



INVESTIGATION OF IMAGERY STATUS OF AMATEUR SOCCER PLAYERS

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Abstract:

The present study tries to explain what imagery is and how commonly it is used by athletes to increase performance. This study aims to provide information that imagery (mental visualization) is a very powerful tool to increase athletes' performance and to provide guidance based on sport psychology. The aim of the present study is to determine the types and levels of using imagery in sport in amateur league Soccer players. Sport Imagery Questionnaire was given to a total of 190 Soccer players aged between 18 and 35 who were playing in amateur leagues of Samsun province. In the study conducted, no significant difference was found between the ages of female and male amateur Soccer players ($p>0.05$). At the same time, no significant difference was found between their sport years ($p>0.05$). In addition, no significant difference was found in motivational general mastery (MG- M) and (MS) in terms of gender and in the comparison of imagery scores in terms of age category and sport years ($p<0.05$).

Conclusion: It is concluded that the visualization status of amateur Soccer players varies slightly according to gender, age group and year of sports. It was observed that the visualization scores were better as the age of sports increased. It is thought that starting sports at earlier contributes to the good visualization scores. It may be suggested that children should be directed to Soccer at an earlier age.

Keywords: soccer, imagery, sport

1. Introduction

People aren't passive recipients of emotions. They hold attitudes and beliefs that influence how they experience, express, and respond to emotions. If individuals believe

an emotion is harmful, they might try to avoid it or situations that increase the likelihood of experiencing it. If individuals believe an emotion is helpful, they might engage in behaviors that increase its intensity or duration (Goodman et al., 2020, Tamer et al., 2019).

A great number of famous athletes, some of them including Mark McGuire, Michael Jordan, Tiger Woods and Chris Evert, have attributed a part of their success to using mental images (mental visualization) and some psychological parameters (Beauchamp et al., 2002; avuőođlu et al., 2017). Researches and applied studies conducted have shown that sport related imagery can be developed through training (Morris et al., 2004). A great number of studies have examined the relationship between imagery and sport performance (Martin et al., 1999). A comprehensive data base has emerged related with how athletes use imagery (mental visualization) in training and imagery performance (Jordet, 2005). Athletes believe in getting any advantage to win and they believe that a few psychological techniques give them this advantage to do this. One of these is using imagery (mental visualization). Mental skills form, socialization and happiness significant foundations to ensure successful competitive performance ([Hall et al., 2009](#); [Dođan et al., 2018](#)).

Imagery is generally considered as “*the cornerstone of sport psychology study field*” ([Cornelius, 2002](#)). Imagery is used in every level by athletes as a common mental training tool ([Munroe-Chandler and Hall, 2007](#)). Imagery is considered as one of the ways facilitating learning in sport. Imagery is used as an applied field of sport psychology studies and an important component of mental preparation (Morris et al., 2004). Although the term imagery is used in a broad sense, imagery (mental visualization) used for sport performance is expressed as “*imagery in sport*” (Taylor and Wilson, 2005). Some other terms such as mental practice, mental rehearsal, visualization and some recreational activities have also been used to refer to various components of imagery in sport (Omar-Fauzee et al., 2009; Aksoy et al., 2017; Kabadayı et al., 2017). Imagery is the skill of forming an idea or picture in the mind (Gawain, 2007) and visualizing (Mcintyre and Moran, 2001). It is the process of learning or perfecting any movement without any exercise by visualizing it in a planned and intensive way and mentally (İkizler and Karagözođlu, 1997; Esentaő et al., 2018). From where the athlete remembers and reconstructs the pieces of information stored in memory is important to create a meaningful imagery because previous experiences of most of the athletes are recalled in a vivid and detailed way through imagery (Omar-Fauzee et al., 2009).

Imagery process and capacity of athletes enables their mental training program to be more efficient. The capacity and skill of managing an imagery process is a decisive feature to maximize the effectiveness of the imagery program (Morris, et al., 2004). The ability to visualize is defined as “*the evaluation of the individual in terms of the capacity to create images and sensory and emotional characteristics for generations*”. Athletes should have at least moderate capacity to create and maintain clear visualizations in the mind and to control these with various sensory methods (Budnik-Przybylska et al., 2014; Özaslan et al., 2017). Imagery is a significant determiner of the athlete’s exercise behavior related with his/her own competence and other related concepts (Cumming, 2008). Imagery can serve a series of cognitive and motivational functions including increase in skills, self-

sufficiency and motivation in sport, exercise, dance and rehabilitation. While it is generally used in terms of its cognitive and motivational characteristics, athletes use imagery in a way that will lead them to skills of knowing and improving themselves and thus ease and revive their performance (Omar-Fauzee, et al., 2009). An individual's mental visualization skill can determine that person's efficiency in terms of his/her participation and interest in mental practices. It has been reported that especially individuals who are interested in imagery and who find imagery practices easy make more use (for example improved performance) of imagery (Robin et al., 2007). For this reason, while developing effective imagery studies, the skill of visualization is an important factor that should be taken into consideration. However, it is not enough only to use imagery to get the desired effect on performance. For this reason, Martin et al. (1999) developed a practical imagery use model to guide the imagery practice and to increase the efficiency of this practice (Gregg and Clark, 2007). There are two different perspectives an athlete can take while performing mental imagery; external or internal perspective.

Mahoney and Avenier (1977) defined imagery in terms of external perspective as watching a past performance as a film or video. On the other hand, internal perspective is defined as watching like it is in their bodies and experiencing all these feelings that can be expected from the actual situation (Cumming and Ste-Marie., 2001). Strategies can be applied according to individual differences and needs of athletes such as self-confidence, relaxing, motivation, goal setting and concentration (Altıntaş and Akalan, 2008; Bostanci et al., 2019). Imagery is a part of the sport psychology skill (mental skill) which enables athletes to achieve success in their tournaments or matches (Omar-Fauzee et al., 2009). Paivio (1985) suggested an analytical frame which explains the functions of imagery and which can provide answers to the question of how and why mental imagery works and stated that both through cognitive (for exp. skill and strategy repetition) and motivational (for exp. self-confidence, stimulation, goal setting) mechanisms imagery can affect behavior in general or at a specific level. Based on Paivio's studies and other existing literature on imagery, a series of researches were made and it was concluded that imagery fulfils five main functions; (a) cognitive specific (for exp., specific sport skills), (b) cognitive general; (for exp., strategies about competition), (c) motivational specific (for exp., specific goals and goal oriented behavior), (d) motivational general arousal (feelings of relaxing, stress, anxiety and arousal) and (e) motivational general mastery (for exp. self-confidence, effective coping, mental satiety, focusing and control) (Barrow et al., 2007). Although it can serve both cognitive and motivational functions, it is known that athletes generally use imagery for motivational purposes. Such a function increases self-confidence or more specifically self-sufficiency. Athletes who perform imagery more frequently know their personal characteristics in higher levels and develop their self-confidence (Williams and Cumming, 2012). Today, many athletes and coaches believe in the power of imagery in sport performance. Athletes in many different branches attribute at least some part of their success to their use of imagery (Omar-Fauzee, et al., 2009).

It has been proven that the use of imagery in sport can be a very effective performance development technique for athletes (Short and Short, 2005). Researches

have shown that a great number of athletes use imagery and consider it as an important psychological skill. Researches have shown a positive association between imagery and some psychological characteristics, such as the self-confidence of the athlete (Callow and Hardy, 2001). In addition, associations between athletes' imagery states and self-confidence levels have been investigated (Abma et al., 2002). When the athlete's self-confidence increases, his/her performance also increases (Chapman et al., 1997). Imagery has been a well-researched topic for adult athletes, especially elite athletes, for the last fifty years. However, there are limited number of studies investigating the use of imagery for young athletes (Munroe-Chandler et al., 2005). A great number of qualitative and quantitative researches have been conducted on the issue. It has been found in these studies that the systematic use imagery is associated with performance improvement. These improvements have been found not only in the fields of motor performance and skill acquisition, but also in the fields of improvement in concentration and decrease in anxiety. There are a great number of reports on the efficiency of mental imagery in the improvement of sport performance in addition to positive experimental findings. As a result of these, imagery generally is included in athletes' mental training program as skill acquisition and performance increasing strategy (Weinberget al., 2003)

2. Material and Method

2.1 Participation

Sport Imagery Questionnaire, which was developed by Hall et al. (2009) was given to a total of 190 Soccer players who were between the ages of 18 and 35 and who were playing in Samsun amateur leagues. The questionnaire was applied through face-to-face interview with the athletes who participated in the study. The interviews were conducted before athletes' trainings. The questionnaires were given to the coaches of the teams and the athletes filled in the questionnaires with the help of their coaches who were informed about how to fill in the questionnaire. The questionnaires which were filled in were collected from the coaches.

2.1.1 Sport Imagery Questionnaire- SIQ

The original questionnaire includes five sub-dimensions and 30 questions. Turkish validity and reliability study of the questionnaire was conducted by Kızıldağ and Tiryaki (2012), the items were evaluated in seven steps and the questionnaire was shaped as 21 items. The five sub-dimensions in the original questionnaire were decreased to four sub-dimensions as cognitive specific (items 1,2,4,5,7,9,13,14 and 15), motivational specific (items 3,6,8,10 and 20), motivational general arousal (items 11,12,17 and 19) and motivational general mastery (items 16,18 and 21). As a result of the factor analysis, it was found that the questionnaire consisted of 4 factors and 21 items (Kartal et al., 2017). Cognitive Specific (CS): Cognitive imagery is used for the correct application of specific skills (Paivio, 1985). Motivational Specific (MS): MS includes specific performance goals. When athletes see that they are congratulated for winning or for their good performance, this increases their motivation (Kartal, et al., 2017). Motivational General Mastery (MG-

M): Includes higher level of motivational skills. It is known that athletes who use this kind of imagery more have more skills related with mastery (Kartal, et al., 2017). In the present study, internal consistency values calculated with Cronbach alpha were .82 for cognitive specific sub-dimension, .81 for motivational specific sub-dimension, .72 for motivational general arousal sub-dimension and as .60 for motivational general mastery sub-dimension.

2.2 Statistical Analysis

Values are expressed as frequency, percentage or mean, standard deviation. Shapiro-Wilk's test was used, histogram and q-q plots were examined to assess the data normality. To compare the differences between/among groups, independent samples t test or one-way ANOVA were used for continuous variables. Analysis were conducted using Statistical analysis was performed by using commercial software. $p < 0.05$ was considered as statistically significant.

3. Results

Table 1: Distribution of age and sport year by gender

Variables	Gender	n	Mean±SD	t	p
Age (year)	Female	55	24.42±3.36	-0.56	0.489
	Male	135	24.75±2.81		
Sport year	Female	55	8.11±3.04	-0.58	0.658
	Male	135	8.43±4.99		

No significant difference was found between ages and sport years ($p > 0.05$).

Table 2: Comparison of imagery scores by gender

Variables	Gender	n	Mean±SD	t	p
Cognitive Specific (CS)	Female	55	52.73±7.97	1.12	0.160
	Male	135	50.88±8.3		
Motivational Specific (MS)	Female	55	30.66±4.58	1.68	0.040*
	Male	135	28.68±6.46		
Motivational General Arousal (MG- A)	Female	55	21.34±4.83	0.54	0.495
	Male	135	20.82±4.72		
Motivational General Mastery (MG- M)	Female	55	19.04±2.83	2.14*	0.009
	Male	135	17.55±3.76		
Total	Female	55	123.78±15.79	1.74	0.030*
	Male	135	117.92±17.16		

While significant difference was found in “motivational specific” (MS) and total score in the comparison of imagery scores by gender ($P < 0.05$), no significant difference was found in other sub-dimensions ($p > 0.05$).

Table 3: Comparison of imagery scores by age category

Variables	Age category	n	Mean±SD	t	p
Cognitive Specific (CS)	18-24 years	125	47.59±8.36	0.78	0.276
	25 +	65	46.24±7.5		
Motivational Specific (MS)	18-24 years	125	27.69±5.44	2.62*	0.001*
	25 +	65	24.44±6.79		
Motivational General Arousal (MG- A)	18-24 years	125	19.86±4.56	2.73*	0.001*
	25 +	65	17.2±4.78		
Motivational General Mastery (MG- M)	18-24 years	125	16.68±3.51	0.64	0.371
	25 +	65	16.2±3.48		
Total	18-24 years	125	111.83±17.07	2.20*	0.002*
	25 +	65	104.1±14.39		

In the comparison of imagery scores by age group, while significant difference was found in “motivational specific (MS)”, “motivational general arousal (MG- A)” and “total” scores ($p<0.05$), no significant difference was found in the other sub-dimensions ($p>0.05$).

Table 4: Imagery scores by sport years

Variables	Sport year	n	Mean±SD	F/LSD	p
Cognitive Specific (CS)	1-5 years (1)	87	44.35±9	3.50*	0.031*
	6-10 years (2)	60	48.36±7.54		
	11 years and more (3)	43	48.78±7.73		
	Total	190	47.29±8.17		
Motivational Specific (MS)	1-5 years (1)	87	26.16±5.71	0.71	0.489
	6-10 years (2)	60	27.53±5.6		
	11 years and more (3)	43	26.57±7.09		
	Total	190	26.97±5.9		
Motivational General Arousal (MG- A)	1-5 years (1)	87	18.7±5.15	0.39	0.675
	6-10 years (2)	60	19.56±4.79		
	11 years and more (3)	43	19.3±3.85		
	Total	190	19.27±4.73		
Motivational General Mastery (MG- M)	1-5 years (1)	87	16.14±3.4	2.20	0.111
	6-10 years (2)	60	17.14±3.28		
	11 years and more (3)	43	15.57±4.12		
	Total	190	16.58±3.5		
Total	1-5 years (1)	87	105.35±18.06	2.29	0.102
	6-10 years (2)	60	112.59±16.17		
	11 years and more (3)	43	110.22±15.43		
	Total	190	110.11±16.77		

* $p<0.05$

While significant difference was found in “cognitive specific (CS)” sub-dimension in terms of sport years ($p<0.05$), no significant difference was found in other sub-dimensions ($p>0.05$). Imagery scores of players with a sport year of 1-5 were found to be lower than those of the other groups.

4. Discussion

Imagery is one of the effective ways of increasing sport performance. There are some different types of imagery that can be used by athletes. These have different effects on performance and self-confidence. In order to make use of imagery types in the best way, images should be applied in a consisted, purposeful and structured way and at the same time they should be as realistic as possible. Sport psychologists often report that athletes need to practice more imaging before trying to use imagery in competitions. In the present study, no statistically significant difference was found between the ages and sport years of female and male amateur Soccer players ($p>0.05$). On the other hand, when imagery scores were compared by gender, while significant difference was found in “motivational specific” (MS) sub-dimension ($p<0.05$), no significant difference was found in the comparison of imagery scores in terms of age category and sport year ($P<0.05$). Both beginner and advanced level mountain climbing athletes use their MS imagery levels significantly less than athleticism athletes. In fact, MS sub-scale represents the greatest inconsistency between imagery used by mountaineers and athleticism athletes (Ewert, 1985). While significant difference was found in “motivational specific” (MS) and “total” scores in the comparison of imagery scores by gender ($p<0.05$), no significant difference was found in other sub-dimensions ($p>0.05$).

In other conducted studies, significant differences were found between gender and sport branches related with imagery use and efficiency. In another study, no significant association was found between gender and imagery skills (Sarı, 2015). For this reason, these factors should be considered while making decisions about imagery use and efficiency (Weinberg et al., 2003). In addition, no significant difference was found in the present study in the comparison of imagery scores by gender for general mastery (MG- M) and (MS) and by age category and sport year for (MG- M) ($p<0.05$). On another study, it was found in MG-M imagery sub-scale that athletics athletes used more MG-M images than mountaineers. In addition, Martin and Gill (1991) found that athletics athletes reported high levels of athlete confidence and self-sufficiency. In a study conducted to analyze the imaging and attention capacities of badminton players, it was found that while there were no significant differences between gender and imagery in badminton players, motivational specific imagery capacity of female players were found to be higher than that of male players in reaching a successful performance goal (Bastug, Agilonu, Balkan, 2017). A significant association was found between sport ages of badminton players for cognitive imagery and motivational general mastery. As cognitive imagery values increased, motivational general arousal values were also found to increase. As motivational general mastery scores increased, motivational specific scores also increased. When athletes face a self-confidence problem or a problem in competitions, their motivational general competences increase. Their goal-based imagery and motivational specific imagery increases positively (Kolayış et al., 2015)

Another study examined the effects of elite athletes’ imagery tries to develop success on their problems solving skills and found that imagery tries had positive effects on Soccer players’ problem-solving skills (Aldemir et al., 2014). In another study

conducted on badminton players, it was found that imagery developed players' self-confidence (Callow and Hardy, 2001). Imagery studies cause high performance on some Soccer skills (such as pass, tempo and shooting) of athletes between the ages of 7 and 14 (Munroe-Chandler et al., 2012). Furthermore, imagery use and regular physical activity were as effective as physical practice in improving soccer dribbling performance and some social status (Munroe-Chandler et al., 2005; Aksoy and Ziyagil, 2017). A great number of top-level athletes have good levels of imagery skills because before they represent their countries, they gain experience in tournaments and competitions (Omar-Fauzee, et al., 2009). Athletes who practice and use their imagery skills in top levels will show great improvement in sport performance (Omar-Fauzee, et al., 2009). In one study, it was found that imagery was used as a mediator technique to increase self-confidence. In addition, it was found that athletes used MG-M type images consciously and top-level athletes used more conscious images (Mamassis and Doganis, 2004).

Athletes who evaluate and re-evaluate their feelings more frequently tend to show higher skills, strategy, effect and mastery imaging ability. There is a strong association between re-evaluation and mastery imaging ability (Anuar et al., 2017). For this reason, the results obtained in the later images of athletes who tend to re-evaluate their performance skills frequently emphasize the positive association between re-evaluation and the two sub-dimensions. It is possible for athletes to remember these more easily. The third highest association with evaluation is the presence of a perfect imaging ability. When an athlete re-evaluates emotions, it won't be surprising if there is a change of emotions (Anuar, et al., 2017). While cognitive anxiety was directly and negatively predicted with mastery imaging ability, direct and positive effect was predicted with the athlete's imaging ability. While athletes increase their adaptation by using positive images, individuals with weak mastery imaging ability may not be able to change their anxiety by using positive images or individuals with low self-confidence cannot change or transform a spontaneous negative imagery (Hanton, Stephen and Hall, 2004; Bostanci, 2014). Individuals with high self-confidence have been found to use all imagery functions better than the group with low self-confidence and statistically significant differences have been found for CS and MG-A. In this study, which was conducted by using modified SIQ, averages have shown that the group with high self-confidence used more CS than the group with low-self-confidence. On the other hand, it was found that the group with low self-confidence used more MG-A and MS than the group with high self-confidence (Short and Short, 2005).

Another study showed that the evidence in sport psychology studies indicated that self-confidence was associated with imagery content. In addition, more questions on how we can maximize the uses of imagery will be important for examining the useful and complicated psychological skills of mental images in future studies (Abma et al., 2002). Sports activities can reduce perceived stress. In a study, found Pilates and aerobic exercises contributed positively to the body image in obese women (Çetinkaya and İmamoğlu, 2018). In addition to differences in role and movement quality imagery, dancers were found to perform imagery more frequently than athletes. Indeed, dancers were found to have higher scores than athletes for three types of imagery (technical, goal,

role and movement quality imagery). A possible explanation for this finding may be that imagery is used and encouraged more openly by dance instructors than sport trainers (Nordin and Cumming, 2008). Irrespective of the type of imagery, high-level dancers perform imagery more often than low-level dancers. This thought seems to be consistent with previously conducted studies on dance, aesthetic sport and more generally sport (Nordin and Cumming, 2008). In previously conducted studies, positive association was found between imagery frequency and exercise behavior for each imagery type (Cumming, 2008).

Individuals who perform imagery in confidence to complete a training (for exp. self-sufficiency imagery) gain higher level of “coping” self-sufficiency levels (that is, coping and timing by using self-sufficiency). Similarly, individuals who work on how to make an exercise by using imagery (that is, exercise technique images) show more self-confidence while performing different aspects of exercise. With the partial support of this hypothesis, technical images have been associated with a greater task competence. That is, individuals who report a greater self-confidence about their ability to perform exercise activity at the same time tend to be more interested in technical imagery. At the same time, individuals who performed images of their health and appearance more frequently reported more self-confidence in their ability to exercise under deterrent and compelling conditions (Cumming, 2008). Education can contribute to the positive reflections of the body image (İmamoğlu and Demirtaş, 2017). In another study, it was reported that motivational general mastery studies can affect self-sufficiency performance. Increased self-sufficiency will cause an athlete to set higher goals, to show more effort and to continue flexibly in the face of difficulties. All these will contribute to an increase in performance (Beauchamp, et al., 2002).

5. Conclusion

It is concluded that the visualization status of amateur Soccer players varies slightly according to gender, age group and year of sports. It was observed that the visualization scores were better as the age of sports increased. It is thought that starting sports at earlier contributes to the good visualization scores. It may be suggested that children should be directed to Soccer at an earlier age.

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