GAZİANTEP ÜNİVERSİTESİ
Spor Bilimleri Dergisi

Cilt / Vol: 5, Sayı / Issue: 4
Aralık / December, 2020
ISSN: 2536-5339

The Examine of Imagination and Self-Efficacy Levels of Athletes in Terms of Some Variables

Serdar KOCAEKŞİ[1*] Umut SEZER[1] Ayşegül Funda ALP[2] Ramazan TAŞÇIOĞLU[3]

Eskişehir Teknik Üniversitesi Spor Bilimleri Fakültesi, *ESKİŞEHİR*
Kocaeli Üniversitesi Spor Bilimleri Fakültesi, *KOCAELİ*
Anadolu Üniversitesi Sağlık Bilimleri Enstitüsü, *ESKİŞEHİR*

DOI: 10.31680/gaunjss.789403

Orijinal Makale / Original Article

Geliş Tarihi / Received: 02.09.2020 **Kabul Tarihi / Accepted:** 29.12.2020 **Yayın Tarihi / Published:** 29.12.2020

Abstract
The aim of this study is to evaluate the imagery and self-efficacy beliefs of athletes. 35 male and 47 female; totally 82 athletes participated in the study. SIQ and SES scales were used to collect the data. SES (Self-Efficacy Scale) that was developed Riggs et al. (1994) was translated and adapted to Turkish by Öcel (2002). SIQ (Sport Imagery Questionnaire) especially developed for sports and it was designed by Hall et al (1998). Turkish adaptation of inventory was done by Kızıldağ in 2007. According to t test results by gender comparative comparison, sub dimension of sport imagery questionnaire, there is a statistically significant difference at the sub dimension of imagery which is the Motivational Specific Imagery and Motivational General Arousal Imagery ($p<0.05$). The Correlation results showed that there was a significant relationship between Cognitive Imagery and Self Efficacy; Motivational Specific Imagery and Self Efficacy; Motivational General-Mastery and Self Efficacy ($p<0.05$). The results of this study reveal that, the imagery change in terms of gender, imagery and self-efficacy beliefs show some relationships and this relationship is observable.
Keywords: Sports psychology, Mental practice, Efficacy beliefs, Mental skills

Introduction

Self-efficacy represents the belief a person has in terms of doing an activity at a specific environment. The ability, desire and competence to achieve a task identify the amount of the effort, resistance and the result for that task. As for performance level, it constitutes the following competency judgments circularly (Lee, 1988). Bandura states that self-efficacy belief shapes as a result of knowledge gained from four different sources. The first and utmost important one of these sources is the personal superiority experiences. Individuals develop competency perceptions in the framework of successful and unsuccessful results of a task. The tasks that are achieved successfully help self-efficacy belief develop and strengthen. Individuals

[*] **Sorumlu yazar:** Serdar KOCAEKŞİ **e-mail:** skocaeksi@eskisehir.edu.tr

combine the knowledge they have with their own skills at tasks that they achieve successfully. The tasks that result with failure cause a decline in the belief of self-efficacy. As a result of this, they consider themselves as not having the required skills to achieve that task (Wann, 1997). The belief of inadequacy stabilizes with recursive failures. However, if this person has developed a strong belief of competency, the failure experiences do not have more destructive effect on competency perceptions. The gained efficacy belief is then transferred from one area to another and thus a general efficacy belief is developed. In order to develop a strong and resistant efficacy belief, one needs to be taught experiences overcoming the handicaps he or she encounters as a result of persistent efforts (Bandura, 1982). Bandura's classical social learning approach model constitutes the second source. In addition to their own experiences, the individuals try to create an efficacy belief by modeling others. According to Bandura, effective and capable models contribute to the development of efficacy beliefs by providing information about the strategies that should be used to overcome the obstacles faced at various condition and situations to the ones who observe such attitudes (Bandura, 2001). People gain their efficacy knowledge from the social comparisons they made from others by procuration. Bandura (1982) stated that when an individual observes one another's succeed of a task, he or she would think, "If others achieve this, I can manage it as well with some small improvements in my performance." (Wann, 1997). Observing the achievements of others having the same characteristics from different aspects with them, will provide individuals develop a belief that they can also be successful. Modeling cannot occur arbitrarily. People tend to model the ones who support their own efficacy perceptions (Bandura, 2001).

Another information resource to contribute to the development of efficacy belief is effective social communication. Positive or negative feedback an individual receives from his or her own skills or efficacies will help his or her self-efficacy belief develop or weaken. Provided that the resource of the information is perceived as honest, skillful and attractive, this situation will promote the efficacy belief (Wann, 1997). Bandura (1982) stated that the increase in effective social communication and efficacy belief can be provided by positive feedback in addition to being appointed to the duties which they have a chance to achieve better in accordance with their capacities. Moreover, the feedback given to the individuals needs to be realistic in order to strengthen the self-efficacy beliefs of the individuals through effective social communication (Öcel, 2002). If this is not possible athletes can learn other

psychological skills and apply them. Psychological skill is a component of long term success of athletes. One of the most favorite strategies and subjects of research so far has been imagery usage (Cumming & Shambrook, 2004). Imagery is a part of mental skills in sports psychology many athletes and trainers accept the role of imagery in a successful performance (Omar-Fauzee et al., 2009). The studies on imagery revealed that imagery as a cognitive strategy is more effective than totally not exercising; less effective than physical exercise; on condition that imagery is achieved in companion with physical exercise, it is much more effective (Kızıldağ, 2007). Many definitions of imagery derived from sport psychology literature have tended to focus on only limited aspects of this ubiquitous mental experience (Morris, Spittle & Watt, 2005). Murphy (1990) defines imagery as inner recollection of affective experiences and recurrence of these experiences without any external stimulant. Denis and Carfantan (1985) mention imagery as a cognitive activity that reminds the physical characteristics of an object. Hall (2001) states that imagery is reinforcement for regular physical activities and it is impossible to train athletes through imagery (Cumming & Shambrook, 2004). Imagery is realizing the movements, feelings of a smell or a taste or a noise without living those in reality (Short, Tenute & Feltz, 2005). Imagery refers to the imagination quality of an individual (Gregg, Hall & Nederhof, 2005). Imagery is not only envisioning but also living the envisioned situation with all sense organs. Imagery skills and application can be learned and developed (Kızıldağ, 2007). Many previous studies stated that the athletes benefit from imagery in their performance developments (Munroe-Chandler, Hall & Fishburne, 2008). Researchers have provided results claiming that imagery usage in sports might be an ultimately effective performance development technique for athletes for many years (Short, Tenute & Feltz, 2005). Conducting a research based on an analytic framework on imagery, Paivio (1991), stated that imagery has cognitive and motivational characteristics both at general and specific levels. These are Cognitive Specific Imagery (CS) including sports skills, game plans, Cognitive General Imagery including game plans strategy imageries (CG), Motivational General Imagery including stimulation and feelings (MG) and Motivational Specific Imagery that covers individual targets (MS) (Morris, Spittle & Watt, 2005; Short, Tenute & Feltz, 2005; Gregg, Hall & Nederhof, 2005; Munroe-Chandler, Hall & Fishburne, 2008; Hall et al., 1998). Based on this theory, Hall et al. (1998) developed Sport Imagery Questionnaire-SIQ to find out the frequency of

usage of imagery functions by athletes, and they divided motivational functions into two as Motivational General Mastery and Motivational General Stimulation different from Paivio's (1991) original model (Kızıldağ & Tiryaki, 2012).

Self-efficacy helps describe the effect of imagery on performance (Morris, Spittle & Watt, 2005). Reliance is one of the most significant factors that identifies the successful and unsuccessful athletes, and in addition to this, one of the reasons in the increase of self-efficacy and self-confidence is the usage of imagery for Bandura (Munroe-Chandler, Hall & Fishburne, 2008). Bandura suggests that the more special a task is the easier it will be to estimate the behavior from efficacy belief. Developed from self-efficacy theory, according to this suggestion imagery causes the success on performance and the increase in the success expectation of the individual on his or her performance. Callery and Morris (1993, 1997) found out the effectiveness of imagery and self-efficacy on performance from the study they conducted on athletes from Austria football league. Similarly, She and Morris (1997) found out that basketball players playing in the shooter position revealed an increase in their self-efficacy and sportive self-confidence as a result of imagery studies (Morris, Spittle & Watt, 2005). The studies conducted before state that there is a relationship between self-efficacy and imagery and this had an effect on performance. Deriving from the information given above it was stated in previous studies that self-efficacy and imagery had a relationship between each other and it had an effect on performance. Having seen the results of the previous studies, this study aims at evaluating the imagery and self-efficacy belief of the athletes.

Material and Methods

Participants

Participants of the study were 35 male athletes (Age, Mean: 24.17 ± 3.32), and 47 female athletes (Age, Mean.: 22.17 ± 2.80), cumulatively 82 athletes, who were dealing with sports in Eskişehir.

Measure

Self-Efficacy Scale (SES): This scale was developed by Riggs et al. (1994), and later it was translated and adapted to Turkish by Öcel (2002). The scale consists of 10 items investigating the beliefs of individuals towards their own capacities. Participants were asked to fill in the 5-scale Likerts Questionnaire in accordance with

their own opinions in terms of whether agreeing or disagreeing with the statements in it.

Sport Imagery Questionnaire (SIQ): SIQ was especially developed for sports and it was designed by Hall et al (1998). There are thirty items in the inventory. Components of sport imagery that make evaluation on imagery dimensions are cognitive imagery, motivational general stimulation, motivational general mastery and motivational special imagery. Turkish adaptation of inventory was done by Kızıldağ in 2007.

Data Analysis

Descriptive statistics, Pearson correlation analysis and t test for independent groups were used to analyze the data.

Results

Table 1. Descriptive statistics table of imagery and self-efficacy points of the athletes

	Group	Mean	Sd	N
Cognitive Imagery	Male	4.63	.84	35
	Female	5.04	1.08	47
Motivational Specific Imagery	Male	4.75	.78	35
	Female	5.48	1.04	47
Motivational General Stimulation	Male	4.64	.99	35
	Female	5.16	1.15	47
Motivational General Mastery	Male	4.93	1.04	35
	Female	5.30	1.04	47
Self-Efficacy	Male	30.71	5.10	35
	Female	30.72	4.78	47

Table 2. ANOVA Results According to Imagery and Self-Efficacy in Terms of Gender

		Sum of Squares	df	Mean Square	F	Power	Sig.
Cognitive General	Between Groups	3.241	1	3.241	3.304	.435	.073
	Within Groups	78.488	80	.981			
	Total	81.729	81				

Motivational Specific	Between Groups	10.746	1	10.746	12.796	.942	.001*
	Within Groups	67.180	80	.840			
	Total	77.926	81				
Motivational General Arousal	Between Groups	5.438	1	5.438	4.582	.562	.035*
	Within Groups	94.939	80	1.187			
	Total	100.376	81				
Motivational General Mastery	Between Groups	2.773	1	2.773	2.548	.351	.114
	Within Groups	87.054	80	1.088			
	Total	89.827	81				
Self-Efficacy	Between Groups	.002	1	,002	,000	.050	.993
	Within Groups	1936.547	80	24.207			
	Total	1936.549	81	3.241			

Examining table 2, it can be seen that there was a significant difference between the imagery sub dimensions of the athletes. Thus motivational specific (t=1.18; p<0.01) and motivational general stimulation (t=2.14; p<0.05) points had a significant difference in terms of gender. On the other hand, as for imagery sub dimensions cognitive one (t=1.18; p>0.05), motivational general stimulation (t=1.59; p>0.05) and self-efficacy belief points (t=.008; p>0.05) didn't have any significant difference.

Table 3. Correlation table applied to the imagery and self-efficacy points of the athletes

	1	**2**	**3**	**4**	**5**
(1) Cognitive Imagery	**-**				
(2) Motivational Special Imagery	.595**	**-**			
(3) Motivational General Stimulation	.445**	.462**	**-**		
(4) Motivational General Mastery	.576**	.619**	.389**	**-**	
(5) Self-Efficacy	.278*	.225*	.130	.257*	**-**

Examining table 3, it can be seen that there was a meaningful positive correlation between cognitive imagery sub dimension and self-efficacy (r = .278*; p<0.05); between motivational specific and self-efficacy beliefs (r = .225*; p<0.05); and between motivational general mastery and self-efficacy beliefs (r = .257*; p<0,05) Motivational general stimulation and self-efficacy did not reveal any significant correlation (p>0.05).

Discussion

Considering the results of this study that aimed to find out imagery and self-efficacy beliefs of athletes, t test results for independent groups showed a significant difference in Motivational specific imagery (p<0.01) and Motivational general stimulation (p<0.05) in terms of gender. Martin and Hall (1995) stated that the golf players who just started motivational specific imagery were affected by this dimension of motivational stimulation in persisting in their training programs (Kızıldağ & Tiryaki, 2012). Having studied on the point averages of the sample, it can be seen that the female athletes had higher motivational specific imagery and motivational general stimulation scores compared to their male counterparts. Female athletes use more imagery dimensions than the male ones and they have higher rates of controlling their anxiety and stimulation levels while preparing to a competition more than male, and even they are thought to image some tasks such as being greeted after a good performance or winning a competition and achieving a task better than the male ones.

Examining the correlation analysis findings of the study, cognitive imagery, motivational specific imagery and motivational general mastery dimensions had a significant positive correlation with efficacy belief (p<0,05). Short et al. (2005) studied on relationship between imagery skills and imagery usage and self-efficacy with 74 female athletes from 6 different branches (basketball, hockey, football, tennis, softball and volleyball) They stated that there was a significant positive correlation between all sub dimensions of imagery inventory (cognitive general imagery, cognitive specific imagery, motivational specific imagery, motivational general stimulation and motivational general mastery) and self-efficacy (Short, Tenute & Feltz, 2005). This study had parallel results with the present study in terms of some sub dimensions of imagery and supports our study.

Munroe-Chandler et al. (2008) studied on self-efficacy, confidence and imagery usage on young footballers and found out that there was a positive correlation between the self-efficacy beliefs and all sub dimensions of imagery of young footballers in their study. The results of this study reveal some parallel results with the ones of present study in terms of some sub dimensions of imagery as well (Munroe-Chandler, Hall & Fishburne, 2008).

As a result of a literature review it was observed that motivational general mastery dimension of imagery is significant. Motivational general mastery serves for the mental strength and control of the athletes (Kızıldağ & Tiryaki, 2012). There are some other studies indicating that having higher motivational general mastery points will be a signal for higher self-confidence rates of athletes. Feltz and Reissinger (1990) stated that athletes using motivational general mastery increased their self-efficacy perceptions.

Working on the studies conducted on imagery and self-efficacy beliefs, Munroe-Chandler et al. (2008), Short et al. (2005) found out a 0.1 rate significant correlation between the sub dimensions of imagery and self-efficacy beliefs. As for our study, it also reveals the parallel results with these studies and the others in literature.

Vealey, took personality researches as a base while developing self-confidence model and the structure he formed created a sportive self-confidence model rather than a general self-confidence model, and for this reason, it was conceptualized as sportive self-confidence model (Vealey, 1986). Bandura's self-efficacy theory which is in our study exists in this conceptualized model as well. Moritz et al. (1996) studied on sportive self-confidence and content of imagery and as a result of the study they conducted they found out that there was a positive correlation ($p<0,05$) between sportive self-confidence and motivational general mastery and motivational general stimulation.

Motivational general stimulation refers to the expression of feelings such as anxiety and control of stimulation levels that accompany to the competitions by athletes. Not finding a significant difference between motivational general stimulation and self-efficacy beliefs ($p>0,05$) showed that athletes do not benefit from this imagery dimension as much as others and for this reason, there was no significant relationship between motivational general stimulation and efficacy beliefs.

Short and Short (2005) studied on the relationship between the imagery usages and confidence on 79 footballers in terms of high and low sportive confidence a footballer went into and they found out that the ones with higher confidence had a positive significant difference between cognitive general imagery, cognitive special imagery and motivational general stimulation.

Callow and Hardy (2001) studied on relationship between imagery types and sportive self-confidence of netball players whose capacity levels were varied and found out that there was a positive correlation between sportive self-confidence and motivational general mastery, cognitive general imagery, cognitive special imagery, and motivational special imagery ($p<0,05$). Adegbesan (2010) conducted a study on indicators of imagery usage on footballers and applied a sportive confidence analysis; as a result of this, found out that there was a positive correlation between imagery functions and sportive self-confidence sub measures; and among them, the motivational general stimulation had the highest score.

Conclusions

As a result of this study and literature review, imagery has some significant differences at some dimensions in accordance with gender. Moreover, evaluating the other aim of the present study, imagery self-efficacy relationship, it was found out that some dimensions of imagery and self-efficacy beliefs had some correlative results. Thus, this study suggests that imagery might differ in terms of gender and the results on the relationship between imagery and self-efficacy can be studied in detail in further studies.

Conflicts of interest

The authors declare no conflict of interest.

References

Adegbesan, O. A. (2010). Analysis of Imagery Use as Predictors of Football Players' Sport Confidence. Word Journal of Sport Sciences, 3(1), 53-58.

Bandura, A. (1982). Self-Efficacy Mechanism in Human Agency. American Psychologist, 37 (2), 122-147.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. Annual Review of Psychology, 52, 1–26.

Callery, P., & Morris, T. (1997). Imagery, self –efficacy and goal-kicking performance. In: Lidor, R., Bar-Eli, M., editors. Proceedings of IX World Congress of Sport Psychology. Netanya, Israel: ISSP, p.169-171.

Callery, P., & Morris, T. (1997). Imagery, self –efficacy and goal-kicking performance. In: Lidor, R., Bar-Eli, M., editors. Proceedings of IX World Congress of Sport Psychology. Netanya, Israel: ISSP, p.172-174.

Callery, P,. & Morris, T. (1993). The effect of mental practice on the performance of on Austrailian Rules football skill. In: Serpa, J., Alves, V., Ferreira, APaula-Brito., editors. Proceedings of VIII World Congress of Sport Psychology. Lisbon: ISSP, p.646-651.

Callow, N. & Hardy, L. (2001). Types of Imagery Associated With Sport Confidence In Netball Players of Varying Skill Levels. Journal of Applied Sport Psychology, 13, 1-17.

Cumming, J., Hall, C. & Shambrook, C. (2004). The Influence of an Imagery Workshop on Athletes' Use of Imagery, The Journal of Sport Psychology, 6(1), 52-73.

Denis, M., & Carfantan, M. (1985). People's knowledge about images. Cognition, 20, 49-60.

Feltz, D. & Riessinger, C. (1990). Effects of in Vivo Imagery and Performance Feedback on Self-Efficacy and Muscular Endurance, Journal of Sport and Exercise Psychology, 12, 132-143.

Gregg, M., Hall, C. & Nederhof, E. (2005). The Imagery Ability, Imagery Use, and Performance Relationship, The Sport Psychologist, 19, 93-99.

Hall, C. R., Mack, D. E., Paivio, A., & Hausenblas, H. A. (1998). Imagery use by athletes: Development of the sport imagery questionnaire. In Smith, D., Bar-Eli, M. editors. Essential Readings in Sport and Exercise Psychology. Champaign, 111: Human Kinetics. p.258-264.

Hall, C. R. (2001). Imagery in sport and exercise. In Singer, R. N., Hausenblas, H. N., Janelle, C. editors. Handbook of sport psychology, 2nd ed. New York: Wiley, p.529-549.

Kızıldağ, E. & Tiryaki, Ş. (2012). Athletes in Sports Imagery Inventory for Turkish Adaptation. Journal of Sports Sciences, 23(1), 13-23.

Kızıldağ, E. (2007). Identify what kind of imagery was used by athletes. For that reason Sports Imagery Questionnaire was adapted for Turkish athletes. Unpublished Thesis, Mersin.

Lee, C. (1988). The Relationship Between Goal Setting, Self Efficacy, and Female Field Hockey Team Performance. International Journal of Sport Psychology, 20, 147-161.

Martin, K., & C, Hall. (1995). Using mental imagery to enhance intrinsic motivation. Journal of Sport and Exercise Psychology, 17, 54-69.

Moritz, S. E., Hall, C. R., Martin, K. A. & Vadocz, E. (1996). What Are Confident Athletes Imaging?: An Examination of Image Content. The Sport Psychologist, 10, 171-179.

Morris, T., Spittle, M., & Watt, A. P. (2005). Imagery in sport. Champaign, IL: Human Kinetics, p.16-17.

Munroe-Chandler, K., Hall, C. & Fishburne, G. (2008). Playing With Confidence: The Relationship Between Imagery Use and Self-Confidence and Self-Efficacy In Youth Soccer Players. Journal of Sport Sciences, 26(14), 1539-1546.

Murphy, S. M. (1990). Models of imagery in sport psychology: A review. Journal of Mental Imagery, 14, 153–172.

Öcel, H. (2002). The Role of self-efficacy collective efficacy beliefs and cohesiveness in predicting player's evaluations of their teams past present performance and future performance expentancies. Unpublished Thesis, Ankara.

Omar-Fauzee, M. S., Daud, W. R. B. W., Abdullah, R., & Rashid, S. (2009). The Effectiveness of Imagery and Coping Straregies In Sport Performance. European Journal of Social Sciences, 9(1), 97-108.

Paivio, A. (1991). Dual coding theory: retrospect and current status. Canadian Journal of Psychology, 45, 255-87.

Riggs, M. L., Warka, J., Babasa, B., Betancour, R. & Hooker, S. (1994). Development and Validation of Self-Efficacy and Outcome Expectancy Scales for Job-Related Applications. Educational and Psychological Measurement, 54, 793-802.

She, W. & Morris, T. (1997). Imagery, self-confidence and baseball hitting. In: Bar-Eli, M., Lidor, R. editors. Proceedings of IX World Congress of Sport Psychology. Netanya, Israel: ISSP, p.626-628.

Short, S., Tenute, A. L. & Feltz, D. (2005). Imagery Use In Sport: Mediational Effects For Efficacy. Journal of Sport Sciences, 23(9), 951-960.

Short, S. E. & Short, M. W. (2005). Differences Between High-and Low-Confident Football Players on Imagery Functions: A Consideration of the Athletes' Perceptions. Journal of Applied Psychology, 17, 197-208.

Vealey, R. S. (1986). Conceptualization of sport confidence and competitive orientation: Preliminary investigation and instrument development. Journal of Sport Psychology, 8, 221-246.

Wann, L. D. (1997). Sport Psychology, Prentice Hall, Inc. Upper Saddle River.