The impact of styles of coping with stress on sport achievement

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Abstract

This study examined the impact of coping with stress on sport achievement. Forty-eight student athletes (26 boys, 22 girls) were included in this study. All participants completed the Sport Stress Coping Styles Scale (SSCSS). The athletes’ coaches were asked to rate the Sport Achievement Scale (SAS) in order to measure students’ sport achievement. Approach coping style was negatively associated with sport achievement. Avoidant coping style was positively associated with sport achievement for male athletes but not female athletes. It can be concluded that both approach and avoidant coping styles will influence sport achievements.

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1. Introduction

Sports psychologists and professional athletes have started to evaluate the linkages between emotion and competitive sporting performance, and in particular how moderating and appropriately expressing the experience of emotions can facilitate performance (Stough, Clements, Wallish & Downey, 2009). Sport achievement and performance to a large extent is influenced by usual stressful factors, committing a mental or physical fault, bearing pain and inconvenience, seeing rival’s cheating or success, getting penalty from referee, or rebuking by trainer.

Coping has been defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Anshel & Si, 2008; Anshel, Sutarsob, 2007; Myers, 2010). The failure to cope effectively with acute stress during the sport contest may lead to undesirable changes in psycho-behavioral processes (Anshel, 1990; Anshel, & Si, 2008; Campen & Roberts, 2001; Gaureau, Blondish & Lapierre, 2002; Giacobbi & Weinberg, 2000). The area of coping with stress in sport has received increased attention by researchers in recent years (e.g., reviews of literature by Anshel, Kim, Kim, Chang, & Eom, 2001; Hoar, Kowalski, Gaureau, & Crocker, 2006; Krohne, Egloff, Varner, Burns, Weidner, & Ellis, 2000; Richards, 2004). A number of constructs have been identified in the coping literature. For example, the emotion-focused versus problem-focused coping paradigm has provided a framework for a large body of assessment and intervention studies (Bernard & Lindsey, 2004). Another conceptual framework in the coping style literature...
that has received increased attention in recent years is approach and avoidance coping style. (Anshel & Si, 2008; Bernard & Lindsey, 2004; McCrae, 1992; Roth & Cohen, 1986; Suls & Fletcher, 1985). Approach coping, referred to as sensitization, engagement, vigilance, attention, and monitoring, is typically defined as an orientation towards the stressful event, with the person's active attempts at resolving and managing the stressor. For example, an athlete with an approach coping style tends to respond to a "bad" call from the referee by questioning or arguing against the call, or perhaps seeking clarification or more information about the call (Anshel & Si, 2008). On the other hand, avoidance coping, also called desensitization, disengagement, repression, and blunting, is an orientation that results in the physical or psychological withdrawal from the source of threat. For example, using the "bad" call as the stressful event, an athlete using an avoidance coping style prefers to discount the importance of the incident, or ignore the call, altogether (Ashel & Si, 2008; Bernard & Lindsey, 2004; Endler & Parker, 1990; Krohen, 1993). In an early conceptual paper, Roth and Cohen (1986) provided guidelines for using the approach and avoidance coping framework, with implications for competitive sport. For example, avoidance coping is usually preferred following a "bad" call from the referee, in which the athlete is required to quickly address the next task at hand. Taking the time to argue the call when the game is in progress runs counter to optimal attentional focusing, especially given the low level of control the athlete can exert in response to the referee. However, an opponent's successful performance might warrant an approach coping style in which the athlete becomes better informed about his or her actions that explains the penalty, thereby preventing a reoccurrence of the problem. In another experiment of competitive table tennis players, Anshel and Anderson (2002) found that approach coping was accompanied by greater negative affect and poorer performance accuracy, as opposed to avoidance coping. These outcomes support Roth and Cohen's contention that avoidance coping is preferred when performing an "open" motor skill (i.e., performed in an unstable environment), such as table tennis. A meta-analysis (Suls & Fletcher, 1985) and review (Roth & Cohen, 1986) of studies with adult participants suggest that the efficacy of approach and avoidance coping is related to perceived controllability and duration of stress: For acute, uncontrollable stress (e.g., painful medical procedure), avoidance is more beneficial; while for enduring, controllable stress (e.g., chronic illness), approach is more advantageous.

Carpenter (1992) believes that avoidant behaviors in case of sever stresses, like what happens in sport events, are more effective. Krohen and Hindle (1988), after examination the athletes coping style in ping-pong matches, concluded avoidant coping style correlated with less anxiety and more achievement and approach coping style correlated with more anxiety. They argue that sport situations in which urgent decisions are necessary, avoidant coping techniques secures the athletes against interfering acts and thoughts. On the other hand, if the athletes attention is intruded by internal or external events (features of approach coping), his or her skills relating to technique and tactic are influenced. Anshel, Williams and Hodege (1997) also found similar results in approach and avoidant coping in athletes who were teenager and university students.

Despite the importance of coping style with stress in sport, particularly because of direct influence on athlete performance achievement, there are few studies in this field and the findings are very primitive. The aim of this research is to examine the impact of coping style on sport achievement. With regard to the limitations of findings in this field this study an exploratory one and in is search of the way that approach and avoidant coping styles on sport achievement in a sample composed of students of different sport field, without suggesting a hypothesis.

2. Method

2.1. Participants

The sampling population of this study was students from the faculty of Physical Education and Sport Sciences, the University of Tehran. Forty-eight student athletes (26 males, 22 females) were choosed randomly. The mean age of the sample was 22.18 years (SD=2.59); the mean age of male athletes was 23.64 (SD=2.80), and for female athletes it was 20.68 years (SD=1.17). Frequency and percentage of each sports field was as follows: track and field 13(27.1%), football 7(14.61%), public sports 5(10.4%), swimming 3(6.3%), water polo 3(6.3%), and wrestling, contact sports, basketball, boxing, gymnastic, and handball each 2 (4.2%) and volleyball, footstall, taekwondo, karate and wosoaw each 1(2.1%).

2.2. Measure

Sport Stress Coping Styles Scale (SSCSS)- The SSCSS (Besharat, 2007) is a 50-item questionnaire that assesses the styles of coping with stress on sport in two main dimensions, namely, "approach coping style" and "avoidant coping style" in Likert scale (from absolutely incorrect =1 to absolutely correct=5). Each of the main
dimensions of questionnaire studies the styles of coping with stress on sport in terms of two sub-scales of "task-focused coping" and "emotion-focused coping" in seven arenas: "committing fouls"; "coach's chiding during the match"; "experiencing sever injury or pain during match"; "receiving card (penalty) or a bad referee during the match"; "observing opponent's good performance during the match"; "bad climate, incompetent field, or fan's reaction during the match". In the primary validation of Persian form of the scale (Besharat, 2007), in a forty-people sample of athletes, cronbach alfa for questions of each of four sub-scales of "task-focused approach", "emotion-focused approach", "task-focused avoidance" and "emotion-focused avoidance" was 0.91, 0.89, 0.92, 0.90 respectively that is a sign of high internal consistency of the scale. Correlation coefficients of subject's scores was r=0.87 in a four-week interval that is assign of good test-retest reliability of the scale. At the present study, due to little sample, subject's coping styles are assessed in two main dimensions of "approach" and "avoidance" and the score of each subject are from 25 to 125.

**Sport Achievement Scale (SAS)**- The SAS (Besharat, Abbasi, & Shojaeddin, 2002) is a 16-item questionnaire that assesses the subject's sport achievement in Likert scale (from very little=1 to very much=5). In a sample of 157 athletes, Cronbach alfa for items of SAS in terms of scores given by coaches and referees was 0.97 and 0.98 respectively and for the whole sample was 0.97 that is a sign of high internal consistency of the scale. The result of content validity of SAS according to football and wrestling coaches and referees view showed that Kendall's accordance coefficient in terms of coaches' view (0.54) and referees' (0.44) is significant at the level of p<0.001.

2.3. Procedure

Receiving necessary explanations and becoming interested to cooperate participants were asked to complete the Inventory of Coping Style in Sport (ICSS). At the next stage, the athletes’ coaches, becoming aware of the aim of the study, were asked to complete the Sport Achievement Scale (SAS) in order to measure subjects' sport achievement.

3. Result

Table 1 shows central indexes of subjects on scores of: approach" and "avoidance" and also "sport achievement.

### Table 1. Means and Standard deviation of approach, avoidance coping style and sport achievement of athletes

<table>
<thead>
<tr>
<th>Groups</th>
<th>Approach coping style</th>
<th>Avoidant coping style</th>
<th>Sport achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Boy's athletes</td>
<td>87.96</td>
<td>11.00</td>
<td>93.84</td>
</tr>
<tr>
<td>Girl's athletes</td>
<td>88.90</td>
<td>8.04</td>
<td>87.22</td>
</tr>
<tr>
<td>Total</td>
<td>88.25</td>
<td>9.68</td>
<td>90.81</td>
</tr>
</tbody>
</table>

For data analysis and finding the impact of coping styles on sport achievement, namely for determining the percentage of sport achievement variance defined by coping styles, Pearson correlation coefficient suggested that there is a negative significant correlation between subjects' score of approach coping style and sport achievement (r =0.73, p =0.001) and a positive significant correlation between their score of avoidance coping style and sport achievement (r =0.70, p =0.001). When correlation coefficient between for mentioned variables was calculated separately for male and female, the results showed that, in female athletes, there is a negative significant correlation between approach coping style and sport achievement (r =0.57, p =0.005), while there is no significant correlation their avoidant coping style and sport achievement (r =0.38, p =0.076); in male athletes there was a significant correlation between both coping styles and sport achievement (approach coping style: r=0.81, p=0.001; avoidant coping style: r =0.87, p =0.001).
Table 2. Correlation coefficients between scor’s girl and boy athletes in the approach and avoidant coping style

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Boy’s approach coping style</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Boy’s avoidant coping style</td>
<td>-0.76*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Boy’s sport achievement</td>
<td>-0.81*</td>
<td>0.87*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Girl’s approach coping style</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Girl’s avoidant coping style</td>
<td>-0.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Girl’s sport achievement</td>
<td>-0.57*</td>
<td>0.38</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

As a result, regression analysis was done for male and female athletes separately. This analysis’s regarded avoidant and approach coping style as predictive variables and sport achievement as criterion variable. According these results, observed $f$ is significant ($p<0.001$) and 80% variance related to sport achievement is defined through avoidant and approach coping style ($R^2=0.08$). Regression coefficients of each predictive variable suggest that avoidant and approach coping style can significantly define variance of sport achievement of male pathless. Given to statistics $t$ coefficients of the impact of approach coping style ($\beta=5.24$) show that these two variables can predict change of sport achievement with confidence of 95% and 99% respectively; namely, approach coping style decreases and avoidant coping style increases the possibility of sport achievement.

4. Discussion

The results suggested that there is a negative significant correlation between approach coping style of athletes, both male and female, and sport achievement; in other words, using approach coping style has a negative impact and reduces the athletes’ chance of success. This finding that in accordance with previous studies results (Anshel, 1990) are defined in terms of some probabilities.

Approach coping style, involves athletes directly with the stressing agent (opponent, coach, referee…). First, this involvement in the stressing situation of the match, the situation on which the athlete is motivated both mentally and physically, wastes some part of mental and physical power of the athlete. Sparing energy to this involvement may decrease the sufficient energy needed for continuing an efficient match and at the end increase the possibility of unsuccessful or failure. Second, involvement in stressing situation can make the athlete vexatious and solicitous, and this stress in turn declines the power of the athlete and reduces his/her accuracy and delicacy and pave the ground for unsuccessful or failure. Third, fore mentioned situation as a mental conflict impacts the athlete's ability of concentration and with keeping phrenetic and precipitant behavior pave the ground for his/her unsuccessful or failure. Forth, in all four mentioned situations the source of stress (opponent, referee, coach…) encountering athlete's approach coping style usually insists on his/her opinion, behavior and standpoint and as e result the athlete's approach coping style leads to a bilateral coping of athlete-opponent, athlete-referee, and athlete-coach. This conflict in turn is harmful to the athlete and increases his/her possibility of unsuccessful or failure. And finally, athlete's conflict with sources of stress blocks the way of utilization of potential positive and favorable facilities such as coach's guidance and viewpoints, aid and reasonable behavior of the referee, opponent's disappointment and so on, for the rest of the match and do not let the athlete to use these facilities for the match result and sport achievement.

Results suggested that there is a significant positive correlation between male athletes’ avoidant coping style and sport achievement. But in the case of female athletes there was no significant correlation between avoidant coping style and sport achievement. This finding that in the case of males is in accordance with previous studies results (Anshel & Williams, 1997; Carpenter, 1992; Endler, 1990; Krohen, 1993; Krohnen & Hindle, 1988) is defined in some different ways. Avoidant coping style, that its main characteristic is eluding from stressing agent by ignoring and neglecting the problem, creating psychological distance, asking others, and keeping normal sport activities, pave the ground for athlete's success in different forms. First, instead of conflicting with the source of stress of and wasting some part of mental and physical power for solving the problem through approach coping style, by ignoring and neglecting the matter devotes all his power to the rest of the match and in this way increases his/her chance of success. Second, through avoidant coping style the athlete create a distance between himself/herself and the source of stress and instead of becoming stressed, with more concentration and relief increases the chance of his/her success. Third, through avoidant coping style the athlete set apart himself/herself from the damaging equation of
athlete — the source of stress (opponent, referee, coach, …) and by calming the atmosphere of the match uses his/her abilities for a better result and achievement. And finally, in forementioned situation, the athlete can better use positive and favorable potential facilities, namely, using guidance and opinions of coach, aid and reasonable behavior of referee, and also opponent's disappointment, for victory and success.

The different correlation coefficient between avoidant coping style and sport achievement in male and female athletes regarding two groups' scores on styles of coping with stress on sport can be justified in this way that female athletes comparing to male ones, have a more moderate behavior in coping with sources of sport stress, especially in avoidant coping style. In other words, higher correlation coefficient between avoidant coping style and sport achievement in males (r = 0.87) by comparison to females' (r = 0.38), suggests that female athletes behave more moderately than male ones and in stressing situation utilize less decisive avoidant styles. This moderate coping in the case of avoidant coping, that has a positive and direct effect on sport achievement, can somehow justifies the reduction of sport achievement in females comparing to males.

Due to exploratory and unfamiliar nature of the study, there are many variables and dimensions that are beyond the scope of this study and their assessment on upcoming studies will depict the kind of relation between coping styles and sport achievement more clearly. Some of that dimensions and variables are as follows: the ability of controlling the situation; clarity/unclearity of the source of stress; durability of results; sport field and the role of athlete’s gender. The limitation of sampling population and the kind of study brings some limitations on generalizability of findings, interpretations and etiology of variables. The validation and normalization of Persian form of coping styles scales on sport is another limitation.

References


