The survey of relationship and comparison: emotional intelligence, competitive anxiety and mental toughness female super league basketball players

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Abstract

The applied word of emotions is Emotional Intelligence (EI) which defines as the ability to perceive, monitor, employ, and manage emotions within one and in others (Gill G.S, 2010). The purpose of this study was to examine the relationship between emotional intelligence, competitive anxiety before a competition and mental toughness of female basketball players. Emotional intelligence questionnaire (Schutte et al., 1998), Competitive state anxiety inventory CSAI-2 (Martens et al., 1990) and mental toughness questionnaire were utilized in this study. The results revealed that although EI of two teams were significantly different (p < .05), but competitive anxiety and mental toughness of them didn't confirm significant difference. Besides, results showed negative relationship between EI and competitive anxiety, but not significant. On the other hand, this study demonstrated that EI and mental toughness in weak team had negative correlation significantly (p < .05). According to findings of this study seem EI can be one of the factors for success in outstanding teams.

1. Introduction

Emotional Intelligence (EI) is a term that has attracted researchers’ attention in the last decade. Athletes and coaches experience different emotions when they try to reach a high performance (Chan & Mallett, 2011). The pressure and the subsequent stress and emotions experienced by athletes are more intense when highly valued goals are at stake (Laborde et al., 2011). Therefore, emotional intelligence could enhance player-to-player interactions within the team and, consequently, improve team performance. (Koch et al., 2010). Daniel Goleman claimed it is the best predictor of success in life since it accounts for 85-90% of outstanding performance compared to Intelligence Quotient which accounts for 10 – 30 % (Crabbe, 2007). Team sports provide a context for numerous levels of interactions among players. Exploration of the influence of trait EI in athletes when they had to face the stress of competition showed high trait EI among male handball players experienced a lower increase of stress compared to
their low trait EI counterparts (Laborde et al., 2011). It also associates with a number of health-related variables, including minimizing the effects of stress (Schutte et al., 2007).

2. Review of the Related Literature

EI focuses on the recognition and use of one’s own and others emotional states to solve problems and regulate behavior (Salovey & Mayer, 1990). Also, Anxiety is defined as feelings of nervousness and tension resulting from environmental demands that are associated with arousal. These demands are usually stressful, indicating to the athletes a perception of imbalance between the demand given and their abilities to fulfill the demand (Sajadi et al., 2011). Jones et al. (2002) define mental toughness as remaining determined, focused, confident, and in control under pressure through training and competition.

Koch et al. (2010) examined the relationship between emotional intelligence and factors such as coach ability, concentration, dealing with pressure, and motivation among top junior level basketball players from the United States and China. Basketball players from the United States scored higher than basketball players from China on all factors of emotional intelligence and results showed that the interpersonal competence factor of the EI was the most important factor for performance-related indicators. Furthermore, the results suggest that there may be cultural differences associated with emotional intelligence which influence coaches’ perceptions of player ability. For athletes, higher EI has been attained to better performance in team sports, such as cricket (Crombie, Lombard, & Noakes, 2009), hockey (Perlini & Halverson, 2006), and baseball (Zizzi, Deaner, & Hirschhorn, 2003). According to Zizzi and colleagues (2003), an athlete must recognize one’s emotions, as well as teammates’ and opponents’ emotions, in order to perform well in team sports. Moreover, at the individual level higher EI was found to be positively related to the use of psychological skills, such as imagery and self-talk (Lane, Thelwell, Lowther, & Devonport, 2009). A study investigated the effectiveness of EI program on the performances of amateur athletes from 4 selected sports, which include basketball, handball, volleyball and weightlifting. Results showed that the amateur athletes from all the sports groups equally utilized and benefited from the treatment programs (Ajayi, Fatokun 2008). Campbell investigated the relationship between EI and the experience of psychological distress in Australian high school students by using Kessler Psychological Distress Scale (Kessler et al., 2003) and Emotional intelligence self-report questionnaire by Schutte et al.(1998). There was no direct association between Emotional intelligence and psychological distress (Campbell, Ntobedzi, 2007).

Emotion related research in the sport domain has indicated that somatic anxiety may have differential effects on sport performance (Martens, Vealey, & Burton, 1990). Almost all athletes experience different level of anxiety before and during a competition. Sometimes this leads to a weak performance. Hence, researchers and coaches try to recognize and control it. In a study relationship between mental skills and interpretation of anxiety in athletes participating in open versus close skill sport was investigated. Athletes filled the modified (CISAI-2 and OMSAT-3). It was revealed that open and close skill athletes differed in intensity, but not interpretation, of somatic and anxiety and self-confidence. Besides, open and close skill athletes are differentiated in how their mental skills related to intensity of anxiety and self-confidence (Auñenanger, 2005). Self-reported emotional intelligence was negatively related to levels of depression and anxiety (Fernandez-Berrocal et al., 2006). Moriya et al. (2011) indicated Influence of emotional intelligence on the psychological competitive ability of female basketball players. They revealed that the high-performance group score was significantly higher than the low-performance group score. Lane et al. (2009) claimed that emotions with successful performance vigor, calmness & happiness, whereas emotions associating with poor performance include confusion, depression and fatigue. Emotional intelligence correlated positively with desirable emotions and negatively with unpleasant emotions (Lane et al., 2010). The purpose of this study was to examine the relationship between emotional intelligence, competitive anxiety during a tournament and mental toughness of female basketball players and compare two teams (strong and weak teams). Trait EI is assessed by a self-report measure.

In another study change-over-time effects of anxiety were examined, somatic anxiety increase between 2 h and 30 min pre-competition. Frequencies of cognitive anxiety increased from seven to two days, one day to 2 h and 2 h to 30 min pre-competition; frequencies of somatic anxiety increased from seven days to two days and 2 h to 30 min
pre-event (Hanton, Thomas & Maynard, 2002). Other findings suggest that striving for perfection in sports is not maladaptive. On the contrary, athletes who strive for perfection and successfully control their negative reactions to imperfection may even experience less anxiety and more self-confidence during competitions (Stoeber et al., 2006). In tennis tournament males and females showed different responses in the CSAI-2 subcomponents. Somatic anxiety was significantly higher in females compared to males whereas self-confidence was significantly higher in males. Winners had significantly lower cognitive anxiety and higher Self-confidence scores than losers. Somatic anxiety was significantly higher in the losers (Filare et al., 2008).

Theoretically, emotional intelligence relates to the ability to monitor, employ, and manage emotions (Salovey & Mayer, 1990). Therefore, participants high in emotional intelligence are more likely to regulate their emotions. Another construct that aligns with controlling emotions and arguably shares some similar characteristics to emotional intelligence is mental toughness. One useful strategy to enable emotional control is psychological skills (Thelwell, 2008), which may help to raise emotional intelligence and enhance mental toughness.

3. Method

3.1. Participants

Fourteen women teams competed in basketball super league competitions in Tehran. Two teams were selected for this study purposely. A Strong team N=11 and a Weak team N=7, (Mean age 23.6 yrs ± 4.1). Actually the strong team was the winner of the competition and the weak one had the worst operation.

2.2. Instruments

Participants’ trait EI was measured with adapted version of the Schutte Self-Report Inventory (SSRI; Schutte et al., 1998). This scale was made up of 33 items. Participants respond on a 5-point Likert type formatted scale, ranging from 1 (totally disagree) to 5 (totally agree). Alpha coefficients were: appraisal of own emotions = .71; appraisal of others emotions = .73; optimism = .74; regulation = .77; social skills = .69; and utilization of emotions = .78. (Thelwell et al., 2008). Competitive state anxiety inventory CSAI-2 (Martens et al., 1990) and mental toughness questionnaire were used to assessing of competitive anxiety and mental toughness of players respectively after their last contest. Competitive state anxiety inventory CSAI-2 consists of 27 items (Martens et al., 1990) and evaluates three main dimensions: cognitive anxiety, somatic anxiety, and self-confidence (Martens et al., 1990). Cognitive anxiety involves cognitions about possible failure, while somatic anxiety involves the perception of bodily symptoms and heightened negative arousal. Self-confidence, on the other hand, involves cognitions that one is up to the task and able to give one’s best possible performance. Consequently, self-confidence prior to and during competitions usually indicates low competitive anxiety and is often associated with higher performance (Stoeber, 2006). Mental Toughness Questionnaire was made up of 14 items.

3.2. Statistical analysis

In order to data analyze, in addition to descriptive statistics were used of the inferential statistics. Independent-Samples T Test used for compare between groups and Pearson Correlation used to exploration relation between parameters each group.

4. Results

According to past researches three hypotheses applied in this study: (a) there is significantly difference between EI, competitive anxiety and mental toughness of strong and weak teams, (b) there is negative significant relationship between EI and competitive anxiety and (c) the relationship between EI and mental toughness is positive and significance.
Examination of data in support of the first hypothesis (shown in Table 1) regarding to significant difference in EI, indicates that although EI of two teams are significantly different (p=.037), but competitive anxiety and mental toughness of them don’t show significant difference (Respectively, p=.90; p=.47). Therefore hypothesis 1 accepted partially.

<table>
<thead>
<tr>
<th>Table 1. Shows differences between groups</th>
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<td><strong>Levene's Test for equality of variances</strong></td>
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<td>Emotional Intelligence</td>
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<td>Competitive Anxiety</td>
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<td>Mental Toughness</td>
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In support of the second hypothesis correlation results show negative relationship between EI and competitive anxiety, but not significant. Therefore, hypothesis 1 not accepted. In third hypothesis, this study demonstrated that EI and mental toughness in weak team had negative correlation significantly (p < .05), thus our hypothesis reject completely (Table 2).

<table>
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<th>Table 2. Shows correlation between parameters in each group</th>
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<td><strong>Team</strong></td>
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**Correlation is significant at the 0.01 level (2-tailed)**

5. Discussion

The purpose of this study was to examine the relationship between emotional intelligence, competitive anxiety during a tournament and mental toughness of female basketball players and compare two teams (strong and weak teams). This study support the previous research which higher EI causes better performance in team sports, such as cricket (Crombie, Lombard, & Noakes, 2009), hockey (Perlini & Halverson, 2006), and baseball (Zizzi, Deaner, & Hirschhorn, 2003). Low score on the EI related to the weak team with an unpleasant performance. Hence, some EI programs likely help athletes’ performance (Ajayei, Fatokun 2008). A line with Campbell & Ntobedzi (2007) there was no direct association between Emotional intelligence and Competitive anxiety and mental toughness,
(Campbell, Ntobedzi, 2007). May be obtained result related to cultural conditions. However, we suggest to coaches that they select athletes with high EI and Low anxiety.

References


Gill G.S (2010). Examining emotional intelligence in sport, a thesis submitted in partial fulfillment of the requirements of the University of Wolverhampton for the Degree of Master of Philosophy.


