



Effectiveness of emotional intelligence on mood profile in female student athletes

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Abstract

For most athletes, sport is considered an emotional experience, and negative emotions can disrupt physical and mental performance. Accordingly, it is necessary for athletes to maintain emotional composure before, during and after competition. The present study was conducted with the aim to assess effectiveness of training components of emotional intelligence on mood of female student athletes. This applied study used quasi-experimental design with pre posttest approach. Of the study population comprising all female student athletes, 60 volunteers were selected and randomly divided into trial and control groups. Brunel Mood Scale was used for both groups in pretest and posttest. Emotional intelligence components were taught to the trial group in 11 sessions twice weekly. The control group received no intervention. Data were analyzed with SPSS-18 using covariance analysis with 95% confidence. The results showed a significant increase in positive mood and reduction in negative mood in the trial group compared to the control. However, in variable of confusion as a negative mood, the difference between the two groups was insignificant. According to the present study findings, and in connection with previous studies, training components of emotional intelligence affects female student athletes' moods. Thus, mental health experts, especially sports psychologists and school counselors can utilize positive outcomes of emotional intelligence training for their clients.

Keywords: Athlete, Emotional Intelligence, Mood, Student

Introduction

Conceptualization of emotion and mood is considered two separate phenomena in psychology and philosophy literature. Historically, distinction between mood and emotion has been difficult both in concept and in measurement. In review of literature, the focus has rather been on structural distinction between these terms, so that in terms of intensity, emotions have a transient nature with behavioral outcomes, whereas mood is

sustainable and less specific with cognitive outcomes [1]. Generally, mood has a varied intensity and duration, and usually involves more than one emotion [2]. Yet, emotions affect every aspect of human behavior, such that, humans' first reaction to a situation is emotional [3]. Researchers have mostly focused on three main components of emotion: mental experience, physiological changes, and observable behavior. With respect to the role of emotion in sports, the emphasis

has rather been on arousal levels, optimal performance, and balance between positive and negative emotions [4]. Psychological dimensions associated with sports have been studied since late 19th century [5]. The most important among all factors that affect sporting performance seems to be the athlete's ability to recognize and accept the right emotion for optimal performance when he needs to [6]. Results of studies on Olympic athletes show that the reason for success in more than 50% of professional athletes was optimum mental preparation for facing anxiety and negative mental pressures in crucial competitions. In fact, emotional states are considered inconsistent with conditions needed to achieve optimal performance. On the other hand, the same states can help athletes in reaching higher performance levels by regulating thoughts and behaviors [7].

In a study by Isfahani, Ghzelseflu&Mostafalu [8] titled "Role of pre-competition anxiety in confidence and success of individual elite athletes", it was reported that successful athletes in negative mood states (confusion, fatigue, anger, depression, and stress) scored poorly compared to unsuccessful and less successful athletes, and that there is a significant and negative relationship between confidence and emotional state. Thelwel (2007) as quoted by Isfahani, Ghezelseflu&Mostafalu (2012), believes incidence of negative mood, especially in novice athletes, disrupts their ability to focus on skill as aimed by the coach. For more than two decades, the concept of emotional intelligence has attracted attention in common literature and in scientific field. This huge interest may specifically reflect the claim that personal differences in processing and management of emotions, predict successful performance in everyday life [9]. The term emotional intelligence was first introduced by Salovey& Mayer [10]. They consider emotional intelligence as the ability to monitor, distinguish and utilize information about emotions that prepare the context for directing intellectual and behavioral processes [11]. Emotional intelligence is associated with the

individual's knowledge of self and others, relationship with others, and adjustment to environment, which is needed to succeed in meeting social demands.

Bar-On believes that emotional intelligence has 5 components: intrapersonal skills, interpersonal skills, adaptation skills, stress management skills, and general mood skills [12]. People with high emotional intelligence experience lower levels of emotion-related fears, stress and mental pressure. Higher emotional intelligence is associated with tendency to experience positive emotions and avoid negative emotions [13]. Various studies have dealt with the relationship and role of emotional intelligence in psychological and health parameters. Boussikou *et al.* [14], quoted by Noorian, Gasparian, Sharif, Zoladl *et al.* (2011), reached the conclusion that emotional intelligence is a necessary parameter to lower anxiety and despair, and boost confidence and courage [14]. Emotional intelligence can predict stress [15], and is associated with mental health [16, 17, 18, and 19]. Boussikou *et al.* (2011) have shown a negative relationship between occupational burnout and emotional intelligence among PE teachers [20]. A study by Brown & Shutte (2006) reports direct and indirect relationships between mental fatigue and emotional intelligence [21]. Very few researchers have provided evidence-based findings on the relationship between sports and emotional intelligence. The relationship between emotional intelligence and sporting performance was first proposed by Mayer & Fletcher (2007) [22]. Facing mental pressure and anxiety is considered common knowledge by athletes of any age, gender, and preparation level [23]. Athletes experience intense emotions before and during competitions [24]. A study by Zizzi *et al.* shows that emotional intelligence plays a mediating role in throwing performance among baseball players. Higher emotional intelligence is associated with healthier notion in athletes [25]. There are also studies on the relationship between athletes' emotional intelligence and optimal performance [26,27].

Still, the major weakness in quantitative and qualitative studies on sports psychology of emotional intelligence is associated with meager reports about the efficacy of training emotional intelligence components in athletes' performance. Despite frequent reports on the effects of emotional intelligence, this weakness is extremely felt in review of local literature. Sports is considered as a mood regulating strategy [28]. Furthermore, different levels of emotional intelligence have been reported in female athletes and non-athletes [29]. Accordingly, the present study was conducted with the aim to investigate effectiveness of components of emotional intelligence on mood states in female athlete students in Tehran.

Method

This is an applied quasi-experimental study with case and control groups and pretest-posttest approach. Study population comprised all female students aged between 9 years and 13 years by 2012, registered at Ghodsgym in Tehran as professional athletes. Selected volunteers were divided into trial (30 girls) and control (30 girls) groups. Subjects were selected by convenience sampling, and participant size was decided according to previous literature on quasi-experimental studies. Explanations were provided for participants in relation to informed presence and number and timing of sessions (11, 30-minute sessions). Before intervention, both groups completed Brunel Mood Scale, and the trial group participated in the twice weekly training sessions on components of emotional intelligence for 11 sessions. By the end of intervention, both groups completed the questionnaire again. Intervention stages and contents included: 1) explanations on group meeting rules, familiarization with emotions and distinction between them and their importance in daily life, 2) emotional self-awareness and interactions about personal strengths and weaknesses, personal differences in display and control of emotions, 3) effective methods of control of emotions, especially anger, home exercises for monitoring emotions and understanding

relationship between thoughts and emotions and behaviors in an objective manner, 5) familiarization with stress and coping strategies, helping participants to know dominant stress coping styles, and positive and negative points of each, 6) training assertiveness and the skill to say no without feeling guilty or ashamed, and review of homework, 7) training balanced empathy and cooperation, homework review and answers to questions, 8) problem assessment and solution technique, homework, 9) evaluation of participants' problem solving techniques between current and previous sessions, 10) receiving feedback from participants on methods used for solving emotional issues, and review of homework, and 11) summation and preparation for end of course, and Brunel Mood Scale (BRUMS) posttest.

This scale was designed by Brunel in 1996 to measure negative mood (confusion, fatigue, anger, depression, and stress) and positive mood states (vitality), containing 24 items with 5 options and scores from zero (not at all) to 4 (very much). In Lane et al. study, mean internal consistency of this scale was reported 87% [27]. In the present study, reliability of the questionnaire was confirmed with Cronbach's alpha 87%. After collection, data were analyzed with SPSS-18 using covariance analysis with confidence of 95%.

Results

Considering that in this statistical method, processing of data is based on observing some assumptions, Levene's test was performed for inter-group equality, and Box test for homogeneity of covariance matrices, which were insignificant for all variables ($P > 0.05$). Thus, processing of data using this statistical method was confirmed. Participants' gender was also controlled to increase effectiveness of intervention (training components of emotional intelligence) on criterion variable (mood states). Table 1 presents mean participant' pretest-posttest scores of mood states in trial and control groups.

Table 1 shows reduced scores of negative

Table 1 Participants' mean pretest-posttest scores of dependent variable for trial and control groups

Mood states	Anger	Confusion	Stress	Fatigue	Depression	Vitality
Trial group pretest	5.13	5.4	5.76	4.37	4.96	4.9
Trial group posttest	4.16	3.4	4.1	3.3	3	12.13
Control group pretest	6.63	6.4	6.6	6	6.63	4.9
Control group posttest	5.26	5.13	6	6.13	5.85	5.2

mood states and increased vitality in trial group posttest. This difference is shown in figure 1.

Table 1 and Figure 1 reveal changes in posttest scores of the two groups. To assess

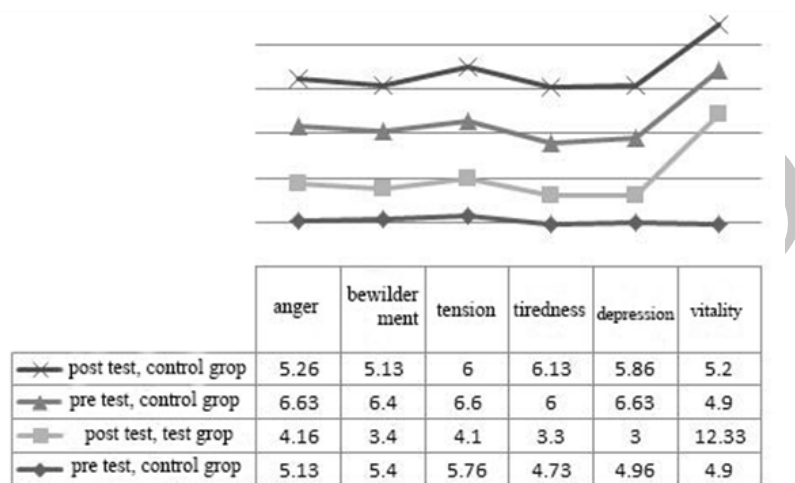


Figure 1 Comparing the mean scores of the participants in the study based on the criterion variable

effectiveness and significance of differences in the two groups, covariance analysis was used, and results are presented in Table 2.

Table 2 results indicate effectiveness of components of emotional intelligence on mood states in trial group compared to

Table 2 Covariance analysis for assessing the effect of training components of emotional intelligence on mood states of participants

Source	Sum of squares	Degree of freedom	Mean squares	F	P-value
Anger	599.62	1	599.62	14.89	0.001
Confusion	255.29	1	255.29	2.10	0.104
Stress	288.26	1	288.26	4.80	0.003
Fatigue	477.02	1	447.02	16.70	0.001
Depression	324.62	1	324.62	11.09	0.001
Vitality	329.10	1	329.10	6.15	0.001

control, with insignificant effect only in subscale of confusion ($P > 0.05$).

Discussion

Interest in contributing psychological factors to sporting performance goes back a hundred years. However, it is now four decades since sports psychology has found its true position [5]. Accordingly, the present study was conducted with the aim to examine the effectiveness of training components of emotional intelligence on positive and negative mood states in

female athletes in Tehran. Table 2 reveals effectiveness of training components of emotional intelligence on mood states in both participating groups. However, this effectiveness cannot be observed in subscale of confusion ($P > 0.05$). In a study by Kimiaee, Raftar and Sultanifar (2011), the effectiveness of training emotional intelligence on reducing adolescents' aggression was reported [31]. Results of a study by Dalsky, Corser&Gohm [32] showed that in highly stressed situations, emotional intelligence acts as a mediator, and

that those with higher emotional intelligence experience lower levels of stress in such situations. Brown & Shutte study (2006) indicated that higher emotional intelligence scores are associated with lower mental fatigue [21]. In Lane & Wilson study [24], a negative relationship was reported between emotional intelligence and anger, depression, fatigue, and stress among athletes. The present study findings are in line with above studies. It seems, emotional intelligence increases stress tolerance in athletes, and reinforces cognitive capacities for more adaptive coping in competitions. Interventions based on increasing emotional intelligence, such as the present study, can provide the context for reducing negative mood states in people by providing learning opportunity to identify own emotional and others, understand meaning of expressed emotions by others, thought-facilitating service of emotions, improvement of intra- and interpersonal relationships, and emotional intelligence act as a moderator of negative emotions.

The present study limitations included: failure to measure mood states in follow-up stage to show sustainability and endurance of intervention, studying girls only, which cannot be extended to boys, and thus cannot provide possibility of comparison between sexes. Data obtained merely through questionnaires are less reliable than those obtained by both questionnaire and interviews. Finally, lack of local relevant research literature, which makes further comparison impossible. It is recommended that in future studies follow-up stages be included to assess lasting effect of interventions. Also, future studies should include both sexes to enable comparison between them. To increase accuracy in selecting typical participants, clinical interviews should be conducted in addition to questionnaire.

Conclusion

Unlike cognitive intelligence, emotional intelligence can be improved through training. Understandable and simple emotional intelligence instructions and programs

provide ample opportunity for other groups in mental and community health, especially school counselors and sport psychologists. Achievement of optimal performance in hard competitions can be greater for athletes than emotional intelligence.

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Contributions

Study design: ShD

Data collection and analysis: ShD, MA, BA

Manuscript preparation: BA, MA

Conflict of interest

"The authors declare that they have no Competing interests."

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