Summary

The Research Summary

"The effect of using some methods of proprioceptive Neuromuscular facilitation on Kinetic Extent and the Level of back Dive on Floor Exercise"

- Introduction and research problem

Gymnastics is a sport one individual sports activities that require from the player activical, physical and psychological certain specifications, as more characteristic of gymnastics in the modern era is a high difficulty in performing skills on different devices, in addition to the advanced countries in the gymnastics go to putting the scientific stages to reach to the best element from the young to practice gymnastic to reach by them high performance, and therefore the winning in the international championships and the Olympics .

According to **Adele Saad Shenouda, Samia Farghali Mansour (1999)** noted that the gymnastics activities that require considerable effort to learn and master, and that the multiplicity of skills and difficulties, and the different organs, in addition to the characteristics required by the performance, such as control of the body and its different parts in the unusual positions , Also doing the movements in space on different heights and different speeds , Next to the momental control on the artal performance which play the main role in the evaluating .

Ground movements device is an important organ of the gymnastics equipment and that the similarity of his skill with skills that lead the rest of the other devices, where is all the movements on different hardware basis of performance and length of the floor exercises 70 seconds and this is the longest period of performance when compared with other devices ..

"**Ahmed Hadi Yusuf (2010) for Heinz Reich Heinz Reich**" that recipe flexibility beside force plays an important role to reach the highest

athletic ability, and that the joints in the shoulder strap, spine, pelvis, comes in the initial importance of the gymnast, it is through these joints that make the movements by the abilitical performance in the gymnastic movements .

The way the nervous easing muscle sensory receptors Proprioceptive Neuromuscular facilitation (PNF) the best ways to develop the flexibility in the joints and capacity diastolic articular muscles and exercises that include how to use the muscle contractions Aizumtria consecutive images iterations by defenat times between them times of relaxtion for these muscles

Refers Roy "Roy" (1994 m) to the corresponding movements skill using the muscles working in his desired effective impact on the development and improve the physical attributes and thus the effectiveness of locomotor performance performance performance.

Therefore, it is important to use exercises that lead in a manner consistent with the nature of the performance of the motor skill and using muscle groups working in the same skill as well as in the same motor track him effective impact in improving the physical attributes and thus increase performance skills to a level of ski, and managed the problem of this study is that the researcher has observed during his Demonstrator sports training and Movement Sciences Department of specialty training gymnastics at the Faculty of Physical Education, University of Sohag, and currency as technical director for the team Sohag University, noted the presence of some of the problems faced by the players and make their level is weak

Inform the researcher Ali many references and periodicals own sport Aldjembazatben researcher lack of scientific research and references that dealt with methods neuromuscular facilitation of sensory

receptors and scientific research (PNF) as the best methods for the development of flexibility and diastolic articular muscles

Aim of the research:

Targeted research is to use some of the neuromuscular facilitation of sensory receptors to the team Sohag University gymnastics techniques and knowledge of its impact on:

1- Flexible joints working on the back somersault on the hands of the performance of the device ground movements.

2- The level of performance skill to skill background Somersault on the hands of a ground movement.

Research hypotheses: -

1. There are significant differences between the mean scores of the two measurements prior and subsequent to the flexibility of the joints in the operating performance of the background Somersault on the hands for the benefit of the dimensional measurement in a sample
2. There are significant differences between the mean scores of the two measurements pre and post performance skills in the background of a somersault on the level of hands in favor of the dimensional measurement in a sample

Methods and procedures Search:

Research Methodology:

According to the nature of the research and the use of objective researcher experimenta as it is the most appropriate curriculum appropriate for this research and the application of tribal measurement and post such as designing a pilot for one set is applied to the proposed training program.

The research community:

This included the research community on the university team artistic gymnastics students (men) from the Faculty of Physical Education, University of Sohag and number (20) students for the academic year 2014/2015 m.

The research sample:

Selected sample way intentional strong (10) students from among the members of the technical team gymnastics students aged between 18 / up to 20 years where he was a medical examination on them to make sure their safety and health before the implementation of the proposed training program due to his program

Means of data collection tools:

The researcher identification tools and devices that use the research sample, in the collection of data for this study scientific references and previous studies of Arab and foreign specialized in sports training in general and in particular gymnastics training, personal interview.

Medical Thermometer to measure the weight by (K.g)	**Stop watch to measure the time**
Restameter to measure the tall by(C.m)	**Sweden stands**
Mind wall	**Graduated boxes**
Mendal device	**Ring hourse**
Ground movement device	**Rubbering device**
Jumping ladder	**Movies Tapes**
Digital camera	**Mendal device**
Switzerlandic balls	**Medical balls**
Low ring	**Sponge mattresses**
Algniometer device to measure the joints flexability	

Questionnaires used in the search:

The researcher with the design and use of the following form:

1. Questionnaire to determine the most important methods of neuromuscular facilitation of appropriate sensory receptors of the skill in question..
2. Questionnaire to identify themes and periods for the proposed training programme.
3. Questionnaire to determine physical traits and dynamic range tests appropriate for the skill in question in the light of neuromuscular facilitation techniques of sensory receptors (**PNF**).
4. Questionnaire to determine the most appropriate training range kinetic joints working skill in gymnastics.
5. Form evaluates the level of performance skills..
6. Registration data for players (name-age-length-weight-age training)..

Statistical processors used:

The nature and objectives of the research the researcher used the following statistical processors.

1. Arithmetic mean
2. Standard deviation
3. Torsion coefficient
4. Test of the significance of individual differences
5. The correlation coefficient
6. Percentage coefficient
7. Splaying coefficient

Conclusions:

In the light of the objectives of the research and its prescriptions and sample characteristics based on statistical treatments and the results reached by the investigator to the following conclusions:

1- A statistical differences at a level (0.05) between the average scores in fingerprinting measurements range kinetic joints working sample search for telemetric, ranged value (v) calculated between (-9.13:-26.31), improvement rates ranged between (59.12% : 122.52%)

2- A statistical differences at a level (0.05) between the averages of the degrees measurements fingerprinting for telemetric in the performance level of a sample search, ranged value (v) calculated with the value of "t" calculated to (-25.32) and range improvement (146.88%).

3- The training programmer using neuromuscular facilitation methods of sensory receptors (**PNF**) repeat the contraction (**RC**), the contraction-relaxation (**CR**), contraction-relaxation-stretching (**CRS**) to improve the range of motion of joints working skill hand back somersault on floor exercise in gymnastics..

4- The training programmer using neuromuscular facilitation methods of sensory receptors (**PNF**) repeat the contraction (**RC**), (contraction-relaxation (**CR**), contraction-relaxation-stretching (**CRS**) has led to improved performance lshkolbh background on the hands on my floor exercise in gymnastics..

Recommendations:

In the light of the research objectives and results within the sample, the researcher recommends the following:

1- Need a repeat contraction (**RC**), the contraction-relaxation (**CR**), contraction-relaxation-stretching (**CRS**) to improve the range of

motion of joints because of their influence on the performance of somersault back on hands on the ground movement device..

2- need to emulate various software training tracks kinetic nature of performance engineering..

3- Application of the proposed programme with research methods that rely on neuromuscular facilitation used in this study on sports teams like a sample search of positives in the physical and skill level of the players, especially skills that require motor wide range ..

4- Attention to performance and flexibility stretching exercises before the performance on the ground movement device ..