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Some characteristics of motivation and their relationship to the performance of the headstand and diving skills on the floor exercise mat in artistic gymnastics for female students

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Abstract

This study aimed to investigate the relationship between selected motivational traits and the performance of headstand and diving skills on the floor exercise mat in artistic gymnastics among female students. The research problem stemmed from the observed difficulty of students in achieving high technical levels in gymnastics without adequate motivational attributes such as self-confidence, determination, and responsibility. A descriptive correlational approach was employed, involving a sample of 21 second-year students randomly selected from 42 at the College of Physical Education and Sports Sciences, University of Kufa (50% of the population). Data were collected using a motivation scale, skill performance evaluations by expert judges, and supporting tools such as questionnaires and observations. Findings revealed a positive relationship between motivational traits and technical performance in both skills. The study concludes that material and moral incentives significantly improve performance and recommends greater attention to psychological and motivational aspects in gymnastics training.

Keywords: Artistic gymnastics, motivational traits, headstand, diving skills

Introduction

Gymnastics has gained worldwide attention, attention, and an audience. This importance stems from the nature of the game and the fun and excitement it brings to its practitioners and viewers. On this basis, those interested in it, including trainers and researchers, are in constant motion to develop it for the better, as evidenced by the huge amount of research and studies related to gymnastics. Gymnastics requires a high degree of understanding and mastery of the motor task in all the devices on which the players perform, including the floor exercise mat device. Among the basic skills performed on this device are the skill of standing on the head and diving without performing these two skills perfectly requires self-confidence, motivation, determination to perform, and other motivations that work to raise their levels, thus positively reflecting on the technical performance of their skills.

The importance of the research lies in the researcher's attempt to identify the relationship between some motivational traits and the performance of the skills of standing on the head and diving on the floor exercise mat in artistic gymnastics for female students.

The research problem was that female students in the faculties of physical education and sports sciences cannot achieve a good level in artistic gymnastics, especially the skills of diving and headstand, unless they have, in addition to the physical, bodily and motor specifications that. It is compatible with the requirements of the two skills and its performance on the floor exercise mat requires a good level in some motivational traits. Lack of attention to these motivational traits during practical lectures leads to a weakness in the level of technical performance of the students. Therefore, the researcher identified this problem and its dimensions.

Through the following question

Is there a relationship between certain motivational traits and the skills of headstand and floor mat diving in artistic gymnastics among second-year female students at the College of Physical Education and Sports Sciences at the University of Kufa?

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The research objective to

1. Identify some of the motivational traits of the research sample.
2. Identify the relationship between some of the motivational traits and the skill of standing on the floor exercise mat in artistic gymnastics for female students.

Artistic gymnastics for female students. The researcher used the descriptive approach with a correlational approach due to its suitability to the nature of the research problem. The research community was determined as second-year female students in the College of Physical Education and Sports Sciences / University of Kufa, numbering (42) female students. The research sample was randomly selected by lottery from the community to represent and include (21) female students. Thus, the sample constitutes a percentage of (50%) of the research community, which is a good percentage to represent the community in a true and real way the researcher concluded that there is a positive relationship between some motivational traits and diving skills in artistic gymnastics. The researcher also concluded that the use of both material and moral incentives played a significant role in raising the level of technical performance in the headstand and diving skills in artistic gymnastics the researcher made several recommendations, including: The need to pay attention to the student's psychological aspects, as they play a significant role in improving and raising performance. Similar studies should be conducted on other age groups to determine the extent of the relationship between motivational traits and performance of the required skills.

1.1 Research Introduction

1.1 Research Introduction and Importance

The development in sports fields, reaching a high level of achievement and achieving good results in international forums, is something that is sought in all sporting events. Gymnastics is one of these fields that has developed significantly as a result of the many efforts expended in this field. Gymnastics has received significant attention and attention worldwide. And the audience, as this importance came due to the nature of the game and what it carries of fun and excitement for its practitioners and for those who watch it. On this basis, those interested in it, including trainers and researchers, are in constant movement for the purpose of developing it for the better, as evidenced by this huge amount of research and studies that concern the game of gymnastics, and that the sport of gymnastics requires a high degree of understanding and mastery of duty. The movement in all the devices that the players perform on, including the floor exercise mat device. Among the basic skills performed on this device are the headstand and diving skills. However, performing these two skills perfectly requires self-confidence, motivation, determination to perform, and other motivations that work to raise their levels, and thus reflect this positively on the technical performance of their skills. Motivation levels among students are also affected by certain motives, and this effect is not at the same level, but rather differs from one student to another. Some respond better when they focus on the teacher's instructions and encouragement to make an effort, such as giving a reward, changing the students' positions in the game plan, or assigning them a specific responsibility or directing punishment or warning... etc. These are all

methods that can be used with female students, so it is preferable to get to know their personalities and nature so that we can choose the appropriate method of motivation to use When needed, without resorting to putting all members of the group under the same treatment.

Hence, the importance of the research lies in the researcher's attempt to identify the relationship between some motivational traits and the performance of the skills of standing on the head and diving on the floor exercise mat in artistic gymnastics for female students.

1.2 Research Problem

Female students in faculties of physical education and sports sciences cannot achieve a good level in artistic gymnastics, especially diving and headstand skills, unless they possess, in addition to the physical and physique specifications The movement that is consistent with the requirements of the two skills and its performance on the floor mat requires a good level in some motivational features, and the lack of attention to these motivational features during practical lectures leads to a weakness in the level of technical performance of the students. Therefore, the researcher identified this problem and its dimensions through the following question:

Is there a relationship between some motivational traits and the skills of headstand and diving on the floor exercise mat in artistic gymnastics for second-year female students in the College of Physical Education and Sports Sciences - University of Kufa?

1.3 Research objectives

1. To identify some of the motivational traits of the research sample.
2. To identify the relationship between some of the motivational traits and the skill of standing on the floor exercise mat in artistic gymnastics for female students.
3. To identify the relationship between some of the motivational traits and the skill of diving on the floor exercise mat in artistic gymnastics for female students.

1.4 Research Hypothesis

There is a significant relationship between some motivational traits and technical performance in the headstand and floor mat diving skills in artistic gymnastics for female students.

1.5 Research Areas

1. **Human scope:** Second-year female students at the College of Physical Education and Sports Sciences, University of Kufa, for the academic year 2024-2025.
2. **Temporal scope:** From October 30, 2024, to April 1, 2025.
3. **Spatial scope:** The indoor gymnastics hall at the College of Physical Education and Sports Sciences, University of Kufa.

2. Research methodology and field procedures

2. Research methodology

To achieve the research objectives, the researcher uses the appropriate methodology to solve the research problem. The methodology is the path leading to uncovering the truth in various sciences. This is achieved through a set of general rules that govern the workflow to arrive at an acceptable result. The researcher used the descriptive methodology

using the correlational approach because it is appropriate for the nature of the research problem.

2.2 Research community and sample

The research community was determined as second-year female students in the College of Physical Education and Sports Sciences / University of Kufa, numbering (42) students. The research sample was randomly selected by lottery from the community to represent and include (21) female students. Thus, the sample constitutes a percentage of (50%) of the research community, which is a good percentage for representing the community in a true and real way.

2.3 Devices, Tools, and Methods Used in the Research

2.3.1 Research Methods Used

- Questionnaire
- Observation
- Arabic and foreign sources and references
- Information Network (Internet)
- Tests and Measurements
- Grade Transcription Form
- Personal Interviews

3.2.2 Tools and Equipment Used

- Indoor Gymnastics Hall at the College of Physical Education and Sports Sciences, University of Kufa.
- Toshiba Laptop.
- Floor Exercise Mat.
- Sponge Mats.
- Paper and Pens.

2.4 Field Research Procedures

2.4.1 Determining Tests for Variables

First Test: Motivation Scale

The Motivation Scale was used by the yard to measure certain traits (motivation, determination, self-confidence, responsibility, leadership). It contains (20) items, which students must answer by placing a check mark (/) in front of the appropriate statement.

The second test was to measure the skill performance of research skills:

The skill performance level was evaluated by assigning a score out of (10) by three female judges in artistic gymnastics (□) with three attempts for each student in both skills (headstand, diving), and the student's highest attempt was counted.

2.4.2 Exploratory Experiment

The researcher conducted the exploratory experiment on 12/5/2022 on a sample of (5) female students from the same research community. The purpose was to identify the validity and efficiency of the tools and devices used in the test, as well as the overall difficulties the researcher encountered during the implementation of the main experiment, how to avoid them, find optimal solutions, and determine the amount of time required to conduct the main experiment.

2.5 Experiment objective

2.5.1 Pretests: The researcher conducted pretests on Tuesday, November 12, 2024. The researcher administered tests to measure certain motivational traits and technical performance in the headstand and diving skills to obtain the pretest results.

2.6 Statistical methods used

The researcher used the statistical package (SPSS) to analyze the research results.

4.1 Presentation, Analysis, and Discussion of Results:

Table 1: Shows the correlation coefficient between some motivational traits and headstand skill.

Connotation	Significance value of the test(sig)	Correlation value	Headstand		+P	S-	Statistical features Researched variables	ت
			+P	S-				
Moral	0.00	0.87	0.47	9.7	0.36	10.8	Motivation	1
Moral	0.01	0.89			0.60	11.2	Design	2
Moral	0.02	0.77			0.48	17.9	Self-confidence	3
Moral	0.01	0.80			0.39	18.6	Take responsibility	4
Moral	0.00	0.79			0.61	14.5	leadership	5

The significance level value is (0.05)

Table 2: Shows the correlation coefficient between some motivational traits and diving skill.

Connotation	Significance value of the test (sig)	Correlation value	Diving		+P	S-	Statistical features Researched variables	ت
			+P	S-				
moral	0.02	0.86	0.48	7.8	0.30	14.3	Motivation	1
moral	0.01	0.83			0.41	11.7	Design	2
moral	0.00	0.79			0.45	17.2	Self-confidence	3
moral	0.00	0.80			0.33	13.4	Take responsibility	4
Moral	0.00	0.88			0.67	19.7	leadership	5

The significance level value is (0.05)

4.2 Discussion of the results

The results in Tables (1) and (2) showed that there are positive correlations between some motivational traits and the skills of headstand and diving. These correlations ranged between (0.87) and (0.88) with a significance of (0.05). The results also showed a significant correlation between

motivation and the skills of headstand and diving, as the more the motivation, both moral and moral, was used, the greater the material during learning the skills of headstand and diving, the higher the level of technical performance of these two skills, because the incentive works to increase attention, which is considered one of the psychological

skills necessary to raise the level of technical performance and develop it. The results also showed a positive correlation between determination and the skills of headstand and diving, as the more determined the student was to perform well, the more factors for successful performance increased. Determination is considered one of the most important factors that affect the ability to perform a certain behavior. The results also showed that there is a positive correlation between self-confidence and the skills of headstand and diving. This means that the skill of self-confidence is a personal trait necessary to achieve success, as it helps the student improve performance. Self-confidence expresses the degree of belief that the student has confidence in the extent of her ability to achieve success. There is no doubt that the student's expectation of the results of her performance is considered an important factor in terms of influencing the performance results. Confidence in expecting results makes the student more willing to make more effort and give, as the higher the degree of expectation. The more confident the student becomes, the more her ability to endure and persevere in the face of obstacles or problems she encounters increases. She becomes less vulnerable to defeat or loss of hope. It also helps to focus attention on performance and stimulates her latent abilities while maintaining calm, relaxation and composure, especially in stressful performance situations.

The results in the table above also showed that there is a positive correlation between the trait of bearing responsibility and the skills of standing on the head and diving, as the trait of bearing responsibility increases through interest, which means emotional connection to the group, whether it is a large or small group, as well as the frequency of participation that works to solve the problems facing performance, as well as The student's sense of responsibility towards the technical performance of the skills, as well as towards the rest of the students, is reflected positively in the technical performance of the headstand and diving skills. The results also showed a positive correlation between the leadership trait and the headstand and diving skills. The student is in certain activities or positions during the artistic performance in which that student must make leadership decisions, such as involving the student in organizing the lesson in which the artistic performance of skills takes place by preparing the equipment and tools and organizing the rest of the students through her communication with the group, as the more the student is placed in leadership roles, the more this is reflected positively on the artistic performance of the skills of standing on the head and diving.

Through the previous discussion, we can understand the interpretation of the research hypothesis, which proved the existence of a positive correlation between some motivational traits and the headstand and diving skills of female students in artistic gymnastics.

5. Conclusions and Recommendations

5.1 Conclusions

Based on the research findings within the research community, the following conclusions were reached:

1. There is a positive relationship between some motivational traits and headstand skill in artistic gymnastics.

2. There is a positive relationship between some motivational traits and diving skills in artistic gymnastics.
3. The use of both material and moral incentives played a significant role in raising the level of technical performance in headstand and diving skills in artistic gymnastics.

Technical

4.2 Recommendations

In light of the conclusions reached by the researcher, the following recommendations were made:

1. The need to pay attention to the psychological aspect of the student, as it plays a significant role in improving and raising her performance.
2. Conduct similar studies on other age groups to determine the extent of the relationship between motivational traits and the performance of the required skills.

Conduct studies examining the relationship between motivational traits and skill performance in other events such as basketball, handball, and volleyball.

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Appendix (1)

Questionnaire to measure some motivational traits among female students.

In the name of God, the Most Gracious, the Most Merciful
Dear student.

Greetings.

Before you are a set of phrases that you encounter that indicate your behavior in the artistic gymnastics class and what is required of you:

- Answer honestly and clearly by putting one mark () in front of each statement that applies to you (applies to me to a great extent, applies to me to a moderate extent, applies to me to a small extent, does not apply to me).
- There are no right or wrong answers. Every answer is considered correct as long as it honestly expresses your opinion about yourself.
- Your answer will only be seen by the researcher and will be used for scientific research purposes. There is no need to mention your name.
- It is important not to ask another colleague to help you answer.

Doesn't apply to me	It applies to me to a degree			Paragraphs	ن
	Few	Medium	Great		
				I can always motivate myself during class.	1
				I consider the study periods to be fun and interesting periods.	2
				I feel bad when my performance is poor.	3
				I feel sensitive when my teacher criticizes me.	4
				I participate in the performance and all my thoughts include self-confidence.	5
				I give up easily when I perform poorly in a skill.	6
				My colleagues describe me as a very responsible person.	7
				I trust others easily.	8
				I try to show my teacher kindness so that he will be pleased with me.	9
				I am confident that my colleagues will cooperate for the benefit of performance.	10
				For me, the lesson is more fun with my classmates.	11
				I get anxious and have a hard time getting back to normal when unexpected things happen in skill performance.	12
				I always strive for the best performance.	13
				In performing skills, I think I put in more effort than most of my classmates.	14
				I blame others when I fail to do a headstand.	15
				I doubt others easily.	16
				I often feel inadequate when I underperform.	17
				I suffer from a lack of confidence in performing some artistic gymnastics skills.	18
				Repetition of the performance bores me.	19
				My confidence gradually fades as I get closer to performing the skills.	20