The mediation effects of self-confidence and sport self-efficacy on the relationship between dimensions of anger and anger control with sport performance

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Abstract

This study examined mediation effects of self-confidence and sport self-efficacy on the relationship between dimensions of anger and anger control with sport performance in a sample of Iranian athletes. A total of 246 volunteer athletes (149 males, 97 females) were included in this study. All participants completed Tehran Multidimensional Anger Scale (TMAS) and Sport Self-Efficacy Scale (SSES). To measure the athletes' sport performance, their coaches were asked to complete the Sport Achievement Scale (SAS). The results revealed that self-confidence and sport self-efficacy mediated the relationship between dimensions of anger and anger control with sport performance.

Keywords: Self, Emotion, Performance, Sport psychology

1. Introduction

Anger and aggression are common phenomena in competitive situations like sport. Because of struggling nature and probably unfulfilling results, sport matches increase anger emotion and aggressive behaviors. Investigation of the relationship between anger and aggression with sport achievement and more importantly, the influence of the mediating effects that can have a determining role in this relationship is of utmost importance. Anger in sport competition can be due to aggressive behavior (Maxwel, 2004; Maxwel, Visek & Moress, 2009). Several research have investigated the relationship between anger and aggression and have shown that anger emotion increase athletes’ aggressive behavior (Conroy, Silva, Newcomer, Walker, & Johnson, 2001). Anger can also interfere with the performance via disrupting or increasing the attention, information processing and decision making, executing, and finally controlling of performance (Jones, 2003; Wittmann, Arce, & Santiseban 2008). Which characteristics can help anger management in competitive situation in athletes? In other words, which factors can mediate positively between anger and sport performance? The answer to this question is one of the aims of this research taking into account the mediating variables of self-confidence and self-efficacy.

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Self-confidence is one of the most related variables to sport performance (Robazza, & Bortoli, 2007). Self-confidence means people’s belief to control themselves and their environment; a perceived ability that increases the anger management and provides the possibility that athletes use their emotion appropriately to achieve sport's aim. It also prevents the athletes from giving up to destructive anger and aggressiveness as one of its clear manifestations (Barton, 1998; Woodman, & Hardy, 2001). The results of research have shown that the high level of self-confidence in athletes is related to perceived constructive ability (Ford, & Collins, 2010; Jones, Swain, & Hardy, 1993; Robazza, & Bortoli, 2007; Woodman, Akehurst, Hardy, & Beattie, 2010). Self-confidence moderates the symptoms of competitive anger (Hanton, & Connaughton, 2002; Hanton, & O’brien, & Mellalieu, 2003; Robazza, & Bortoli, 2007) and facilitates the sources of confrontation against negative emotion (Ford, & Collins 2010; Hanton, & Connaughton, 2002). Self-confidence before and after a match often correlates with better performance (Craft, Magyar, Becker, & feltz, 2003; Robazza, & Bortoli, 2007).

Self-efficacy refers to a person’s belief about the ability of doing special behavior for achieving desirable results (Bandura, 1997). According to socio-cognitive approach, in comparison with people with low level of self-efficacy, people with high level of self-efficacy will be less vulnerable in confrontation of severe emotional excitation like anger and consequently they are more vulnerable for adaptive confrontation with excitements (Bandura, 1997, 2001). Ausbrooks, Thomas, & Williams (1995) have shown that people with high level of self-efficacy had less tendency to suppressing of anger and expressing of anger in aggressive behaviors. The main aim of the current research was investigating the mediating effect of self-confidence and sport self-efficacy in the relationship between anger and anger control in sports performance.

2. Method

2.1. Participants and Procedure

The participants of this study included professional athletes of different sports from all over Iran. Two hundred and forty six athletes (149 males, $M_{age} = 23.50$ years, age range: 18-33 years, and 97 females, $M_{age} = 22.30$ years, age range: 18-29 years) from different sports federations and clubs participated voluntarily in this study. They were asked to complete Tehran Multidimensional Anger Scale (TMAS, Besharat, 2008a) and Sport Self-Efficacy Scale (SSES; Besharat, 2008b). To measure the athletes’ sport performance, their coaches were asked to complete the Sport Achievement Scale (SAS; Besharat, Abbasi & Shojaoldin, 2002).

2.2. Measures

**Tehran Multidimensional Anger Scale (TMAS; Besharat, 2008a)**- This is a 30-item scale developed in Tehran University for assessing dimensions of anger in Iranian populations. Questions of this scale assess 6 dimensions of anger including trait anger, state anger, anger-in, anger-out, anger control-in, and anger control-out in a five-point Likert-type scale from 1 (very little) to 5 (very much). Psychometric properties of the TMAS have been examined and confirmed in several studies (Besharat, 2008a).

**Sport Self-efficacy Scale (SSES; Besharat, 2008b)**- This is a 10-item scale and measures sport self-efficacy from 0 to 100. This scale has been developed based on theoretical model of self-efficacy and questionnaires related to this construct (e.g., Bandura, 1997, 2001, 2006; Llewellyn, Sanchez, Asghar, & Jones, 2008) for measuring specific sport self-efficacy (Besharat, 2008b). Psychometric properties of the SSES have been examined and confirmed in several studies (Besharat, 2008b).

**Sport Achievement Scale (SAS; Besharat et al., 2002)**- The SAS is a 16-item self-report measure which is answered by coaches and provides a score that reveals athletes’ sport achievements. Scores were recorded on a five point Likert-type scale from 1 (very little) to 5 (very much). The results of content validity, based on the judgments of sport coaches and judges have shown Kendall's tau-t coefficients of .54 and .44 for coaches and judges, respectively. Chi-square results for testing significance of above coefficients revealed that calculated correlations for
coaches ($\chi^2 = 163.18$, df = 15, $P < .001$) and for judges ($\chi^2 = 106.64$, df = 15, $P < .001$) was statistically significant (Besharat et al., 2002).

3. Results

Mean scores and standard deviations for all scales are presented for males, females, and the total sample in Table 1.

Table 1. Mean scores and standard deviations on each scale of the anger, anger control, self-confidence, sport self-efficacy, and sport performance for athletes

<table>
<thead>
<tr>
<th>variable</th>
<th>Male athletes</th>
<th>Female athletes</th>
<th>All of athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean(S.D)</td>
<td>Mean(S.D)</td>
<td>Mean(S.D)</td>
</tr>
<tr>
<td>Trait anger</td>
<td>12.23(3.41)</td>
<td>11.69(3.84)</td>
<td>12.02(3.59)</td>
</tr>
<tr>
<td>State anger</td>
<td>13.20(3.33)</td>
<td>12.48(3.52)</td>
<td>12.91(3.42)</td>
</tr>
<tr>
<td>Internal anger</td>
<td>13.15(3.87)</td>
<td>12.56(4.23)</td>
<td>12.92(4.02)</td>
</tr>
<tr>
<td>External anger</td>
<td>12.85(3.37)</td>
<td>12.24(3.73)</td>
<td>12.61(3.52)</td>
</tr>
<tr>
<td>Internal anger control</td>
<td>17.20(3.18)</td>
<td>18.38(3.42)</td>
<td>17.67(3.32)</td>
</tr>
<tr>
<td>External anger control</td>
<td>18.55(3.17)</td>
<td>19.12(3.52)</td>
<td>18.77(3.31)</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>18.86(3.50)</td>
<td>17.75(3.86)</td>
<td>18.42(3.68)</td>
</tr>
<tr>
<td>Sport self-efficacy</td>
<td>71.59(107.98)</td>
<td>695.25(121.72)</td>
<td>719.00(113.98)</td>
</tr>
<tr>
<td>Sport success</td>
<td>65.79(7.18)</td>
<td>64.20(38.18)</td>
<td>65.16(7.61)</td>
</tr>
</tbody>
</table>

Table 2 indicates the Pearson product-moment correlations between measures of anger, anger control, self-confidence, sport self-efficacy, and sport performance.

Table 2. Pearson correlation coefficients between scores of anger, anger control, self-confidence, sport self-efficacy, and sport performance

<table>
<thead>
<tr>
<th>variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trait anger</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State anger</td>
<td>0.56</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal anger</td>
<td>0.57</td>
<td>0.74</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External anger</td>
<td>0.60</td>
<td>0.75</td>
<td>0.79</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal anger control</td>
<td>-0.45</td>
<td>-0.56</td>
<td>-0.59</td>
<td>-0.57</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External anger control</td>
<td>-0.51</td>
<td>-0.55</td>
<td>-0.57</td>
<td>-0.60</td>
<td>0.71</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-confidence</td>
<td>-0.17</td>
<td>-0.14</td>
<td>-0.18</td>
<td>-0.19</td>
<td>0.10</td>
<td>0.13</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Sport self-efficacy</td>
<td>-0.27</td>
<td>-0.16</td>
<td>-0.20</td>
<td>-0.22</td>
<td>0.13</td>
<td>0.16</td>
<td>0.40</td>
<td>--</td>
</tr>
<tr>
<td>Sport success</td>
<td>-0.26</td>
<td>-0.17</td>
<td>-0.21</td>
<td>-0.21</td>
<td>0.14</td>
<td>0.16</td>
<td>0.34</td>
<td>0.74</td>
</tr>
</tbody>
</table>

To evaluate the rate of mediating effect of self-confidence on the relationship between anger and anger control in sports performance, a series of stepwise regression analysis was performed. The results showed that by entering self-confidence as a mediating effect in regression model, $\beta$ coefficient for trait anger decreases from 26% to 21%. The Sobel test showed that this change is significant ($t = 5.9$, $P < 0.001$) and trait anger also remained significant ($t = -3.57$, $P < 0.001$). The result also showed that by entering other dimensions of anger, similar results in regression model are repeated.
Then to evaluate the rate of mediating effect of sport self-efficacy on the relationship between anger and anger control with sport performance, a series of stepwise regression analysis was performed. The results showed that by entering sport self-efficacy as a mediating variable in regression model, $\beta$ coefficient decreases for trait anger from $-26\%$ to $6\%$. The Sobel test showed that this change is significant ($t = 16.60, P < 0.001$) whereas trait anger lost its significance ($t = -1.56, P < 0.001$). The results also showed that by entering other dimensions of anger, similar results are repeated.

4. Discussion

The results of the present study showed that self-confidence has a significant negative correlation with anger and a significance positive correlation with sport performance and can have mediating effect in the relationship between anger and anger control with sport performance. Statistical analysis of data characterized that increase in the levels of self-confidence decreases the relationship between anger and anger control with sport performance. These mediating effects were partial for anger and were complete for anger control. These are explained in terms of the following possibilities. Self-confidence means belief and trust on the ability to control self and environment (Burton, 1998; Woodman, & Hardy, 2001), to reinforce the perceived ability of athletes in management of stress and negative emotions in sport competitions, lack of which can cause athletes to have less influence on their anger which in turn can lead to inevitably destructive consequences. This explanation corresponds with the results of research that confirms the relationship between self-confidence and perceived ability of athletes (Jones, et al., 1993; Robazza, & Bortoli, 2007). Positive correlation between self-confidence and anger control is indicating that parallel to controlling and moderating effect on anger, self-confidence influences the improving of sport performance via reinforcing the anger control. The results of research (Craft, et al., 2003; Robazza, & Bortoli, 2007) showed that self-confidence before and during the match correlates with better performance. The results of research showed that self-confidence facilitate the confrontation sources of negative emotion (Ford, & Collins, 2010; Hanton, & Connaughton, 2002). According to this, one can suggest that self-confidence helps athletes in such a way that by proper use of coping strategies, they will be able to manage and control symptoms of competitive anger and will consequently improve their sport performance. Self-confidence via interpretation and positive evaluation of related symptoms of experienced anger indicates that anger is controllable and can be coped with better (Hanton, & Connaughton, 2002; Hanton et al., 2003; Robazza, & Bortoli, 2007). The results of research also showed that due to keeping and continuing management and control of situation during match, self-confidence moderate the symptoms of competitive anger (Hanton, & Connaughton, 2002; Hanton et al., 2003; Robazza, & Bortoli, 2007; Ursin & Eriksen, 2004).

The results of research showed that sport self-efficacy has a negative correlation with anger and a positive correlation with anger control and sport success and can have a moderating effect on the relationship between anger and anger control with sport performance. Analysis of data indicated that increase of sport self-efficacy decreases the relationship between anger and anger control with sport performance. These mediating effects for anger and anger control was complete and could be interpreted based on several possibilities.

Sport self-efficacy means beliefs held by athletes to have the ability to succeed in executing tasks and specialized sport skills which influence their emotional and behavioral reactions in stressful situations of match. The relationship between sport self-efficacy with coping strategies has been confirmed previously (Bandura, 1997; 2001). Sport self-efficacy helps athlete to know that anger is controllable via positive evaluation of related symptoms of experienced anger by athlete (Hanton, & Connaughton, 2002; Hanton et al., 2003; Robazza, & Bortoli, 2007; Ursin & Eriksen, 2004). Ursin and Eriksen (2004) believe that positive coping expectancy provides a sense of control of situation with existing coping resources which decreases the possibility of negative emotions. The effect of sport self-efficacy on controlling and decreasing negative emotions has been confirmed in several researche (e.g. Bandora, 1997, 2001).

The results of current research showed that sport self-efficacy influences the relationship between anger and sport performance completely, whereas self-confidence influences this relationship partially. One of the possible reasons
of this different influence can be explained on the ground that self-confidence reflects athlete's belief of general ability in controlling situations and conditions but self-efficacy represents athlete's belief of his or her ability to successfully executing tasks and specialized sport skills. This means that belief of general ability may has a weaker effect on controlling and decreasing stress and negative emotions in special situations. According to the results of research, the mediating effect of self-confidence as a general construct in the relationship between competitive anxiety and sport performance was partial and weaker but mediating effect of sport self-efficacy as a special construct was complete and stronger. In a practical level, the present study indicated the importance and necessity of attention to mediating variables such as self-confidence and sport self-efficacy as influential factors on the relationship between anger and anger control and sport performance in athletes. In a theoretical level, the results can be of value to related theories of emotions, emotion regulation, coping strategies and stress management, especially in sport psychology.

References


