Annals of Applied Sport Science, vol. 3, no. 4, pp. 09-18, Winter 2015

www.aassjournal.com
e-ISSN: 2322–4479
p-ISSN: 2476–4981

Original Article

Received: 31/08/2014
Accepted: 25/11/2014

Relationship of Emotional Intelligence and Self-regulation of Male Elite Swimmers

[1]Ahad Sadri[*], [2]Hamid Janani

1. East Azerbaijan Science and Research Branch, Islamic Azad University, Tabriz, Iran.
2. Department of Physical Education and Sport Science, Tabriz Branch, Islamic Azad University, Tabriz, Iran.

ABSTRACT

Emotional intelligence (EI) is itself an important factor in predicting individual performance and has been introduced as the strongest force for leadership and success. The aim of this study was to evaluate the correlation between EI and self-regulation (SR) in elite male swimmers of East Azerbaijan Province, Iran. The subjects included 100 male athletes participating in East Azerbaijan Province swimming championships held in Tabriz from 18-21 March, 2014. Mean age and mean years of training records in swimming subjects were equal to 22.86±6.86 and 11±6.51, respectively. To collect the required data, Emotional Intelligence Questionnaire of Bradberry and Greaves and Self-regulation Questionnaire of Brown, Miller and Lawendowski were used. The results showed that there is a significant positive correlation between total scores of EI and SR. Also, all components of EI (except social awareness) had a positive significant correlation with the total SR score. Among the components of EI, social awareness had a negative significant relationship with SR. The findings suggest that EI and SR consist of the same infrastructure and this fact can justify the high correlation between them.

Key Words: Emotional Intelligence; Self-regulation; Male Swimmers; Self-Management.

Corresponding Author:
Ahad Sadri
E-mail: ahadsadri@yahoo.com

INTRODUCTION

In sport today, repeated and regular physical exercise and practice is not considered as the only key factor for achieving peak performance and preset objectives. It seems that in addition to the physical, tactical abilities and professional skills, psychological and personality characteristics are greatly effective for athletic success. For example, in swimming, which is a full medal sport at the Olympics and world competitions, various physical trainings and nutritional strategies have caused close-run in swimmers' records and it seems that what makes the difference between them is mental preparation. Hence, sports psychologists have conducted numerous studies on various aspects of athletes' psychological characteristics. Among the psychological factors involved in athletic sports, a large part of researches is dedicated to self-confidence, emotional intelligence, imagery, and anxiety (1). Emotional intelligence, which is defined as: the ability to correctly assess and express emotion (intrapersonal abilities), the ability to control emotions in other people (interpersonal abilities), ability to effectively regulate emotions, and ability to use emotions for guiding the behaviors (2), has attracted the attention of many researchers (3). Goleman believes that emotional intelligence refers to self-awareness of feelings and ability to use them to adopt appropriate decisions in life (4). He stated that intelligence quotient (IQ) accounts for only 20% of successes in the best of circumstances and the remaining 80% are dependent on other factors (4). It seems that the destiny of people in many situations is subjected to skills that form emotional intelligence (EI). In fact, EI justifies the failure of people with high IQ and unexpected success of individuals with medium IQ (4). Perhaps, development of the concept of EI is the most reasonable answer to: why some people despite having high IQ, face more difficulties in their work than others (5).

EI can help athletes succeed in sports fields. Control of emotions is very important for athletes, because lack of emotional control greatly influences the performance of athletes (3). It has been repeatedly observed that despite appropriate trainings, athletes cannot achieve the expected results in competitions because of reduced concentration and proficiency. Therefore, excitation control centre in the brain must be strengthened to efficiently deal with stress, anxiety, and doubt (6).

The interesting point is that fostering mental capabilities of EI empowers athletes to endure long and hard trainings, maintain a sense of peace and hope, feel less discouraged, maintain their self-confidence in the face of defeat and try to overcome the obstacles, and do not give up trying and enhance their strength after victories (2). These capabilities are considered an advantage in a difficult and skill-based sport like swimming which requires long-term, tough, and sometimes boring trainings; putting so much pressure on athletes, leaving the trainings, and counteracting the economic and time investment of teams, coaches, and athletes. Understanding others' emotions in sport will help athletes make better use of possible errors of their competitors (6). However, according to previous studies, there is no reason to believe that psychological characteristics of athletes in all sports and even athletes at different levels and positions in a single sport are the same (7). For instance, a study on athletes of water polo and swimming showed that swimmers have a higher EI (8). Hence, it is necessary to study the EI of athletes at every region and culture, especially their skill levels.

Self-regulation is another factor that affects mental health and performance of

people and is trainable and improvable like EI. Generally, self-regulation can be defined as the ability to control, change, and adjust emotions, impulses or wishes (9). Self-regulation has been studied in form of two sub-categories of emotional regulation and cognitive regulation. Emotional regulation refers to control of sentiments and motives, and cognitive regulation means to control thoughts and actions that are related to planning and execution of behaviors (10). Self-regulation has a significant relationship with general adjustment, emotional states, health-related habits, and athletic performance (11-13), and self-regulation deficiency is considered a psychological barrier to health-related behaviors such as exercise (14).

Both EI and self-regulation are trainable, for this: writing short sentences and quotations on bulletin boards about proper management of emotions and feelings of oneself and others can make readers think deeply about it. Additionally, applying the non-dominant hand, quit negative habits, trying to control physical condition and physical or verbal flamboyant gestures, fighting against prejudice thoughts, imagining the lives of others (e.g. obese people, the disabled, etc.) Every day for five minutes, changing the speech style from informal to formal, refraining from sentences starting with "I", avoiding swearing, cutting on tobacco or other drugs consumption for 2-4 weeks can improve self-regulation and somewhat emotional intelligence (15).

Stadler *et al.* (2009) compared two groups of women that had received skills related to self-regulation and concluded that women who had learned self-regulation skills showed better performance in physical activities and exercise instructions (16). Toering *et al.* (2009) also came to the conclusion that high scores in thoughts and efforts, as two components of self-regulation, are associated with high levels of performance (17). Findings of previous studies have indicated that elite athletes are well aware of their strengths and weaknesses and can better convert this awareness into practice. Furthermore, they are willing to try and take part in trainings and competitions.

Various models have been proposed for self-regulation. One of the most interesting is developed by Miller and Brown (18). In this model, self-regulation is considered a seven-stage process ,including: acquisition of related information, evaluation of information and comparison with the norms, decision-making for change, assessment of various possible options, planning, execution, and evaluation of the effectiveness of the plan. They stated that each of the seven steps could be deficient, and psychological interventions can be applied in the problematic dimensions to resolve the problems (18). This model suggests that people with low self-regulation have little ability to set goals consistent with the norms (such as sports rules) and progress towards them. Such people prefer activities that create immediate gratification.

According to the literature and theoretical research in both areas of emotional intelligence and self-regulation in relation to success, it can be tangibly concluded that these two variables are of great importance in different fields of sport. Swimmers have to individually strive for victory over rivals in a closed environment at a challenging struggle in the presence of the audience and the referees and control of negative emotions is essential for achieving an optimal performance. Thus, continuing the processes of self-regulation and emotional self-management for the control of these emotions during the competition is very difficult and decisive (11). Moreover, according to Kirkcaldy (1982) and Banfield *et al.* (2004), there is no reason to believe that characteristics of EI and self-regulation of athletes in all sports at different levels or posts in a single sport are the same (7, 10).

Self-regulation is an issue that has not been investigated in Iran's sports psychology and studies so far have focused mostly on learning, self-regulation and self-regulation feedback (19).

Although many attempts have been made to explore emotional intelligence in sport, the correlation between EI and self-regulation in athletes of various sports is not entirely clear. On the other hand, EI is an educable capability and if its correlation with self-regulation is proven, self-regulation can also be improved by teaching of emotional intelligence abilities; so that the way towards success can be paved. In addition, various models have been proposed for self-regulation, one of the most interesting ones developed by Miller and Brown (1991) has been examined and approved in living environment (20). However, the application of this model in sports needs to be studied. This study therefore, examined the application of the self-regulatory model of Miller and Brown (1991) in sport psychology of swimming.

Swimming in East Azerbaijan Province has been faced with many problems in recent years which have caused a dramatic drop in this sport field. Sports psychology can resolve many of these problems if it is scientifically studied and taken into account. By studying the correlation between EI and self-regulation in swimmers of East Azerbaijan Province, the present paper aims to take a step towards overcoming these problems and respond to the gap that exists in this full medal sport.

MATERIALS AND METHODS

This research is a field descriptive-correlation study.

Participants. The subjects included 100 male athletes participating in the East Azerbaijan Province swimming championships held in Tabriz from 18-21 March, 2014. Mean age and mean years of training records in swimming of subjects were equal to 22.86±6.86 and 11±6.51, respectively.

Tools. To collect the required data, Emotional Intelligence Questionnaire of Bradberry & Greaves (21) and Self-regulation Questionnaire of Brown, Miller, & Lawendowski (22) were used. Emotional Intelligence Questionnaire (SRQ) of Bradberry & Greaves (2004) consists of 28 items measuring four components of self-awareness, self-management, social awareness, and relationship management. Validity coefficients of these items range from 0.73 to 0.90 and its concurrent validity with Bar-On emotional intelligence test has been reported to be equal to 0.68 (21). The 68-item Self-regulation Questionnaire of Brown, Miller, & Lawendowski (1999) measures seven components of receiving related information, evaluation of information and comparison with the norms, instigation to change triggered by perceptions of discrepancy, search for ways to reduce discrepancy, planning for change, implementation of behavior change, and evaluation of progress toward a goal. Reliability coefficient of SRQ by test-retest and Cronbach's alpha obtained 0.94 and 0.91, respectively (22). Before the subjects filled the questionnaires, different sections of the questionnaires and the way of filling them were explained to the athletes.

Statistical Analysis. Normality of distribution of studied quantitative variables was confirmed by Kolmogorov-Smirnov test and then the correlation between them was examined by Pearson correlation test at a significance level of 0.05. All statistical analyses were performed in SPSS 19 software.

RESULTS

Table 1 shows the demographic characteristics of the participants in this study. According to this table, mean age and mean years of training records in swimming

of subjects are equal to 22.86±6.86 and 11±6.51, respectively.

Table 1. Description of the demographic characteristics of the participants

Variable	Number	Mean±SD	Minimum	Maximum
Age (year)	100	22.86±6.86	16	45
Sports history (year)	100	11.00±6.51	3	35

Table 2 provides a description of the components of emotional intelligence and self-regulation in the participants. As seen in this table, overall score of EI and self-regulation of swimmers in this study are equal to 287.34±25.35 and 228.56±22.56, respectively.

Table 2. A description of the components of emotional intelligence and self-regulation in elite swimmers of East Azerbaijan Province

	Variable	Mean±SD	Minimum	Maximum
Emotional Intelligence	Self-awareness	83.90±7.78	58	98
	Self-management	71.25±16.1	29	97
	Social awareness	57.21±14.3	25	96
	Relationship management	74.98±12.6	10	96
	Emotional intelligence skills	287.34±25.35	203	350
	Emotional intelligence quotient	71.89±6.36	50	88
Self-Regulation	receiving related information	33.16±5.44	21	45
	evaluation of information and comparison with the norms	32.53±3.13	25	41
	instigation to change triggered by perceptions of discrepancy	28.93±3.50	18	37
	search for ways to reduce discrepancy	36.42±4.09	25	45
	planning for change	31.24±6.86	17	45
	implementation of behavior change	33.23±5.73	19	44
	evaluation of progress toward a goal	33.05±4.09	22	41
	Overall score of self-regulation	228.56±22.56	181	281

Before running the Pearson correlation test, normality of distribution of studied quantitative variables was confirmed by Kolmogorov-Smirnov test. Table 3 presents correlation coefficient of different components of emotional intelligence and self-regulation. Based on the correlation coefficients and significance levels obtained, it can be stated that there is a significant relationship between emotional intelligence quotient and its components (except social awareness) and self-regulation in male swimmers of East Azerbaijan ($P<0.01$). In addition, there is a negative relationship between social awareness and self-regulation ($P<0.01$).

Table 3. Correlation of different components of emotional intelligence and self-regulation in swimmers of East Azerbaijan Province.

	Self-regulation	
	r	p
Self-awareness	0.41**	0.001
Self-management	0.51**	0.001
Social awareness	0.41**	0.001
Relationship management	0.42**	0.001
Emotional intelligence quotient	0.43**	0.001

**: significant at $p<0.01$

DISCUSSION

This research studied the correlation between emotional intelligence (and its components) and self-regulation among the elite male swimmers of East Azerbaijan Province. Pearson correlation test results show that there is a significant relationship between emotional intelligence quotient and its components (except social awareness) and self-regulation in male swimmers of East Azerbaijan. This is consistent with the findings of Mabekoje (2010) and Farmahini *et al.* (2008) (23, 24). Moreover, no significant correlation between these two variables has been reported. It can be easily realized that two psychological variables of emotional intelligence and self-regulation have many structural similarities. Constituent elements of these two variables are somewhat similar, as the ability to receive relevant information and then management and application of them for achieving a goal are part of both of them. Thus, significant correlation between emotional intelligence and self-regulation is not unexpected. For instance, evidence shows that people with low self-regulation probably could not resist temptations to fleeting joy and pleasures, which is an obstacle to participation in regular and overwhelming exercise, and give up the long-term sports objectives (25). In other words, Miller & Brown's self-regulation model suggests that people with low self-regulation may consider exercise as entertainment, ignore failure in previous competition as a "warning", and fail to set their training programs in order to prevent future failures (25). Conversely, high emotional intelligence helps people to have a deep and clear understanding of their own feelings, emotions, strengths and weaknesses, needs, and drives. Such athletes know why and for what reason they should train and enjoy a good integration in goal setting and choosing a strategy to achieve success. When faced with a challenge, such people can easily get rid of it using their thinking. On the other hand, emotional self-control or self-management helps athletes to adjust the emotions and passions inconsistent with their purposes. Another component of emotional intelligence is self-arousal, which is an attempt to achieve a desired degree of goals, according to Goleman (4). People who have this feature are usually result-centred and have many drives to meet the objectives and criteria. In addition, studies have indicated that EI means to manage or regulate the emotions of oneself and other people (26) and components of self-regulation are of requirements of management, especially, self-management. Therefore, it can be observed that self-regulation and emotional intelligence are composed of the same infrastructures, which can justify the high correlation between them. On the other hand, it seems that some psychological skills overlap with the concepts of emotional

intelligence and self-regulation. For example, positive thinking control or self-talk corroborate the relationship between thoughts, feelings, and behaviors. If someone manages to replace negative self-talk by positive self-talk, it is expected that positive changes occur in his/her feelings and emotions. Thus, positive self-talk can help people to manage their emotions, which is one of the main components of emotional intelligence and self-regulation (27). On the other hand, as mentioned earlier, various components of self-regulation are the pillars of self-management, planning for change, and achieving the goals. Thus, since emotional intelligence has a high correlation with management and leadership (21), it is expected that self-regulation is associated with emotional intelligence.

Another finding of the present study indicates that there is a significant negative correlation between social awareness and self-regulation among the elite male swimmers of East Azerbaijan Province. In the literature, no study was found which has separately investigated the correlation between components of EI and self-regulation. However, it can be stated that this result is somewhat inconsistent with the findings of Mabekoje (24) and Farmahini *et al.* (23). As an explanation to this correlation, it should be noted that although the existing evidence supports the rationality of significant positive correlation between EI and self-regulation, perhaps because of personal differences between the participants in the present study and previous one and as social awareness of the participants was lower than the components of EI and the overall score of self-regulation, this component has a significant negative correlation with self-regulation. Furthermore, according to the self-regulation model developed by Kruglanski *et al.* (28), one of the methods of self-regulation (transfer and evaluation) may be lower than the optimal level, this significant negative correlation may be due to the fact that this was not be taken into account in the self-regulation model used in this study. Also, according to power-energy self-regulation model, limited source of self-control may had been discharged before filling out the questionnaires by the participants, reducing their self-regulation and finally causing the significant negative correlation between social awareness and self-regulation in elite male swimmers in the East Azerbaijan Province.

CONCLUSION

The results of this study show that there is a significant positive correlation between EI and its components with self-regulation among the elite swimmers of East Azerbaijan Province and as both are trainable; it is recommended that some measures are provided for training and strengthening emotional intelligence and self-regulation in athletes.

APPLICABLE REMARKS

- As the concepts of emotional intelligence and self-regulation overlap with many mental skills, such as positive thinking control or self-talk, the athletes who have high emotional intelligence, especially under stressful conditions, are able to control their energy level; in order to achieve optimal performance and, according to individualized zones of optimal functioning theory; adjust their self-regulation level.

REFFRENCES

1. Gucciardi DF, Jackson B. Understanding sport continuation: An integration of the theories of planned behaviour and basic psychological needs. Journal of Science and Medicine in Sport. 2013.
2. Parker JD, Taylor GJ, Bagby RM. The relationship between emotional intelligence and alexithymia. Personality and Individual differences. 2001;30(1):107-15.
3. Laborde S, Lautenbach F, Allen MS, Herbert C, Achtzehn S. The role of trait emotional intelligence in emotion regulation and performance under pressure. Personality and Individual differences. 2014;57:43-7.
4. Goleman DP. Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement. New York: Bantam Books; 1995.
5. Bar-on R, & Parker, J. D. A. The handbook of emotional intelligence: theory, development, assessment, and application at home, school, and in the work place. . San Francisco: Jossey-Bass; 2000.
6. Rahmani M. Effect Of Emotional Intelligence Components Education On Mental Health Improvement And Self-Imagination Of Athlete Girl Students (Arak Payam Nour University). Clinical Psychology & Personality (Daneshvar Raftar). 2014;20(9):75-84 [Article in Farsi].
7. Kirkcaldy BD. Personality profiles at various levels of athletic participation. Personality and Individual differences. 1982;3(3):321-6.
8. Zuskova K, Stejskal, T. . Intelligence in sport. Journal of applied sport psychology. 2003;20:63.
9. Murtagh AM, Todd SA. Self-regulation: A challenge to the strength model. Journal of Articles in Support of the Null Hypothesis. 2004;3(1):19-51.
10. Banfield JF, Wyland CL, Macrae CN, Munte T, Heatherton TF. The cognitive neuroscience of self-regulation. Handbook of self-regulation: Research, theory, and applications. 2004:62-83.
11. Barkhoff H, Heiby EM, Pagano IS. Self-regulation skills of a competitor type vs. a training champion athlete in artistic roller skating: A season long case study in elite sport competitions. Self. 2007;9(2).
12. Mezo PG, Heiby EM. A comparison of four measures of self-control skills. Assessment. 2004;11(3):238-50.
13. Singer RN. Preperformance state, routines and automaticity: What does it take to realize expertise in self-paced events? Journal of sport & exercise psychology. 2002.
14. Hagger MS, Wood CW, Stiff C, Chatzisarantis NL. Self-regulation and self-control in exercise: the strength-energy model. International Review of Sport and Exercise Psychology. 2010;3(1):62-86.
15. Gailliot MT, Plant EA, Butz DA, Baumeister RF. Increasing self-regulatory strength can reduce the depleting effect of suppressing stereotypes. Personality and Social Psychology Bulletin. 2007;33(2):281-94.
16. Stadler G, Oettingen G, Gollwitzer PM. Physical activity in women: Effects of a self-regulation intervention. American Journal of Preventive Medicine. 2009;36(1):29-34.
17. Toering TT, Elferink-Gemser MT, Jordet G, Visscher C. Self-regulation and performance level of elite and non-elite youth soccer players. Journal of sports sciences. 2009;27(14):1509-17.
18. Miller WR, Brown JM. Self-regulation as a conceptual basis for the prevention and treatment of addictive behaviours. Self-control and the addictive behaviours. 1991:3-79.
19. Rahavi R, Aslankhani M, Abdoli B, Vahabzade A. The Effects of Scheduled Practices (Self-Regulated and Non-Self-Regulated) on Learning of Simple and Complex Tracking Tasks. Journal of Motor Learning and Movement. 2009;1(2):65-85 [Article in Farsi].
20. Neal DJ, Carey KB. A follow-up psychometric analysis of the self-regulation questionnaire. Psychology of Addictive Behaviors. 2005;19(4):414.
21. Bradberry T, Greaves J. Emotional intelligence appraisal: There is more than IQ: TalentSmart; 2004.
22. Brown JM, Miller WR, Lawendowski LA. The self-regulation questionnaire. 1999.
23. Farmahini M, Farahani., Abdolmaleki J, Rashidi Z. An Investigation Of The Effect Of Emotional Intelligence, Self- Regulation Learning And Classroom Goal Orientation On Educational Progress Of The Male Students Of The First Year Of High School In Qorve. Daneshvar Raftar. 2008;15(30):85-97 [Article in Farsi].
24. Mabekoje SO. Emotional intelligence and self-regulation among school-going adolescent: Self-efficacy as a mediator. Cotemporary Humanities. 2010;4(2):209-22.
25. Khani M, Farokhi A, Shalchi B, Ansari A, Angoori P, Azerbaijan E. THE RELATIONSHIP OF PERSONALITY DIMENSIONS AND SELF-REGULATION COMPONENTS WITH SUCCESS OF IRANIAN BOXERS. Serbian journal of sports sciences. 2011;5(1):21-8.
26. Akbarzadeh N. Emotional Intelligence: from point of view of "Peter Salovey" and others. second ed. Tehran: Farabi Publication; 2004 [Book in Farsi]. 134 p.
27. Mayer JD, Salovey P. The intelligence of emotional intelligence. Intelligence. 1993;17(4):433-42.
28. Kruglanski AW, Thompson EP, Higgins ET, Atash M, Pierro A, Shah JY, et al. To" do the right thing" or to" just do it": locomotion and assessment as distinct self-regulatory imperatives. Journal of personality and social psychology. 2000;79(5):793.

مقاله اصیل
تاریخ دریافت: ۱۳۹۳/۰۶/۰۹
تاریخ پذیرش: ۱۳۹۳/۰۹/۰۴

تازه‌های علوم کاربردی ورزش
دوره سوم، شماره چهارم
ص‌ص ۱۸-۰۹، زمستان ۱۳۹۴

ارتباط میان هوش هیجانی و خودتنظیمی شناگران مرد نخبه

احد صدری*[۱]، حمید جنانی[۲]

۱. کارشناس ارشد تربیت بدنی، دانشگاه آزاد اسلامی، واحد علوم و تحقیقات آذربایجان شرقی، تبریز، ایران.
۲. استادیار رفتار حرکتی گروه تربیت بدنی، دانشگاه آزاد اسلامی، واحد تبریز، تبریز، ایران.

چکیده

هوش هیجانی به‌تنهایی یکی از عوامل مهم پیش‌بینی عملکرد فرد و قوی‌ترین نیرو برای رهبری و موفقیت معرفی شده است. هدف این تحقیق، بررسی همبستگی هوش هیجانی با خودتنظیمی شناگران مرد نخبه آذربایجان‌شرقی بود. آزمودنی‌های تحقیق ۱۰۰ نفر از شناگران مرد شرکت‌کننده در مسابقات قهرمانی شنای استان آذربایجان شرقی بود که از تاریخ ۱۸ تا ۲۱ اسفند ماه سال ۱۳۹۲ در تبریز برگزار شد (سن ۶/۸۶±۲۲/۸۶ سال و پیشینه تمرین در رشته شنا ۶/۵۱ ± ۱۱ سال). برای گردآوری داده‌های پژوهش از پرسشنامه‌های هوش هیجانی برادبری و گوریوز (۲۰۰۴) و خودتنظیمی براون، میلر و لاوندوسکی (۱۹۹۹) استفاده شد. نتایج نشان داد که میان نمره کلی هوش هیجانی و خودتنظیمی همبستگی مثبت و معنی‌داری وجود دارد (r=۰/۴۳، p = ۰/۰۰۱). همچنین میان همه مؤلفه‌های هوش هیجانی (بجز آگاهی اجتماعی) و نمره کلی خودتنظیمی همبستگی مثبت و معنی‌داری مشاهده شد (p=۰/۰۰۱). میان مؤلفه آگاهی اجتماعی هوش هیجانی و نمره کلی خودتنظیمی همبستگی منفی معنی‌داری بدست آمد (r=-۰/۴۱، p = ۰/۰۰۱). چنین پیداست که خودتنظیمی و هوش هیجانی از زیرساختارهای مشابهی تشکیل شده‌اند و این امر می‌تواند همبستگی بالای آن‌ها را توجیه کند.

واژگان کلیدی: هوش هیجانی، خودتنظیمی، شناگران مرد، خودمدیریتی.

* - نوسنده مسئول:
احد صدری
پست الکترونیک: ahadsadri@yahoo.com