

## Mental Imagery and Self-Talk as Approach to Cope with Pressure among Individual Sports

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**Abstract:** The research aims to identify the effect of mental imagery and self-talk on cope with pressure, imposed by the nature of competition in some individual sports (fencing-tennis-karate). The experimental method was used on one group through pre and post measure, with a sample consisting of 22 individual sports players. It was divided internally into three groups (Group A included 8 tennis players - Group B included 7 fencing players - Group C included 7 karate players). The multidimensional mental imagery scale, a measure of self-talk in sport and the skills measurement of facing the pressures in sports were used as tools for data collection. Descriptive statistics were used such as, Wilcoxon test for indicative differences, Kruskal Wallis test for indicative differences and the percentage of improvement. The results indicated that there were significant differences between the pre and post measure of the research group in mental imagery and self talk in favor of the post measure. It also indicated that there were significant differences in the skills of facing the pressures in sports in favor of the post measure.

**Key word:** Mental imagery · Self-talk · Cope with pressure

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### INTRODUCTION

Mental imagery plays an important role in improving performance, enhancing concentration and lessening the negative psychological effects of the pressure accompanying athletic events through recalling the sense of the optimal performance a few minutes before the competitions start [1].

Several researchers in the field of athletic psychology pointed out the importance of positive self-talk in the competitive athletic activities, in particular, when the stress increases or the athlete needs more concentration on performance or more encouragement to continue his performance. It also affects the restoration of ideal emotional state and psychological charging to achieve competitive target. The continues training on the self-talk skill induces Physiological effects which, in turn, affect the efficiency of motor performance, that leads to improve the performance of skills in various athletic activities [2].

Pressure is one of the most important problems facing most of the players. It has several negative effects on the level of the performance of the player. It causes

motor rigidity, loss of the flow and sequence of performance, the thing that leads to discontinuity, restriction of the motor range and inability to do the proper motor outflow. All these effects contribute to the lack of access to the high level of performance of the player and make him unable to reach his maximum capacity before performing in the important competitive events [3-5].

Individual sports activities are characterized by the player's sense of responsibility towards winning or losing a competition. This increases the pressures lies on the athlete leading to a situation of tension and distraction. Moreover, the stress imposed by the nature of the competition such as its importance, achieving an early goal at the beginning of a match or fear that a classified athlete loses a game against anonymous one are the most important features of the competitive activities. That requires mental preparation of the players to face such pressing situations [6,7].

The research problem is to identify the effect of mental imagery and self-talk on cope with pressure which Imposed by the nature of competition in some individual sports (fencing-tennis-karate).

**MATERIALS AND METHODS**

**Subjects:** The Researcher used an experimental method by using three experimental groups through pre and post measurements for each group. The sample included (22) individual sports players who were chosen intentionally .They were divided internally into three groups (Group A, N = 7 (fencing) players - Group B, N = 8 (tennis) players - Group C, N = 7(karate) players.

**Measures**

**A Multi-dimensional Mental Imagery Scale in Sport:** This scale was originally developed in (1982). It aims to identify the degree of the sensory that could be used during the mental imagery in training and competitions. The scale consists of five dimensions (Visual imagery-audible imagery-kinetic sense imagery-emotional imagery, imagery control); it also includes two different athletic situations (individual practice - performance in competition) [8].

**Self- Talk Scale in Sport:** This scale aims to measure positive self-talk used by players in sports situations whether in training or competition [9].

**Skills of Facing Sports Pressure Scale:** This scale aims to measure the player's ability to cope with the pressures during training and sports competitions.

**The Suggested Program of Mental Imagery and Self-talk:** This program aims to increase the capacity of the players to face the pressures in individual sports [10-13].

**The Program Included the Following Dimensions:** (Muscle relaxation - mental relaxation - mental imagery - Self talk). The duration of the program application is (8) weeks, (3) units per week and the session of training is (30) minutes for each training unit. The researcher used descriptive statistics, Wilcoxon test for indicative differences, Kruskal Wallis test for indicative differences, Percentage of improvement, as statistical methods in this research.

**RESULTS AND DISCUSSION**

There are indicative statistical differences between pre and post measurements in the first experimental group (fencing players) in the research variables towards the post measurements.

There are indicative statistical differences between pre and post measurements for the second experimental group (tennis players) in the research variables towards the post measurements.

There are indicative statistical differences between pre and post measurements of the third experimental group (karate players) in the research variables towards the post measurements.

Table 1: Indicative differences between pre and post measurements of the first experimental group (fencing players) in the research variables (N =7)

Variables	Pre measure		Post measure		Z	P
	M	SD	M	SD		
Visual imagery	4.2857	2.289	10.000	.0000	2.379*	0.017
Audible imagery	2.8571	1.069	8.000	2.2361	2.460*	0.014
kinetic sensory imagery	3.429	1.397	8.286	1.113	2.530*	0.011
Emotional imagery	3.429	1.397	8.571	2.439	2.070*	0.038
Imagery control	4.000	1.633	9.714	.488	2.392*	0.017
Self talk	16.571	5.349	34.571	3.867	2.379*	0.017
Pressure facing	75.143	3.579	105.286	6.645	2.379*	0.017

\*P < .05

Table 2: Indicative differences between pre and post measurements of the second experimental group (tennis players) in the research variables (N=8)

Variables	Pre measure		Post measure		Z	P
	M	SD	M	SD		
Visual imagery	5.000	2.928	9.000	1.852	2.530*	0.011
Audible imagery	4.000	2.564	7.750	2.121	2.533*	0.011
kinetic sensory imagery	3.625	2.199	7.375	2.387	2.558*	0.011
Emotional imagery	3.625	1.847	8.125	2.100	2.379*	0.017
Imagery control	4.750	2.376	9.000	.756	2.359*	0.011
Self talk	17.125	3.227	31.625	6.116	2.530*	0.011
Pressure facing	75.875	2.357	109.125	9.920	2.530*	0.011

\*P < .05

Table 3: Indicative differences between pre and post measurements of the third experimental group (karate players) in the research variables (N = 7)

Variables	Pre measure		Post measure		Z	P
	M	SD	M	SD		
Visual imagery	4.714	1.254	7.714	1.604	2.456*	0.014
Audible imagery	3.571	.787	7.000	1.528	2.414*	0.016
kinetic sensory imagery	4.429	1.397	7.143	1.773	2.456*	0.014
Emotional imagery	4.143	1.464	6.429	1.618	2.264*	0.024
Imagery control	4.286	.756	7.429	1.902	2.414*	0.016
Self talk	14.286	4.957	29.286	4.645	2.410*	0.016
Pressure facing	74.000	3.055	102.286	8.381	2.456*	0.014

\*P < .05

Table 4: Differences between the three experimental groups in the research variables in the post measurements

variables	fencing	tennis	karate	chi <sup>2</sup>	p
Visual imagery	15.00	11.75	7.71	6.546*	0.038
Audible imagery	12.71	11.94	9.79	0.810	0.667
kinetic sense imagery	13.79	11.31	9.43	1.693	0.429
Emotional imagery	13.57	12.19	8.64	2.412	0.299
Imagery control	15.86	11.25	7.43	6.539*	0.038
Self talk	15.21	11.31	8.00	4.431	0.109
Pressure facing	11.12	13.44	9.14	1.676	0.433

\*P < .05

Table 5: Percentage of improvement for the three experimental groups in the research variables:

Variables	First group (fencing players)			Second group (tennis players)			Third group (karate players)		
	Pre-measure	Post-measure	%	Pre-measure	Post-measure	%	Pre-measure	Post-measure	%
Visual imagery	4.2857	10.0000	%133.3	5.0000	9.0000	%80.0	4.7143	7.7143	%63.6
Audible imagery	2.8571	8.0000	%180.0	4.0000	7.7500	%93.8	3.5714	7.0000	%96.0
kinetic sense imagery	3.4286	8.2857	%141.7	3.6250	7.3750	%103.4	4.4286	7.1429	%61.3
Emotional imagery	3.4286	8.5714	%150.0	3.6250	8.1250	%124.1	4.1429	6.4286	%55.2
Imagery control	4.0000	9.7143	%142.9	4.7500	9.0000	%89.5	4.2857	7.4286	%73.3
Self talk	16.5714	34.5714	%108.6	17.1250	31.6250	%84.7	14.2857	29.2857	%105.0
Pressure facing	75.1429	105.2857	%40.1	75.8750	109.1250	%43.8	74.0000	102.2857	%38.2

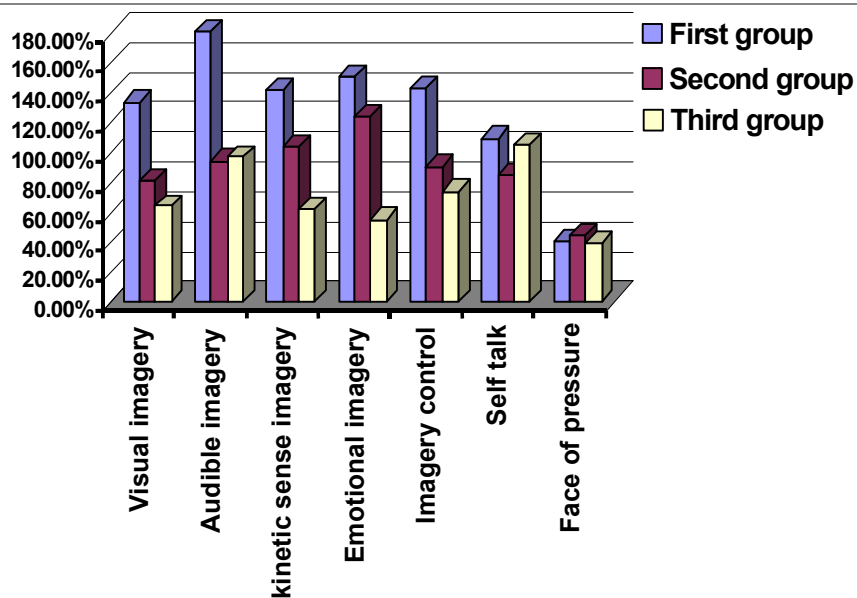


Fig. 1: Percentage of improvement for the three experimental groups in the research variables.

There are indicative statistical differences between the three experimental groups in (visual imagery and imagery control) in the post measurements in favor of the fencing players, while there are no differences in the rest of the research variables.

There is an increasing in the Percentage of improvement for the three experimental groups in all research variables.

There are differences in the Percentage of improvement between pre and post measure among the three experimental groups in the research variables ranged between 38.2 %-180.0%.

The first experimental group (the fencing players) recorded the highest rate of improvement for the audible imagery, while the second experimental group (the tennis player) recorded the highest rate of improvement for emotional imagery. The third experimental group (karate players) recorded the highest rate of improvement for self talk.

The results indicated that there were significant differences between the pre and post measurements for the three experimental groups (fencing-tennis-karate) in the research variables (mental imagery-self talk- facing of sports pressure) towards the post measurements.

Those differences are due to the effective role of the proposed program of training with the skills of mental imagery, self talk in developing the different dimensions of those skills as well as its impact in developing of the skills of pressure facing.

These results are consistent with the results of Shamoun [14], which refers to that the mental imagery has a motivational function which leads to improve the level of performance. It is also consistent with the results of Van Raalte [15]) which referred to that the use of self -talk, help the players to perform well in the competitions especially in critical times and pressing situations.

Results also indicate that there were no significant differences between the three experimental groups in (audible imagery- kinetic sense imagery-emotional imagery-self talk- facing of pressure) in the post measurements. The researcher sees that the content of the proposed program was an effective for the research sample and appropriate to the nature of individual sporting activity practiced as it has contributed to the development of the research variables equally for all experimental groups.

On the other side it is clear that there are indicative statistical significant in the post measurement (visual imagery and imagery control) in favor of the fencing players. This was due to the nature of fencing which requires the ability to imagine the motor pathways of the

offensive and defensive various skills. These variables, is one of the most successful performance variables. It also requires the ability to imagine these skills and control this imagining quickly, accurately and perfectly prior to the performance directly. So, it was very important for the fencing players to train on these variables during the program application more than the other players of the research groups.

This is consistent with the confirmation by the results of other researches which indicated that the sport activity may require focusing on the mental skills more than any other activity, according to the nature of performance [16, 17].

The researcher indicates that the differences in the percentage of improvement between pre & post measurements for the three experimental groups in the research variables are due to individual differences between players as well as the role of the proposed program through using mental imagery & self-talk which has contributed to develop the research variables in different rates which vary according to the capacities, capabilities, tendency and desires of the players.

The Researcher sees that recording the highest rate of improvement by the first experimental group (fencing players) in audible imagery was because it paid great attention to training on this variable which is related to the sport of fencing as this sport requires a good audible perception during the performance of defense or counter attack skills. While the second experimental group (tennis players) recorded the highest rate of improvement in emotional imagery variable because it needs more emotions in the performance besides it requires a great amount of the emotional imagery for the ideal performance for winning in the competitions.

The third experimental group (karate players) recorded the highest rate of improvement in self talk because it is characterized by the direct physical contact with opponent which requires the player to continuously use of self-talk to encourage himself and increase motivation to make good performance, which made the players in this group a great motive to train more effective on this variable which is very important in karate.

## **CONCLUSION**

- The need to focus on the practice the skills of multi-dimensional mental imagery and positive self-talk side by side with the skills program which used in training of the individual sports because of its effective role in the development of ability to cope with the pressures of sports.

- Importance of consideration of the individual differences between players as well as the nature of the difference in performance skills for various sports activities when we perform mental skills programs to achieve the maximum benefit from these programs to overcome the various psychological problems and then developing the performance.
- The need for doing more researches on the various individual and Group sports activities to identify the effect of the mental imagery and self-talk on various psychological variables.
- Doing more Researches to determine the influence of many of mental skills to cope with pressure in different sports activities.

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