



## **Summary**

### **Introduction and Research Problem :**

Gymnastics is one of the most difficult individual sports that is characterized by including a great number of movements that are different in both difficulty and performance concerning shape, and form of muscle work. Achieving high standards in gymnastics depends on possessing distinctive physical, psychological, physiological, and muscle abilities among players. Thus, gymnastics requires that a player should possess a high degree of muscle and neurological adaptation upon which the level of skill can be determined.

Therefore, due to the requirements of gymnastics including quick change of directions and moving in different levels during performing the motor set, practising such sport necessitates certain physical traits and adaptive abilities, in addition to some characteristics like controlling the body, boldness in performance, and correct timing.

Hence, the importance of adaptive abilities appears in performing gymnastics, since they help the player to use the body easily in performing different movements, moving from a position into another, or changing speed of performance in an accurate and appropriate timing.

### **Aim of the research :**

The present research aims at constructing an instructional program of the balance bar and investigating its effect on the adaptive abilities and level of skill performance of faculty of physical education female students. Assiut University, through which the following can be recognized :

- The effect of the suggested program on adaptive abilities.

- The effect of the suggested program on raising the level of skill performance.

**Hypotheses of the research :**

- 1) There are statistically significant differences between the pre and post tests of the experimental group concerning the adaptive abilities and the level of skill performance in favor of the post test.
- 2) There are statistically significant differences between the pre and post tests of the control group concerning the adaptive abilities and the level of skill performance in favor of the post test.
- 3) There are statistically significant differences between the post tests in each of the experimental and the control group concerning the adaptive abilities and the level of skill performance in favor of the experimental group.

**Procedures of the research :**

**(Approach of the research) :**

The researcher has used the experimental approach including two groups, one is experimental and the other is controlling, applying the pre and post tests system.

**(Sample of the research)**

The research sample included (30 female students in the faculty of Physical Education, Assiut University, divided into two groups equally, the control group, and the experimental one.

The sample was proved to be homogeneous as a whole, in addition to matching the two research groups in the light of variables that are supposed to affect the accuracy of results as follows :

- Age, height, and weight.



- Adaptive abilities cited in the research.
- The motor set performed on the balance bar.

**(Instruments of data collection) :**

- Instruments and equipments used in measurement.
- Analysis of references and scientific researches.
- Questionnaires for experts/ opinions.
- Tests.

**The main experiment :**

- A) The researcher conducted the pretest during the period from 13-3-2004 to 18-3-2004 on the two research groups before the beginning of the main experiment of the following study variables :
- Measurements of height, weight, and age.
  - Tests of adaptive abilities involved in the research.
- B) The researcher applied the program on the research sample during the period from 20-3-2004 to 8-5-2004 where the total program lessons were (14 lessons) divides as two lessons weekly. (the lesson period is 90 minutes).
- C) The researcher conducted the post test on the two research groups during the period from 9-5-2004 to 11-5-2004.

**(Statistical treatment)**

- Arithmetic means.
- Standard deviation.
- Skew.
- Percentage of improvement.

- T-test.

### **Conclusions & Recommendations :**

#### **(Conclusions)**

In the light of the research aims and hypotheses, and through the statistical treatment and discussion of results, the researcher could conclude the following :

- The suggested educational program has a positive effect on the adaptive abilities included in the research (balance – agility – speed – motor sensation).
- The suggested instructional program has a positive and effective effect on the level of skill performance of the motor set performed on the balance bar.
- The adaptive exercises included in the program have an effect on improving the level of adaptive abilities and raising the level of skill performance in spite of the difficulty of performance on the balance bar during the age stage included in the research sample.

#### **(Recommendations) :**

- Conducting further studies concerning the adaptive abilities to recognize the degree of their importance and the way to develop performance on other different gymnastics sets.
- Using the adaptive abilities as a whole and recognizing their effect on the four sets used by female students.



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**The Effect of a Suggested Instructional Program of  
the Balance Beam on the Coordination Abilities  
and Level of Skill Performance Among Faculty of  
Physical Education Female Students**

**A Thesis**

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