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The Effect of Stretching Exercises in Development of Physical Flexibility for Beginner Physical Strength Players

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Ahmed Yousif, Samer Yousif, Ahmed Fadhil
College of physical education, Babylon University, Iraq
College of physical education, Babylon University, Iraq
Faculty of Health Sciences, UITM, Malaysia
ahmed1968yousif@yahoo.com
samir1971yousif@yahoo.com
ahmedfad2005@yahoo.com

ABSTRACT

The physical preparation is one of the most important elements of preparation and completion requirements in the game of physical strength. It is by observing the researchers their being interested in a game of physical strength noticed weakness and shortcomings in the training of some elements of the physical preparation is the most important physical flexibility, so the researchers suggest to prepare physical exercises to develop the physical flexibility by a variety training styles to know and study the impact to be an effective facility of training and is available to all coaches. Study aimed to: 1) Prepare stretching exercises by a variety styles of training to develop the physical flexibility for physical strength players; 2) to investigate of the effect of exercises by static – dynamic and (PNF) stretching styles in the development physical flexibility of physical flexibility for physical strength players; 3) to investigate of the differences between the effect of used stretching styles in development of physical flexibility for physical strength players. The researchers used the experimental method, the sample of search consisted of (18) beginner players from a physical strength team of Babylon for the 2011 season were divided into three equal groups, the researchers used observation and experimentation and objective tests as a means of gathering information, and after testing underwent respondents to implement stretching exercises for a period of 10 weeks, three training units weekly , after a post tests was performed and data processing by using the SPSS statistical bag.

Keywords: **physical flexibility, physical exercises, variety training, strength players**

1. Introduction

The physical preparation of general and special types is one of the most important elements of the prepare and achievement requirements in physical strength and receive the bulk of the training unit time and trainers interesting. . physical flexibility one of the most important physical abilities that indicate the level of athletes efficiency and all according to specialization and represent important capacity contribute significantly to the development of

other physical abilities, so it is an important preventive element to protect players from sports injuries and it is an important means of recovery and continue to perform exercises with high efficiency, especially when performing exercises by high intensity, including the development of physical strength.

By observation researchers noticed weakness and shortcomings in the training of some elements of the physical preparation as well as physical flexibility , due to the belief of some coaches that develop flexibility with a negative impact in the development of muscles strength, which leading them to neglect their training in most periods and stages of training which has a negative impact in the development of other physical attributes and including maximum power in addition to the exposure of some of the players to sports injuries because of the low levels of flexibility in the joints, ligaments and muscles.So the researchers felt the preparation of physical exercises to develop physical flexibility by variety of training styles to investigate and study their impact in the physical flexibility status with the players to be an effective training and available to all coaches.

2. Methodology

2.1 Conceptual Framework

Researchers used the experimental method to solve the problem of the research problem by implementation of the experimental design (pre test and post test for the control group (Mohammed & Osama, 1998).

Table (1) Shows the experimental design used in the search experiment

The experimental group	Pre test	experimental treatment	Post test
first group	physical flexibility	Dynamic stretching exercises	physical flexibility
second group	physical flexibility	Static stretching exercises	physical flexibility
third group	physical flexibility	PNF stretching exercises	physical flexibility

2. 2 Hypothesis

1. The stretching exercises by the used training styles have a positive effect in the development of physical flexibility for beginners' physical strength players.

2. PNF stretching style better than other stretching styles of developing physical flexibility for beginners' physical strength players.

2. 3 Measurement of variables

1. Test of flexibility of the shoulders. The purpose of the test: measuring the flexibility of the shoulder joint (Bastawisi, 1999).

2. Test of bend the torso from standing. The purpose of the test: measuring the flexibility of the torso and back thigh muscles (Kamal et al., 2002).

3. Test torso flexibility in the movement of the tide. The purpose of the test: measuring the flexibility of Article muscles of the torso (Ghanem et al., 2010).

4. Test the flexibility of hip (Bastawisi, 1999).The purpose of the test: measuring the flexibility of hip used Tools: scale of angles.

5. Test the flexibility of the rear leg muscle (calf). http://www.topendsponts.com/testing/flex.htm). The purpose of the test: measuring the flexibility of the calf muscle.

6. Test the torso turnover on both sides. (Mohamed, 2001). The purpose of the test: measuring the flexibility of the spine on the vertical axis.

2. 4 Data screening

To deal with the data statistically researchers used the (SPSS) statistical package for the social science

2.5 Sample and analysis

The research community represented by (25) players of Babylon physical strength beginners for the 2012 season aged (18-19 years). The sample of search included (18) players were selected randomly Statistics where formed 72% of the origin community. The sample has been divided into three equal experimental groups.

2. 6 Preparation and implementation of flexibility exercises:

Through the experiences of researchers and after note the specialized scientific sources and references the researchers prepared exercises especially for the development of physical flexibility by static – dynamic and (PNF) stretching styles were implemented every style of these styles with experimental group. these exercises implemented for a period of two and half months from the date of 11/ 9/2012 until 23 /11/2012 by 3 units weekly , days (Sunday - Tuesday - Wednesday) , where the total number of training units which included stretching exercises were (30) at the stage special preparation phase. performing of stretching exercises was before, during and after the repetition of strength exercises and performed in the same muscular groups operating in the exercise of strength by (3 - 4) repetitions of exercise of training unit ,strength exercises were performing before strength exercise at a moderate level while be performed deeper and stronger through and after strength exercises.

2. 6. 1 Model for static stretching exercises:

Exercise of extend torso back: Stand opened, the distance between the legs as chest wide, put your hands behind the back strengthen. - Do slowly ins and outs - extend torso back to the farthest extent possible while maintaining the integrity of the knees. - Staying in a position to extend the torso a period of (30) seconds, and then return to the primary position. - Repeat the exercise (2-4) times.

2 .6 .2 Models for dynamic stretching exercises:

Exercise of weighted arms back: from a standing opened position, lifting arms and shaking your hands. Weighted arms back (maximum range), Continue of performance (10 weighted or 10 seconds). Repeat the exercise (3-4) times

2. 6. 3 Model for PNF exercises:

Exercise of bend the torso forward from long sitting: From a long sitting position, bend the torso with extend arms to the front - by Assistant person clicking from back on the shoulders to the extent the movement range for the hip (feeling simple uncomfortable), stable s for (10 seconds) - the player paying the torso back to resist assistant person and doing a static contract in torso muscles for (6 seconds) - relax - bend the torso with extend arms forward (the assistant person clicking from back on the shoulders to the range further than the first time and stable for 30 seconds.

3. Results & Discussion

Display the results of physical tests flexibility in measuring pre and post experimental research groups and analyzed**.**

(Table 2) Shows the mean value and standard deviation of the results of the first experimental group

Sequence	Tests	Measurement Unit	Pre test		Post test	
			Mean	Std. Deviation	Mean	Std. Deviation
1	bend the torso from the stand	Cm	12.33	5.60	18.66	6.47
2	the flexibility of the torso from the tidal	Cm	21.33	6.80	27.66	5.75
3	Flexibility of shoulder joint	Cm	1.19	0.15	1.11	0.14
4	torso turnover on both sides	Cm	38.66	4.08	45.83	4.07
5	flexibility of the rear leg muscle (calf)	Cm	12.25	3.15	14	2.60
6	flexibility of hip	Angle degree	140.33	10.61	143.16	7.90

(Table 3) Shows the mean value and standard deviation of the results of the second experimental group

Sequence	Tests	Measurement Unit	Pre test		Post test	
			Mean	Std . Deviation	Mean	Std . Deviation
1	bend the torso from the stand	Cm	13.16	4.75	18	4.69
2	the flexibility of the torso from the tidal	Cm	22.16	4.57	28	4.60
3	Flexibility of shoulder joint	Cm	1.23	0.12	1.24	0.16
4	torso turnover on both sides	Cm	39.66	3.2	43.66	4.41
5	flexibility of the rear leg muscle (calf)	Cm	12.25	4.23	13.50	4.37
6	flexibility of hip	Angle degree	138.66	9.81	145	3.68

(Table 4) Shows the mean value and standard deviation of the results of the third experimental group

Sequence	Tests	Measurement Unit	Pre test		Post test	
			Mean	Std . Deviation	Mean	Std . Deviation
1	bend the torso from the stand	Cm	12.88	5.26	23	5.25
2	the flexibility of the torso from the tidal	Cm	22.16	6.06	36.66	3.61
3	Flexibility of shoulder joint	Cm	1.16	0.12	1.01	0.10
4	torso turnover on both sides	Cm	39.5	3.78	49.83	3.31
5	flexibility of the rear leg muscle (calf)	Cm	12.75	3.69	16.33	3.50
6	flexibility of hip	Angle degree	134.83	11.07	145.16	4.75

Display the results of significant differences between pre and post measurement of physical flexibility for experimental research groups and analyzed. For testing the significant differences between the results of physical flexibility tests in pre and post measurements, researchers used the nonparametric statistical method (wilcoxon) to test the differences between related samples. Evident from the table (6) there are significant differences between pre and post measurement for post measurement in all tests except the test of (hip flexibility),

where the difference was not significant. It is clear from Table (7) there are a significant differences between pre and post measurement and for post measurement in all results of the tests except Test of (flexibility of shoulder joint), where the difference was not significant. It is clear from the table (8) there are significant differences between pre and post measurement for post measurement in all results of the tests.

(Table 5) Shows the value of wilcoxon and the significance level and kind to the results of flexibility tests in pre and post measuring for the first experimental group

Tests	wilcoxon	sig	Type of sig
bend the torso from the stand	2.20	0.02	Signed
the flexibility of the torso from the tidal	2.21	0.02	Signed
Flexibility of shoulder joint	2.21	0.02	signed
torso turnover on both sides	2.23	0.02	Signed
flexibility of the rear leg muscle (calf)	2.03	0.04	Signed
flexibility of hip	1.58	0.11	Not signed

(Table 6) Shows the value of wilcoxon and the significance level and kind to the results of flexibility tests in pre and post measuring for the second experimental group

Tests	wilcoxon	sig	Type of sig
bend the torso from the stand	2.23	0.02	Signed
the flexibility of the torso from the tidal	2.20	0.02	Signed
Flexibility of shoulder joint	0.10	0.91	Not signed
torso turnover on both sides	2.06	0.03	Signed
flexibility of the rear leg muscle (calf)	2.06	0.02	Signed
flexibility of hip	2.02	0.04	Signed

(Table 7) Shows the value of wilcoxon and the significance level and kind to the results of flexibility tests in pre and post measuring for the third experimental group

Tests	wilcoxon	Sig	Type of sig
bend the torso from the stand	2.23	0.02	Signed
the flexibility of the torso from the tidal	2.20	0.02	Signed
Flexibility of shoulder joint	2.20	0.02	Signed
torso turnover on both sides	2.22	0.02	Signed
flexibility of the rear leg muscle (calf)	2.20	0.02	Signed
flexibility of hip	2.20	0.02	Signed

Display the results of significant differences between the experimental groups in physical flexibility in the post measurement and analysis. Evident from the table (9) the presence of significant differences between the results of research experimental groups post measurement in (flexibility of torso from the tidal) Test and (flexibility of shoulder joint) and (flexibility of torso for both sides) for the third experimental group which used PNF stretching exercises.

(Table 8) Shows the value of Cruskal Wallis test and the significance level and type for results of flexibility tests in the post measurement of the experimental research groups

Tests	Cruskal Wallis	sig	Type of sig
bend the torso from the stand	2.30	0.31	Not signed
the flexibility of the torso from the tidal	8.47	0.01	Signed
Flexibility of shoulder joint	5.82	0.05	Signed
torso turnover on both sides	6.10	0.04	Signed
flexibility of the rear leg muscle (calf)	2.89	0.23	Not signed
flexibility of hip	2.17	.33	Not signed

Through the presentation and analysis of the results of physical flexibility tests in the pre and post measurement, results showed a significant difference between the results of the tests for all the research groups, the researchers attribute these findings to the effect of stretching exercises, which trained in effective intensity and suitable valium. The performance of stretching exercises improves flexibility and this leads to the development of speed and power and economic effort and reduces the risk of fatigue and muscular soreness. (http ://www.speed-strengthtraining.com /explore.cfm / stretching exercise /) .

The flexibility exercises considered basic and accompanied exercises at the development of physical abilities; they can be performed in beginning of the training unit or between exercises or sets far from the case of fatigue. (Bastawisi, 1999) The results showed significant differences between the results of research groups in the post measurement, significant differences in of the preference of third experimental group (PNF exercises) in the results of some tests, which allows for the athlete's training to perform in wide rate of movements better than other stretching styles because of their positive impact in curbing the activity of sensory receptors in the muscles. (PNF) is one of the most effective techniques in training of physical flexibility to increase the rate of movement. (http: www.sport–fitness- advisor.com /PNF stretching.htm) .

4. Conclusion

The stretching exercises by surveyed training styles have a positive effect in the development of physical flexibility for beginners' physical strength players. PNF exercises advantage over other styles of stretching in the development of physical flexibility for the beginner physical strength players.

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