ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/366958275

Investigation of the relationship between emotional quotient levels and imagery in university students in Turkey

Article *in* Conhecimento & Diversidade · December 2022

DOI: 10.18316/rcd.v14i35.10650

CITATIONS
0

READS
48

3 authors:



Mergül Çolak
Erzincan University
24 PUBLICATIONS **45** CITATIONS
SEE PROFILE



Ülviye Bilgin
Gazi University
30 PUBLICATIONS **38** CITATIONS
SEE PROFILE



Emrah Seçer
Erzincan University
8 PUBLICATIONS **47** CITATIONS
SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Exercise, training, endocrine View project

Thesis of effects of modified core exercise studies in alzheimer's patients over 55 years of age on depression, daily life activities and some physical fitness values View project

All content following this page was uploaded by Emrah Seçer on 08 January 2023.

The user has requested enhancement of the downloaded file.

Investigation of the relationship between emotional quotient levels and imagery in university students in Turkey

Investigação da relação entre os níveis de quociente emocional e a imagem em estudantes universitários na Turquia

Ulviye Bilgin*
Mergül Çolak**
Emrah Seçer***

Abstract

The purpose of this relational study is to investigate the relationship between emotional quotient levels and imagery. University students, studying in the field of sports sciences (n=298), participated in the study. "Revised Schutte Emotional Quotient Scale" and "Sports Imaginary Questionnaire" was used in the study. In statistical analysis, Pearson Correlation analysis and Multiple Linear Regression analysis were applied. As a result, in this study it was found that there were moderate relationships between cognitive imagery and emotional quotient, low relationships between motivational specific imagery and emotional quotient, and moderate and positive relationships between motivational general mastery and emotional quotient. However, no significant relationship was found between motivational general arousal and emotional quotient. When the results were examined, it was found that the sub-dimensions of Cognitive Imagery, Motivational Specific Imagery, and Motivational General Mastery were significant predictors of emotional quotient level and explained 25.4% of the variance in emotional quotient.

Keywords: Students; Emotional Quotient; Imagery.

* Gazi University, Faculty of Sports Sciences, Department of Physical Education and Sports Teaching/Turkey; Email: ulviye@gazi.edu.tr; https://orcid.org/0000-0001-5871-0089

** Erzincan Binali Yildirim University, Faculty of Sports Sciences, Department of Physical Education and Sports Teaching/Turkey; Email: mcolak@erzincan.edu.tr; https://orcid.org/0000-0002-4762-8298

*** Erzincan Binali Yildirim University, Faculty of Sports Sciences, Department of Sports Management/Turkey; Email: emrah.secer@erzincan.edu.tr; https://orcid.org/0000-0002-6683-680X

Resumo

O objetivo deste estudo relacional é investigar a relação entre os níveis de quociente emocional e as imagens. Estudantes universitários, estudando na área de ciências do esporte (n=298), participaram do estudo. Foram utilizados no estudo "Escala de Quociente Emocional Schutte revisada" e "Questionário Imaginário Esportivo". Na análise estatística, foram aplicadas a análise de Correlação Pearson e a análise de Regressão Linear Múltipla. Como resultado, neste estudo foi constatado que havia relações moderadas entre imagens cognitivas e quociente emocional, relações baixas entre imagens específicas motivacionais e quociente emocional, e relações moderadas e positivas entre o domínio geral motivacional e o quociente emocional. Entretanto, não foi encontrada nenhuma relação significativa entre a excitação geral motivacional e o quociente emocional. Quando os resultados foram examinados, verificou-se que as sub-dimensões da imagem cognitiva, da imagem específica motivacional e do domínio geral motivacional foram preditores significativos do nível de quociente emocional e explicaram 25,4% da variação do quociente emocional.

Palavras-chave: Estudantes; Quociente Emocional; Imagiologia.

Introduction

The concept of Emotional Quotient (EQ) gained popularity in the mid-1990s with the STUDY of Goleman (Goleman 1995). This concept has been studied by many researchers in academic studies and field practices until today. In particular, Schutte et al. (Schutte et al. 2007c) collected all researched studies on emotional quotient and health in their article (Rubaltelli et al., 2018; Castro-Sánchez, et al., 2018). Many studies conducted in recent years have revealed that the definition of intelligence quotient (IQ) should be expanded and the emotional quotient (EQ) should be included in this definition (Koçak & İçmenoğlu, 2016). Goleman (Goleman 2005), on the other hand, demonstrated in a comprehensive study that the emotional quotient is a much more important phenomenon than the classical theory of intelligence. The concept of emotional quotient has been the subject of research in many fields such as education (Thomas et al., 2017), health (Pau & Sabri, 2015) and exercise (Dağ & Sarı, 2019; Solanki & Lane, 2010).

Emotional quotient plays a serious role in the individual's ability to cope with the difficulties, unexpected situations and problems that s/he has encountered in personal, social and business life. Emotional quotient is concerned with the skills and strategies to process emotional information (Lopes, et al., 2006). It also includes the interaction of emotion and cognition that enables the individual to adapt (Salovey & Grewal, 2005) or a common combination of emotion and intelligence (Ciarrochi et al., 2000; Roberts, et al., 2001). Accordingly, it is debated that the four interrelated basic skills consist the emotional quotient (Brackett & Mayer, 2003; Warwick & Nettelbeck, 2004). The first skill, perceiving emotions, is comprehending one's own and others' emotions with information obtained from facial expressions, verbal messages, body language or similar cues. It includes the ability to accurately express one's own emotions using these clues (Mayer, et al., 2004; Lopes, et al., 2006). The second skill, using emotions, requires concentration, thinking rationally, and developing, using and feeling emotions for the correct communication. The third skill in the model is about grasping emotional processes. It requires having knowledge of which events are likely to generate different emotion types, combining the necessary ones from complex emotion bundles,

and comprehending how emotions evolve. The last skill of the model refers to individuals' ability to manage their own emotions and cope with emotionally challenging interpersonal situations. This emotional skill requires the ability to regulate the expression and perception of emotions in interpersonal interaction situations in order for the individual to realize his/her purpose (Mayer et al., 2004).

Matthews et al., (2002) noted that the emotional quotient level might affect both mental disorders in which emotion plays a critical role and disorders linked with the non-emotional characteristics of the emotional quotient. Mood and anxiety disorder conditions are examples of maladaptive emotional states as primary indications (Matthews et al., 2002). Improved perception, comprehension, and administration of emotion by those with high emotional quotients may interfere with the development of maladaptive emotional states associated with mood and anxiety problems. Studies have shown that those with higher emotional quotients are usually prone to have a more positive mood and can better repair their spirit after a pessimistic mood induction (Schutte et al., 2002b).

According to Murphy (1994), imagery is the internal recall of sensory experiences stored in memory and the repetition of these experiences without an external stimulus. Imagery is part of our thinking system. We can also use the imagery to recreate a past successful performance by rethinking what we saw or thought. In other words, we can remember events in the past and recreate them in our brain, or we can see events that never happened in our minds (Weinberg & Gould, 1995).

In order for the skills demonstrated in sports to yield successful results, it is necessary to perform the application at the right time, in the right place, with the right technical choices, with the right methods, and by making the right decisions. It is known that imagery studies are important in improving the ability of athletes to make correct decisions and practice. Imagery is an experience in which real lives are imitated. It can be noticed that the imaged thing is seen, its movements can be felt while imagining, or images of sounds, tastes and smells can be experienced without real experiences. Imagery includes not only visualizing but also experiencing this situation with all sense organs (seeing, smelling, hearing, touching, tasting) (Hall, 2001).

In the sports science literature, imagery types are grouped under five main headings (Hall et al., 1998). These are: “cognitive specific imagery”, which includes the perfect application of special skills and has a direct impact on the development of a skill; “cognitive general imagery”, which includes successful implementation of performance plans; “motivational specific imagery” that includes imagery of specific performance goals achieved; "motivational general mastery", in which athletes imagine how to deal with competition-specific technical and tactical problems when faced with them; and finally “motivational general arousal”, which defines the emotions accompanying important competitions and is also used to control the anxiety and arousal level of the athlete while preparing for the competition (Miçooğulları et al., 2009).

According to Zizzi, et al., (2003), an athlete reported that in order to perform well in team sports; she should know his/her own emotions, the emotions of his/her teammates and opponents well. Moreover, Lane et al., (2009b) state that the use of psychological skills such as imagery and self-talk is positively associated with the emotional quotient at the individual level.

When the importance of the emotional quotient is evaluated in the context of team and individual sports, it is stated that high level emotional quotient in athletes (especially in team sports) is directly related to performance success (Crombie, et al., 2009; Perlini & Halverson, 2006; Zizzi, et al., 2003).

In literature there are many publications on emotional quotient and imagery. However, specific studies in which both subjects were conducted at the same time could not be found. In order for the skills demonstrated in sports to yield successful results, it is necessary to perform the application at the right time, in the right place, with the right technical choices, with the right methods, and by making the right decisions. Both the development of physical skills and the development of mental skills can be achieved with imagery. With Imagery, physical corrections such as improving the skills learned and correcting mistakes can be provided, as well as psychological adjustments such as controlling emotions, improving concentration and self-confidence. It is obvious that the emotional quotient is also important for the athletes to be successful and to benefit from the imagery adequately, and to develop their ability to make the right decision and practice. For this reason, it is thought that determining the relationship between the emotional quotient and imagery will be important in terms of guiding the practitioners in the sport (trainer, athlete etc.).

Methods

Research Model

Relational survey model, one of the quantitative research methods, was used in the research. Relational survey model is defined as a method that intents to determine the degree and variation of the relationships between two or more variables (QuestionPro. 2022).

Research Group

The sample of study consists of 298 (141 female and 157 male) university students in the field of sports sciences in Ankara, who were selected by simple random method. The simple random sampling method is a method in which the participants are randomly selected from the population and the probability of each unit being selected is equal. It is stated that the representation power of this sampling method is higher than other methods (Büyüköztürk et al., 2021).

The protocol of the study was approved by the Human Research Ethics Committee of Erzincan Binali Yildirim University (30/06/2021 -decision number 07/14). The study was conducted in accordance with the Declaration of Helsinki.

Data Collection Tools

In the research, "Personal Information Form" created by the researchers as well as "Revised Schutte Emotional Quotient Scale" and "Sports Imagery Questionnaire" were used to determine the characteristics of the study group.

Schutte Emotional Quotient Scale was developed by Schutte et al. (1998a) as 33 items, and was arranged by Austin et al., (2004) as 41 items, and was adapted by Tatar et al., (2011) into Turkish. Only the total score of the Revised Schutte Emotional Quotient Scale was evaluated. This test is a 33-item measurement tool that evaluates individuals' ability to identify, understand and manage their own emotions and those of others.

Sport Imagery Questionnaire; the imagery scale developed by Hall et al. (1998) was adapted into Turkish by Kızıldağ and Tiryaki (2012). The scale consists of 4 sub-dimensions and 21 items (Table 1).

Table 1 – Sport Imagery Questionnaire

Cognitive imagery	1,2,4,5,7,9,13,14,15
Motivational specific-imagery	3,6,8,10,20
Motivational general-arousal	11,12,17,19
Motivational general-mastery	16,18,21

Cognitive imagery (CI): Cognitive imagery is used for the correct application of special skills. This type of imagery appears to be used in the development of many skills, from golf swing to basketball free throw (Paivio, 1985).

Motivational specific imagery (MS): Feelings such as winning, seeing that they are congratulated for their good performance, being proud of winning increases the motivation of the athletes. Paivio (1985) found that athletes using Motivational Specific-Imagery were better at maintaining goal-related tasks (e.g., training).

Motivational general-mastery imagery (MG-M): It is known that athletes, who use this type of imagery more, have more mastery-related skills. Motivational general mastery serves to keep the athlete mentally strong and in control (Hall et al., 1998).

Motivational general-arousal imagery (MG-A): Athletes using this type of imagery try to keep their arousal levels under control. In this context, the person can learn ways to cope emotionally. Also, this type of imagery is used to control arousal level and anxiety when preparing for a competition (White & Hardy, 1998).

Results

In the study, descriptive analyses were conducted to determine the demographic characteristics (gender, age, height, weight) of the participants. In order to determine the statistical techniques to be applied in the research, the distribution characteristics were determined and the assumptions of the parametric tests were tested. It was determined that the skewness value was between -.100 and -.521, while the kurtosis values were between -.693 and

-.031. It is stated that if the values in question are between -1.5 and +1.5, it is appropriate to perform parametric analyses in which the data have a normal distribution (Tabaschnick & Fidell, 2013). From this point of view, Pearson Correlation analysis was applied to determine the relationship between the variables and Multiple Linear Regression analysis was applied to determine the effect of emotional quotient on imagery in sports. The minimum, maximum, mean and standard deviation values of the answers given to the scales are shown in Table 2.

Table 2 – Mean, Standard Deviation, Minimum, Maximum, Skewness and Kurtosis Values of Participants' Scale Scores

Factor	n	Min.	Max.	Mean	Sd.	Skewness	Kurtosis
Emotional Quotient Scale	298	2.73	4.73	3.67	.434	-.100	-.681
Cognitive Imagery	298	2.56	7.00	5.49	.843	-.206	-.031
Motivational Specific-Imagery	298	2.40	7.00	5.40	1.196	-.472	-.543
Motivational General-Arousal	298	1.50	7.00	4.98	1.132	-.521	.141
Motivational General - Mastery	298	3.00	7.00	5.79	.915	-.261	-.693

Results

Demographic characteristics of the participants are given in Table 2. 52.7% of the participants were male and 47.3% were female. It is seen that the participants are between the ages of 18 - 25 and have an average age of 22.10, have a height of 154 - 210 cm and an average height of 175.76, and have a body weight of 48 - 101 kg and an average of 69.99 kilograms (Table 3).

Table 3 – Characteristics of Participants

Characteristics (n:298)	Group	n	%
Gender	**Female**	141	47.3
	Male	157	52.7
		Min-Max	**X±Ss**
Age (years)		18-25	22.1±2.45
Height (cm)		154.00-210.00	175.76±11.21
Weight (kg)		48.00-101.00	69.69±9.89

Pearson Correlation test results that showed the relationship between Emotional quotient levels and Cognitive imagery dimensions were given in Table 4. Analysis results, showed that there were moderate level of (r=.399, p<.01) relationships between cognitive imagery and emotional quotient, low level of (r=.138, p<.05) relationships between motivational specific-imagery and emotional quotient, and moderate (r=.465, p<.01), significant and positive relationships between motivational general-mastery and emotional quotient. However, the relationship between motivational general arousal and emotional quotient was not significant (p>.05).

Table 4 – The Relationship Between Participants' Emotional Quotient Scores and Cognitive Imagery Levels

		Cognitive Imagery	**Motivational Specific-Imagery**	**Motivational General-Arousal**	**Motivational General-Mastery**	**Emotional Quotient**
Cognitive Imagery	**r**	1				
	p					
Motivational Specific-Imagery	**r**	.521	1			
	p	**.000****				
Motivational General-Arousal	**r**	.263	.533	1		
	p	**.000****	**.000****			
Motivational General-Mastery	**r**	.702	.511	.285	1	
	p	**.000****	**.000****	**.000****		
Emotional Quotient	**r**	.399	.138	.019	.465	1
	p	**.000****	**.017***	.742	**.000****	

p<.05*, p<.01**

Multiple Linear regression analysis' results showed that there were significant relationships between emotional quotient and cognitive imagery, motivational-specific imagery and motivational general-mastery (Table 5). According to this result, Imagery scores explain 25.4% of the variance in the emotional quotient. According to the standardized regression coefficients, the relative importance of the predictive variables on the emotional quotient appears to be motivational general mastery β=.420, cognitive imagery β=.196, and motivational specific imagery β=.137. The variables in question have significant and positive values, and it can be said that an increase in the values will also increase the level of emotional quotient.

Table 5 – Multiple Linear Regression Analysis Results for Predicting Participants' Emotional Quotient Levels

	B	Sh.	β	t	p
Constant	97.671	6.704		14.569	**.000***
Cognitive Imagery	4.144	1.552	.196	2.670	**.008***
Motivational Specific-Imagery	-2.039	1.022	.137	-1.994	**.047***
Motivational General-Arousal	-1.244	.938	-.079	-1.325	.186
Motivational General - Mastery	8.162	1.420	.420	5.748	**.000***

R=.504, R^2=.254, F=24.882, p<.05

Discussion

In this study examining the relationship between emotional quotient and imagery in athletes, it was determined that there was moderate level (r=.399, p<.01) of relationships between cognitive imagery and emotional quotient, low level (r=.138, p<.05) of relationships between motivational specific-imagery and emotional quotient, and moderate (r=.465, p<.01), significant and positive relationships between motivational general-mastery and emotional quotient. No significant relationship was found between motivational general arousal and emotional quotient. According to the end of multiple linear regression analysis, imagery scores explain 25% of the variance in the emotional quotient. It can be said that other variables have significant and positive values, except for the motivational general arousal variable, and increases in the values affect each other positively.

Studies in the sports literature indicate that psychological skills facilitate athletic performance in athletes (Altıntaş & Akalan 2008). Emotional quotient is also among the important psychological skills. In general, it has also been reported that there is a positive relationship between performance and the emotional quotient, and between performance and the emotional quotient's dimension of being able to manage one's own emotions (Beauchamp et 1996; Thelwell & Greenlees, 2001).

The relationship and interaction between mental training and performance has also been revealed in some studies in the literature (Botwina & Krawczynski, 2003; Mamassis & Doganis, 2004).

Chakarvarti & Lal (2016) found that high-performing participants had higher emotional quotient scores than others in their study of high- and low-performing Indian sprinters.

In another study, Lane et al., (2009b) state that psychological skills used in competition and training may be related to emotional quotient approaches. Specifically, self-talk, imagery, and activation during training and competition connect with perspectives of assessing the feelings of others and the ability to regulate emotions. It is emphasized that the

emotional quotient perceptions of individuals who report the direction of relationships and the frequent use of psychological skills are also stronger. Having an improved use of psychological skills is associated with the emotional quotient. This study is parallel to the literature and contributes to the literature in this sense.

In the study conducted by Alaeddinoğlu et al., (2022). it was stated that the communication levels of curling athletes were greatly affected by the pre-constructed mental processes and preliminary studies. Every mental training has a great impact on success in all aspects during the competition (Alaeddinoglu, Şebin, Çakır, 2022).

In a study examining the relationship between the use of imagery skills and the levels of sportive confidence in secondary school students participating in school sports (Savaş, 2019), as a result of the correlation analysis between sportive imagery and sportive confidence, it was determined that as sportive imagery skill increases, sportive self-confidence perception also increases. In parallel, Kolayış et al., (2015) found that there was a statistically significant positive relationship between cognitive imagery and motivational general-mastery and sports history in their study on female athletes between the ages of 14-18 in which imagery, motivation and anxiety relationships were examined.

Within their studies in which they investigated the relationship between imagery ability and imagery use in athletes, Gregg et al., (2011) revealed in their hierarchical regression analysis that the imagery capability explains 20% to 41% of the variance in the use of imagery functions. They also stated that visual and kinesthetic imagery ability predicts cognitive specific image use, and motivational general-mastery and motivational general-arousal imagery ability predict the use of motivational general functions of imagery. They also suggested using more than one evaluation method to evaluate imagery ability.

In a study of 54 male athletes from team sports (soccer, field hockey and rugby), it was stated that self-talk, imagery and activation were associated with emotional quotient both in training and competition. It was also stated that the emotional quotient perceptions of individuals who reported the direction of relationships and the frequent use of psychological skills were also stronger (Lane et al., 2009b). In the current study, Imagery scores explain 25% of the variance in the emotional quotient. In this sense, the study is similar to the literature.

In a study examining the relationship between the imagery skills of the archers and their attention levels, it was stated that the cognitive imagery, motivation specific imagery and motivation general-arousal sub-dimensions of the imagery questionnaire were low pre-ictors of the archers' attention levels (Tekin & Ulukan, 2020).

In his thesis study, Alaeddinoğlu stated that cartoons and animation increase effective pre-learning in tennis learning and that the next tennis technique increases with imagery (Alaeddinoglu & Kalkavan 2019).

Bahadır & Adiloğulları (2020) stated that as the emotional quotient levels of the athletes increased, their mental resilience levels increased. In their study investigating the relationship between mental resilience and emotional quotient, they found that there is a positive and weakly significant relationship between emotional quotient and mental resilience levels in university students participating in sportive activities. In addition, they emphasized that this relationship is important for researchers and practitioners and that this situation should be taken into account in terms of performance development of the athlete. Therefore, the high

mental endurance ability of the athlete can be considered as one of the common characteristics of successful athletes due to the differences it creates in performance (Güven & Yazıcı, 2020).

In this study, in which we examined the association between emotional quotient and imagery, no significant association was found between the emotional quotient and the motivational general arousal variable that they imagined how to cope with problems.

The relationship between emotion and performance in psychology is explained with the IZOF model. The IZOF model is an emotion management system developed by Russian-Finnish Yuri Hanin, targeting individual performance in sports. According to Hanin (2000)'s IZOF model, it is a theoretical and practical approach that enables qualitative and quantitative analysis of the functional relationship between emotions and performance. In 4 sections described as Individual, Regions, Optimal and Functionality; It has been stated that there are individual differences among the athletes, the optimal anxiety level may vary for the athletes in the same sport, and the high anxiety levels of some athletes and low anxiety levels may affect performance (Hanin, 2000; Graeme J. Connolly 2019).

Robazza et al. (2004), In their research based on the IZOF model, they point out that personal feelings and physical reactions can distinguish between successful and less successful performances. In other words, the type and intensity of emotions and some of the physical responses associated with them increase the likelihood of good or bad performance.

Saklofske et al. (2007), reported that emotional intelligence is related to exercise behavior and emotional intelligence also regulates the relationship between exercise behavior and personality. They also stated that exercising may be related to emotional quotient.

Tok et al. (2008), found that emotional intelligence differs according to the status of being an athlete or not. Emotional intelligence level is more developed in athletes. In the same study, they stated that emotional intelligence differs according to the sports branch. While the emotional intelligence level of athletes from swimming, volleyball and basketball branches was higher, emotional intelligence was the lowest among non-athletes and athletes in athletics. They also found that emotional intelligence did not differ by gender.

Cooper et al. (2021) investigated athletes' performance-related emotions and emotional profiles for optimum performance in strength and conditioning; They stated that an optimal emotional profile should be reached in order to achieve the highest perceived performance in strength and condition, and in order to achieve this, they should be informed and developed about psychological skills and strategies in cooperation with sports psychologists.

Basically, you need enough stress to provide motivation, but not as much as you get overwhelmed. Mild to moderate short-term stress can cause an acute stress response that provides the motivation and energy needed just when it's needed. It only lasts long enough to help you do your best. It is difficult to detect this case and it will differ from person to person and according to the branches. Since branch change was not examined in this current study, the inability to find a relationship between motivational general arousal levels, which is the sub-dimension of imagery, and emotional quotient can be explained in this way.

Emotional quotient is highly interesting in the field of sports. The interior and intersubjective aspects are crucial here. More or less, every athlete achieves self-consciousness, self-discipline, self-spur, social skills, and empathy. The performances of individuals with high emotional quotients are positively affected. There is a relationship between emotional quotient

and imagery. From here, paying attention to the emotional quotient development of children in the general education system will bring success in sports branches in the future.

Conclusion

At the end of the study, except for the motivational general arousal sub-dimension positive correlations were found among the imagery sub-dimensions' and emotional quotient. Cognitive imagery, Motivational specific-imagery and Motivational general-mastery were predicted 25.4% of the variance in the emotional quotient level of athletes.

The findings of this study have a number of important suggestions for researchers and practitioners:

- This study was carried out with a limited number of participants, studies with larger sample groups can be conducted in the future. In addition, studies can be conducted on athletes in different age categories.
- In this study, no distinction was made between individual and team athletes. In new studies, individual, team and branch distinctions can be made.
- Gender differences can be examined in future studies.
- The effect of emotional quotient and imagery training on performance in sports can be investigated.
- Different parameters can be compared together with emotional quotient and imagery.
- Based on the results of our research, it is recommended that trainers, managers, mentor etc. pay attention to emotional quotient and imagery training and seminars.

References

Altıntaş, A., & Akalan, C. (2008). Zihinsel antrenman ve yüksek performans. *Beden Eğitimi ve Spor Bilimleri Dergisi SPORMETRE, 6*(1), 39-43. https://doi.org/10.1501/Sporm_0000000131

Alaeddinoglu, V., Kalkavan, A. (2019) Yeni Yaklaşımla İnteraktif Tenis Öğretimi, Gece Kitaplığı, Ankara

Alaeddinoglu, V., Şebin, K., Çakır, B. Ö., (2022) Investıgatıng Curling Athletes' Effective Communicatıon Skills, RPGE– Revista on line de Política e Gestão Educacional, Araraquara, v.26, n.1, p. 892-909, 2022 ISSN: 1519-9029 DOI: https://doi.org/10.22633/rpge.v26i1.19689

Austin, E. J., Saklofske, D. H., Huang, S. H. S., & McKenney, D. (2004). Measurement of trait emotional intelligence: testing and cross-validating amodified version of Schutte et al.'s (1998) measure. *Pers Indiv Differ. 36*(3), 555-62. doi:10.1016/S0191-8869(03)00114-4.

Bahadır, G., & Adiloğulları, İ. (2020) The examination of relationship between mental toughness and emotional ıntelligence in university students engaged in sports. *Internatinal Journal of sport, Exercise and Training sciences. 6*(4), 117–128. e-ISSN: 2149-8229. doi: 10.18826/useeabd.793760

Beauchamp, P. H., Halliwell, W. R., Fournier, J. F., & Koestner, R. (1996). Effects of cognitive-behavioral psychological skills training on the motivation, preparation, and putting performance of novice golfers. *The Sport Psychologist, 10*(2), 157-170.

Botwina, R., & Krawczynski, M. (2003). "Application of visulation in training of young football players", *XI. European Congress of Sport Psychology*.

Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Pers Soc Psychol Bull, 29*(9), 1147-58. https://doi.org/10.1177%2F0146167203254596

Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2021). *Bilimsel araştırma yöntemleri* (30. baskı). Ankara: Pegem.

Castro-Sánchez, M., Zurita-Ortega, F., Chacón-Cuberos, R., López-Gutiérrez, C. J., & Zafra-Santos, E. (2018). Emotional intelligence, motivational climate and levels of anxiety in athletes from different categories of sports: analysis through structural equations. *International journal of environmental research and public health, 15*(5), 894. https://doi.org/10.3390/ijerph15050894

Ciarrochi, J. V., Chan, A. Y. C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Pers Indiv Differ, 28*(3), 539- 61. https://doi.org/10.1016/S0191-8869(99)00119-1

Chakarvarti, D., & Lal, M. (2016). Emotional Intelligence and Its Association with Social Physique Anxiety and Performance among Sprinters. *Rupkatha Journal on Interdisciplinary Studies in Humanities, 8*(2), 71-78. https://rupkatha.com/v8n2.php

Cooper, JJ, Johnson, M, Radcliffe, J, and Fisher, J. (2021). Optimal emotional profiles for peak performance in strength and conditioning. J Strength Cond Res 35(3): 833–840. https://doi.org/10.1519/jsc.0000000000002832

Crombie, D., Lombard, C., & Noakes, T. (2009). Emotional intelligence scores predict team sports performance in a national cricket competition. *International Journal of Sports Science & Coaching, 4*(2), 209-224.

Dağ, A., & Sarı, İ. (2019). Duygusal zekâ ve sporcularda duygusal zekâ kullanımı. *İnsan ve Toplum Bilimleri Araştırmaları Dergisi, 8*(1), 183-200.

Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books

Goleman, D. (2005*). Duygusal zeka neden IQ'dan daha önemlidir?*. Çeviren: Banu Seçkin Yüksel, İstanbul: Varlık Yayınları.

Graeme J. Connolly (2019) Applying Emotion Theory in Coaching Athletes: Play an Effective Affective Game, Strategies, 32:3, 25-30, https://doi.org/10.1080/08924562.2019.1583618

Gregg M., Hall C., McGowan E., E., Hall N. (2011) The relationship between ımagery ability and ımagery use among athletes. *Journal of Applied Sport Psychology. 23*(2), 129-141. https://doi.org/10.1080/10413200.2010.544279

Güven Ş., & Yazıcı, A. (2020). Türkiye'de zihinsel dayanıklılık konusunda yapılmış araştırmaların analizi ve incelenmesi. *Ulusal Spor Bilimleri Dergisi, 4*(1), 82-93. https://dergipark.org.tr/en/download/article-file/1172654

Hall, C. R., Mack, D., Paivio, A., & Hausenblas, H. (1998). Imagery use by athletes: Development of the sport imagery questionnaire. *International Journal of Sport Psychology, 29*(1), 73-89. https://psycnet.apa.org/record/1998-04132-006

Hall, C. R. (2001). *Imagery in sport and exercise. In: Handbook of research on sport psychology*. RN Singer, HA Hausenblas (Eds), 2nd ed, New York, John Wiley and Sons, p 538.

Hanin, Y. L. (2000). Individual zones of optimal functioning (IZOF) model: Emotion-performance relationships in sport. In Y. L. Hanin (Ed.), *Emotion in sport* (pp. 65–89). Champaign, IL: Human Kinetics.).

Kolayiş, H., Sarı, İ., & Köle Ö. (2015) Takım sporlarıyla uğraşan kadın sporcuların imgeleme, güdülenme ve kaygı puanları arasındaki ilişkinin incelenmesi. *Ankara Üniv Spor Bil Fak Dergisi, 13*(2), 129-136. https://dergipark.org.tr/en/download/article-file/600899

Koçak, R., & İçmenoğlu, E. (2016). Üstün yetenekli öğrencilerin duygusal zekâ ve yaratıcılık düzeylerinin yaşam doyumlarını yordayıcı rolü. *Türk Psikolojik Danışma ve Rehberlik Dergisi,4*(37). https://web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=505f8893-c7f2-4cb1-9769-1adf33cbc34f%40redis

Kızıldağ, E., & Tiryaki, M. Ş. (2012). Adaptation of Sports ımagery questionnaire for turkish athletes. *Hacettepe J. of Sport Sciences, 23*(1), 13–23. https://dergipark.org.tr/en/download/article-file/151223

Lane, A. M., Meyer, B. M., Devenport, T. J., Davies, K. A., Thelwell, R., Gill, G. S., & Weston, N. (2009a). Validity of the emotional intelligence scale for use in sport. *Journal of Sport Science and Medicine, 8(2)*, 289-295. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3761491/

Lane, A. M., Thelwell, R. C., Lowther, J., & Devonport, T. J. (2009b). Emotional intelligence and psychological skills use among athletes. *Social Behavior and Personality: An İnternational Journal, 37*(2), 195-201. https://web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=08c1a451-ca4c-4c3d-ae7a-3f6a88d065b7%40redis

Lopes, P. N., Côté, S., & Salovey, P. (2006) An ability model of emotional intelligence: Implications for assessment and training. In VU Druskat, F Sala, G, Mount (Eds.). Emotional intelligence and workplace performance. Mahway NJ: Lawrence Erlbaum.

Mamassis, G., & Doganis, G. (2004). The effects of a mental training program on juniors pre-competitive anxiety, self confidence, and tennis performance. *Journal of Applied Sport Psychology, 16*, 118-137. https://doi.org/10.1080/10413200490437903

Matthews, G., Zeidner, M., & Roberts, R. D. (2002). *Emotional intelligence: Science and myth*. MIT Press, Cambridge, MA

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional ıntelligence: Theory, findings and ımplications. *Psychol Inq, 15*(3), 197-215.

Miçooğulları, O., Kirazcı, S., & Özdemir, R. A. (2009). Futbolcuların deneyimleri açısından imgeleme türleri ve kullanım düzeylerinin belirlenmesi. *Spor Hekimliği Dergisi, 44*, 1-8. https://journalofsportsmedicine.org/full-text/110/tur

Murphy, S. M. (1994). Imagery interventions in sport. *Medicine and Science in Sports and Exercise*, 26(4), 486-494. https://psycnet.apa.org/doi/10.1249/00005768-199404000-00014

Paivio, A. (1985). Cognitive and motivational functions of imagery in human performance. *Canadian Journal of Applied Sport Sciences, 10*, 22- 28. https://europepmc.org/article/med/4085129

Pau, A., & Sabri, B. A. (2015). Relationship between emotional intelligence and job satisfaction in newly qualified malaysian dentists. *Asia Pacific Journal of Public Health, 27*(2), NP1733-NP1741. https://doi.org/10.1177%2F1010539512449855

Perlini, A. H., Halverson, T. R. (2006). Emotional intelligence in the national hockey league. *Canadian Journal of Behavioural Science, 38*(2), 109-119. https://doi.org/10.1037/CJBS2006001

QuestionPro. (2022). Quantitative Research: Definition, Methods, Types and Examples. Retrieved from https://www.questionpro.com/blog/quantitative-research/. Accessed October 26, 2021

Roberts, R. D., Zeidner, M., & Matthews, G. (2001). Does emotional intelligence meet traditional standards for an intelligence? Some new data and conclusions. *Emotion, 1*(3), 196-231. https://psycnet.apa.org/doi/10.1037/1528-3542.1.3.196

Rubaltelli, E., Agnoli, S., & Leo, I. (2018). Emotional intelligence impact on half marathon finish times. *Personality and Individual Differences, 128*, 107-112. https://doi.org/10.1016/j.paid.2018.02.034

Saklofske, D. H., Austin, E. J., Rohr, B. A., & Andrews, J. J. W. (2007). Personality, emotional intelligence and exercise. *Journal of Health Psychology*, 12, 937-948. https://doi.org/10.1177%2F1359105307082458

Salovey, P., & Grewal, D. (2005). The Science of Motional İntelligence. *Curr Dir Psychol Sci, 14*(6), 281-285.

Savaş, M. (2019). Okul sporlarına katılan ortaöğretim öğrencilerinin imgeleme becerileri kullanımı ile sportif güven düzeyleri arasındaki ilişkini incelenmesi. Erzincan Binali Yıldırım Üniversitesi Sağlık Bilimleri Enstütüsü Beden Eğitimi ve Spor Anabilim Dalı, Yüksek Lisans Tezi, Erzincan.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., Dornheim, L. (1998a). Development and Validation of a Measure of Emotional İntelligence. *Pers Indiv Differ, 25(2)*, 167-177.

Schutte, N. S., Malouff, J. M., Simunek, M., McKenley, J., & Hollander, S. (2002b). Characteristic emotional intelligence and emotional well-being. *Cognition & Emotion, 16*(6), 769-785. https://doi.org/10.1080/02699930143000482

Schutte, N. S., Malouff, J. M., Thorsteinsson, E.B., Navjot Bhullar, N., & Rooke, S. E. (2007c) A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences, 42*, 921-933. https://doi.org/10.1016/j.paid.2006.09.003

Solanki, D., & Lane, A. M. (2010). Relationships between exercise as a mood regulation strategy and trait emotional intelligence. *Asian Journal of Sports Medicine, 1*(4), 195. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3289183/

Tabaschnick, B. G. & Fidell, L. S. (2013). *Using Multivariate Statistics* (6th Edit.). Boston: Pearson.

Tatar, A., Tok, S., & Saltukoğlu, G. (2011). Adaptation of the revised schutte emotional ıntelligence scale into turkish and ınvestigation of its psychometric properties. *Bulletin of Clinical Psychopharmacology, 21*(4), 325-38. http://dx.doi.org/10.5455/bcp.20110624015920

Tekin, M., & Ulukan, M. (2020). Okçuların imgeleme becerileri ile dikkat düzeyleri arasındaki ilişkinin incelenmesi. *Turkish Studies – Educational Sciences, 15*(4), 3099-3110.

Thelwell, R. C., Greenlees, I. A. (2001). The effects of a mental skills training package on gymnasium triathlon performance. *The Sport Psychologist, 15*(2), 127-141. https://journals.humankinetics.com/view/journals/tsp/15/2/article-p127.xml

Thomas, C. L., Cassady, J. C., & Heller, M. L. (2017). The influence of emotional intelligence, cognitive test anxiety, and coping strategies on undergraduate academic performance. *Learning and Individual Differences, 55*, 40-48. https://doi.org/10.1016/j.lindif.2017.03.001

Tok, S., Moralı, S. L., & Tatar, A. (2007, 7-9 May). Duygusal zekâ ve ölçek araştırmaları schutte duygusal zekâ ölçeğinin türkçeye uyarlanması ve psikometrik özelliklerinin incelenmesi. *International Emotional Intelligence and Communication Symposium*, İzmir.

Warwick, J., & Nettelbeck, T. (2004). Emotional intelligence is. *Pers Indiv Differ, 37*(5), 1091-1100. Doı: 10.1016/j.paid.2003.12.003

Weinberg, R. S., & Gould, D. (1995). *Foundations of sport and exercise psychology*. Champaign, IL: Human Kinetics, 280-283.

White, A., & Hardy, L. (1998). An in-depth analysis of the uses of imagery by high-level slalom canoeists and artistic gymnasts. *The Sport Psychol, 12*(4), 387-403. https://doi.org/10.1123/tsp.12.4.387

Zizzi, S., Deaner, H., & Hirschhorn, D. (2003). The relationship between emotional intelligence and performance among college basketball players. *Journal of Applied Sport Psychology, 15*(3), 262-269. https://doi.org/10.1080/10413200305390

View publication stats