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THE STUDY OF MENTAL IMAGERY DIMENSIONS AND THEIR RELATIONSHIP TO PERFORM DIVE ON FLOOR EXERCISE IN GYMNASTICS

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ABSTRACT

The Main Purpose of the current study was to Study of Mental Imagery Dimensions and their Relationship to Perform Dive Roll on Floor Exercise in Gymnastics as well as the level of mental imagery for the study sample .Sport Imagery Questionnaire was applied to measure the imagery ability of the athletes' skill performance, a s well as the test of dive-roll for (35) undergraduate male students, chosen from the second year of college of physical education and sports science, students at salahddin university Erbil.(n=35, age19±1.44 years). descriptive research method used as it suits the nature of the research problem. There searcher used the following statistical means (the mean, standard deviation, person correlation coefficient). There results indicated that the overall level of Mental Imagery was moderate as well as a significant relationship between the study variables. The researcher recommended paying more attention to the mental imagery along with preparing the learning and training schedules.

Keynotes: Mental imagery, gymnastics, male students, Floor exercise, skill, performance

1. INTRODUCTION

Gymnastic for college students is a relatively difficult sport compared to other activities and games since this sport requires flexibility and coordination that help performers to apply the skills safely. Many gymnastic skills involve large weight-bearing powers in the hands and other parts of the body; as well as the requirement of a good mental preparation. **(Gabel, 1998).** Dive roll is one of the skills in gymnastics that requires a good timing between the takeoffs and extends the arms before landing. To perform a well shown skill in sports not only, physical training is sufficient to reach high performance but psychological skills required as well. Most athletes have relatively close physical abilities, which makes the difference in completions is the psychological preparation. According to **Driskell et.al (1994)** imagery use has a sensible and significant impact on motor skill performance. Further more imagery can improve emotional control, goal setting and concentration which appear solidly as a crucial part of success in sports **(Heuzé and Lévèque (1998).**

The word imagery came from the Latin imago (imitate), imagery contains creating a mental picture of experience clearly and as close as to the real situation. It is an influential mental technique that has been used widely among researchers, sport psychology consultants, as well as trainers and athletes **(Taylor & Wilson, 2005).** Athletes can employ imagery techniques for more determinations such as: learning and practice of skills; and stress management (Strachan & Munroe-Chandler, 2006).

Mental training also helps in establishing a positive thinking of one hand and turns the negative thoughts into positive, on the other hand **(Malik &Yadav, 2015).** There is evidence that also used to enhance skill acquisition **(Hall et al, 1998).**

The current study explores the study of mental imagery dimensions and their relationship to dive roll on floor exercise, and the purpose of the study is to find out:

1. The level of mental imagery for the study sample.
2- The relationship between mental imagery dimensions and Dive-Roll skill on floor exercise. Field of the study:
1. Human scope: (35) undergraduate Male students, chosen from the second year of college of physical education and sports science, students at Dalahaddin university –Erbil.
2- Time scope: from 22/01/2020 until 29/01/2020
3- Spatial scope: Dr. Shakhwan gymnastic Hall.

2. METHODOLOGY

2.1 Participants

35 undergraduate 2nd year Male students were chosen from the college of physical education and sports science, at Salahddin University, Erbil (Iraq).

2.2 Selection of Variables

The dive roll skill in gymnastics and four dimension of mental imagery i.e. Visual, Auditory, Kinesthetic and mood were selected for the purpose of present investigation.

2.3 Instrumentation

In order to collect data for the study, the Sport imagery questionnaire was used to evaluate the four dimension of mental imagery. Dive-roll in gymnastics was performed on Floor arena and recorded by Sony Handycam recoder-CX440

2.3.1 Evaluation of Mental imagery

The researcher used sport imagery questionnaire, which developed by Rainier Martens author and pioneer in sport psychology and was designed to help athletes to determine how they experience .The questionnaire contented four specific areas (sight, sound, feeling and mood) of

an image, and in four different situations (practicing alone, practicing with other, watching teammate and competing.

After the preparation of finished the questionnaire of sport imagery on the sample after a week of Dive –roll skill evaluation in order to measure the imagery of the student about the skill, they had to perform the Dive first after the skill recorded the week. After the questionnaire of sport imagery had applied, the data was extracted.

2.3.2 Evaluation of Dive- Roll skill

The researcher filmed the participants each individual by Sony camera, which was stabilized in 4 meters of place of perfumed dive roll. Afterward, the film showed to (4) gymnastic lecturer send judges in order to score the skill. The score was out of 5; the 2 highest and lowest was removed, and the other two score was averaged.

2. 4. Pilot study

Before conducting the present investigation, pilot Study on 10 participants of the same community by taking different sample of the second- year undergraduate male students belong to college of physical education and sport science. The purpose of conducting the pilot study was to find out the following:

1. Familiarization to the sport imagery questionnaire.
2. Reducing of the testing hurdles.
3. Knowing the total time of the answering questions.

2. 5. Final Study

After the preparation of finished the questionnaire of sport imagery on the sample after a week of Dive –roll skill evaluation in order to measure the imagery of the student about the skill, they had to perform the Dive first after the skill recorded the week. After the questionnaire of sport imagery had applied, the data was extracted.

2.6 Statistical Analysis

The researcher used SPSS software for the statistical treatment of the collected data. The mean, standard deviation and Pearson Moment correlation coefficient were calculated.

3. RESULTS AND DISCUSSION

To find out the relationship between dive-roll and four dimensions of mental imagery, mean, Sd, and Product Moment Correlation Coefficient were computed and data ertaining to this, has been presented in table 1 to 5.

TABLE 1

MEAN AND STANDARD DEVIATION OF DIVE- ROLL AND VISUAL AUDITORY, KINESTHETIC AND MOOD DIMENSIONS OF MENTAL IMAGERY

S.N0.	Variables	Mean	SD
1	Dive Roll	3.98	3.12
2	Visual imagery	16.33	2.19
3	Auditory imagery	15.42	2.31
4	Kinesthetic imagery	17.67	2.03
5.	The mood imagery	14.87	2.23

TABLES 2

CORRELATION VALUE BETWEEN DIVE -ROLL AND VISUAL DIMENSION OF MENTAL IMAGERY

Variables	Correlation Coefficient	Required Value
Dive Roll V/S Visual imagery	0.876*	0.325

The (R) level of signification (0.05) and df (35-2) = 0.325

Table 2 shows that the positive significant correlation was found between dive-roll and visual dimension of imagery of college male students of physical education of Salahddin University, Erbil (Iraq), as the obtained r-value of 0.876 was higher than the required r.05 (33)=0.325. The researcher attributed that the visual imagery is an important for skill perfection. Therefore, the learner imaging the skill in his mind before occurrence the real performance of physical education students. The obtained result is compatible with **(Elliott &Khan, 2010, p97).**

TABLES 3

CORRELATION VALUE BETWEEN DIVE -ROLL AND AUDITORY DIMENSION OF MENTAL IMAGERY

Variables	Correlation Coefficient	Required Value
Dive Roll and V/S Auditory imagery	0.771 *	0.325

The (R) level of signification (0.05) and df (35-2) = 0.325

Table 3 shows that the positive significant correlation was found between dive-roll and auditory dimension of imagery variables of college male students of physical education of Salahddin University, Erbil (Iraq), as the obtained r-value of 0.771 was higher than the required r.05 (33)=0.325. The researcher described the close relationship between the visual and auditory, when the trainer wants to correct the skill performance of the player uses the auditory information as a feedback during movement execution. The neuromuscular compatibility has a great role in directing the motor response and raised the value of the correlation coefficient. Therefore, the compatibility between the nervous and muscular systems is important in the success of any response or skill **(Thanoon, 1987, p42).**

TABLES 4

CORRELATION VALUE BETWEEN DIVE -ROLL AND KINESTHETIC DIMENSION OF MENTAL IMAGERY

Variables	Correlation Coefficient	Required Value
Dive Roll and Kinesthetic imagery	0.892*	0.325

(R) level of signification (0.05) and DF (35-2) = 0.325

Table 4 shows that the positive significant correlation was found between dive-roll and kinesthetic dimension of imagery of college male students of physical education of Salahddin University, Erbil (Iraq), as the obtained r-value of 0.892 was higher than the required r.05 (33)=0.325. The researcher accredited to nature of gymnastics since the gymnast can not see his performance, and in order to perform a good control oo the skill, he requires a very good sense of his body during the performance as well as a good coordination between muscular system and central nervous system. The obtained result is compatible with **(Collet et. al., 2004,p195).**

CORRELATION VALUE BETWEEN DIVE -ROLL AND MOOD DIMENSION OF MENTAL IMAGERY

Variables	Correlation Coefficient	Required Value
Dive Roll and mood dimension	0.721*	0.325

(R) level of signification (0.05) and DF (35-2) = 0.325

Table 5 shows that the positive significant correlation was found between dive-roll and mood dimension of imagery of college male students of physical education of Salahddin University, Erbil (Iraq), as the obtained r-value of 0.721 was higher than the required r.05 (33)=0.325. The researcher accredited that to nature of gymnastic. Since gymnast is an individual game the gymnast does not need to think about the other performers can not see his

performance, as well as and in order to perform a good control of the skill he requires; the fact that the more the central nervous system is under-excited, the fine motor control and the greater the accuracy, which makes the students able to control and isolate their emotions, as the idea stresses the mood and generates behavior in a valid sense of his body during the performance. The finding is compatible with **(Terry,2003,p5-10).**

4. CONCLUSIONS

1. The positive significant correlation was found between dive-roll and visual dimension of mental imagery followed by auditory dimension, kinesthetic dimension and mood dimension of imagery of college male students of physical education.
2. Mental imagery is highly beneficial for the better skill performance of male physical education students in gymnastics. So in order to perform a better skill in gymnastics, mental imagery skill is valid and accurate.

5. RECOMMENDATION

1. Researcher recommends that physical educationists and gymnastic coaches should make use of this research results via setting and formulating training session by increasing the attention on the mental imagery along with preparing the learning and training schedules.
2. Encouraging the students of using mental training during the lectures as well as after them.
3. The necessity of establishing a good relationship between the sport psychologist, and the team manager during all the preparation periods.

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