative perfectionism. Therefore, negative perfectionism may predict competitive state anxiety, or the latter may be prevented by controlling the factors contributing to the former. As most active handball players may make mistakes during training and competitions, this individual mistake may turn out to be a team mistake. Thus, the players should not expect perfect performance on the part of themselves and teammates. Players' concentration on a perfectionist preoccupation may result in their frustration and wrath, which often influences the individual, teammates and - when it comes to the end of a close competition – the goalkeeper. This may result in the team losing the game. It is, therefore, recommended that athletes use self-restructuring skills when they feel disappointed or show poor performance. Restructuring skills need to be learnt and developed in the training environment so that they may be used as positive conditioned reactions to mistakes, disappointment and poor performance.

The results of regression analysis revealed that negative perfectionism could predict somatic anxiety in the adolescent handball players in a significant, positive manner. The somatic dimension represents individuals' perception of physiological responses and negative stimulation the results of which appears as palpitation, shortened breathing, sweating hands and muscle stiffness. On the other hand, some vulnerable players lose their confidence when they approach competition challenges. One of the important dimensions of mental preparation is the ability to maintain composure and confidence. It is, therefore, recommended that athletes take enough rest the night before the competition because it may become a stressful night as the reality of competition looms. Athletes should not be alone for long hours because even a small injury may turn out in their mind to be a big problem, as the negative aspects tend to crystallize in the mind of athletes. Non-tiring group activities, talking to family members, friends, and teammates as well as watching happy scenes on TV, physical relaxation and reviewing tomorrow objectives are useful activities to pass the time the night before the competition. Besides, coaches or teammates should not imbue the athletes' minds with information loads that lead to tension and anxiety. On the competition day, athletes should have good perspiration during warm-up. They need to do stretching exercises completely. They need to feel that it is time for performance and take shots at regular game speeds. They need to understand that a good or bad warm-up does not indicate a good or bad game performance because athletes should have in-depth, valid confidence in their abilities but not a superficial understating that depends on a pre-competition warp-up. The athletes should not remain inactive during the interval between warm-up and the start of the game because this idle time may cool down their bodies and increase tension in them. A good warm-up can help relax athletes' bodies and prepare them for the competition. It is not regular with handball players to be completely relaxed and healthy, though. This is because handball players usually suffer from a tinge of muscle strain, a broken finger, a painful arm or sprained ankle so that they usually play with 75-80 percent of their capacities. Thus, physical conditions should not turn out to be a mental disorder and be used as an excuse for poor performance [10].

The results of regression analysis also revealed that negative perfectionism could predict cognitive anxiety in adolescent handball players in a significant, positive manner. Cognitive dimension is associated with negative expectations and cognitive concerns about oneself, situations and likely outcomes of failure. Still, the combination of individual and team performance in handball requires the players to have low levels of anxiety, great responsibility, selflessness, openness to failure, recovery after failure and resistance to mental pressures [10]. To develop these characteristics, athletes may need to use cognitive restructuring techniques such as goal-setting and mental imagery to reduce their pre-competition anxiety and improve their performance [30]. The athletes should avoid pressing their mind to review information or tasks the night before the game. They should not be presented with new information, or only little information should be provided. The coaches need to spread their composure and confidence to the team. On the day of competition, the most effective time to hold a technical meeting is about one or one hour and a half before the game is started because the athletes are approaching the competitive situation and have higher levels of excitement. In the last hour before the game, the coach encourages the players and makes the last inspections of equipment as well as physical and mental preparation so that composure, confidence, emotional preparation and endurance contribute to a strong start. The athletes are typically highly concentrated during the last hour. In fact, they may be over-stimulated or frustrated. The more orderly the team and coach's mental structure, the less the pre-competition stress will be. The athletes should not be involved in preparatory

issues before the competition, as this may distract them from final preparation and increase their stress. Every player needs to entertain himself or herself with an activity that contributes to their composure. Within the last hour before the game is started, the players need to think over individual and team goals, ponder over their tasks in defense and attack and practice them. They need to talk to their teammates about what will happen to them in the game and make predictions for likely situations [10].

The results of regression analysis also showed that negative perfectionism could predict self-confidence in adolescent handball players in a significant, positive manner. This is consistent with the findings of Goudas et al. (1998), Leunes and Nation (2002) [31,32]. Since movement in handball is continuous and instantaneous, the players need to achieve a certain level of safety against failure; otherwise, they may fail to maintain a good performance. Safety against failure is important as it may prevent excitement, anxiety and loss of confidence. Negative perfectionists lack flexibility and are always vulnerable to failure-induced fear and anxiety. They may see the environment as threatening and non-supportive. Besides, self-confidence refers to personal belief in task mastery and successful performance [9]. Thus, it seems that increases or decreases in negative perfectionism may help predict self-confidence because these two variables stand opposed to each other. Leunes and Nation (2002) reported that the athletes, who obtained higher scores of error-induced anxiety, showed higher anxiety and negative thought before the competition, lower self-confidence during the competition as well as lower concentration and negative reactions to mistakes [32]. All these factors may lead to individual and team failure. Goudas et al. (1998) reported that successful athletes had higher self-confidence that contributed to their success [31]. Flectcher and Hanton (2001) reported that non-elite athletes used relaxation techniques to reduce their anxiety to a controllable level, which helped them achieve higher self-confidence [30]. Golf players were reported to use mental imagery to reduce their excitement and negative emotions to improve their performance because mental imagery during a competition helps the athletes maintain their concentration and self-confidence [33]. In this regard, it is recommended that such techniques as mental imagery and relaxation be used, and negative perfectionism indices (such as criticalness by parents, officials and coaches) be reduced to help increase self-confidence in the athletes.

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