

EFFECT OF SELECTED ACROBATICS GYMNASTICS TRAINING PROTOCOL ON BALANCE APPLIED ON JUNIOR ARTISTIC GYMNASTICS GIRLS

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ABSTRACT

Background: Balance is factor that is basic to performance and especially to high complex movement (It may define as one's ability to maintain the body's centre of supporting base of the body). We need balance as we habituated to perform lots of physical movement to accomplish the daily assignment. **Objectives:** The purpose of the study was to effect of selected acrobatics gymnastics training on Balance. **Method:** Fifteen girls' students were selected as the subject for this study. All the students resided in their own organization in the district of Nadia. The age limit of the students was 16 years. Balance was analyzed by specific test for balance referred by Strok Stand test. **Results:** Result revealed that after six week acrobatics Gymnastics training the strok stand balance performing for static balance for boys is gradually increasing. FatmaÇelikKayapnar (2011) this study aimed at evaluating the effect of movement education program on static balance skills of preschool children (5-7 years). **Conclusion:** The results tell us that movement education program which was implemented, positively affected static balance of preschool children.

Key words: Balance, Gymnast, Artistic gymnastics, Acrobatics gymnastics, Training

I. INTRODUCTION

Acrobatics gymnastics is an ancient activity that emphasizes the combine beauty of dance and acrobatics gymnastics skills and excitement to the exercise. Acrobatics balance show grace, strength and flexibility choreography and synchronization add flare and creativity to each exercise.

Acrobatics gymnastics favors body control in various positions, both on the ground and in the air. For, the reason the sports are included in the training program of pilots, cosmonauts and parachutists. Acrobatics gymnastics draws it is basic elements that shape the sports physical expression from the sole source as other gymnastics discipline.

Acrobatics gymnastics belongs to 'Acro'- is a competitive gymnastics discipline where partnerships of gymnastics work together and perform routine consisting of acrobatics moves, dance, and tumbling set of music.

Balance is also an important human ability used in our everyday activities like walking and standing as well as in majority of the games and sports and dancing. Balance may define as one's ability to maintain the body's Centre of supporting base of the body. Balance is two types' namely- *Static balance and Dynamic balance*.

❖ **Static balance:-** It may be defined as one's ability to hold a stationary position for reasonably long duration in comparatively less stable position. For example: standing on one foot, standing on stick, handstand, holding headstand balance, tripod balance etc.

❖ **Dynamic balance:-** It may be defined as one's ability to maintain body balance during vigorous movements in comparatively less stable movements. For example: walking over narrow wall, leaping from stone to stone, walking on moving roller, walking over a rope with or without support etc. Dynamic balance is an important factor in physical activities involving controlled movements. e.g.: Running, Dismounts from gymnastics apparatus, series of movement in floor exercise in gymnastics, offensive movements in Wrestling and Fencing etc.

II. METHODOLOGY

▪ **The subject-**The study was conducted on junior girls. Fifteen students were selected as the subjects for this study. All the students resided in their own organization in district of Nadia. The age limit of the students was 16years.

▪ **Criterion measure-**StaticBalance was analyzed by specific test for balance referred by - **Strok Stand test**. Stopwatch- used for taking time during Balance testing.

▪ **Statistical tool used-** For the purpose of analysis and interpretation of the results of Pre-test and Post-test the following statistical tools were used. The Mean and Standard deviation and 't'-value were calculated by using the following formulas—

i)
$$\text{Mean} = \frac{\sum x}{n}$$

ii)
$$\text{Standard deviation} = \sqrt{\sum \frac{x^2}{n-1}}$$

iii)
$$\text{Standard error of the difference between mean} = \frac{SD}{\sqrt{n}}$$

iv)
$$\text{'t' value} = \frac{XD}{SE}$$

v)
$$\text{Degree of freedom(df)} = (N-1)$$

(a) **Pre-test:-** Pre test was conducted upon 15 selected students by administering the stock Stand Test for static balance.

❖ **TEST PROTOCOL-** The treatment for subject was consisted of following selected acrobatics practice.

1. Standing on 1 leg, both hands supporting -(Duration 20mints,10repetition)
2. Standing on hands, arms straight -(Duration 20mints,10 repetition)
3. 1 foot stand facing opposite direction -(Duration20 mints,10 repetition)
4. Standing on shoulders -(Duration20 mints,10 repetition)
5. Standing on 1 hand arms straight -(Duration10mints,05 repetition.)

The above mentioned acrobatics practice were treated simultaneously and this group practice strictly. The duration for practice schedule was five each day and they were subjected to the acrobatics practice for five days in a week. The total duration of treatment period was six weeks.

(b) Post-test:- After the successful completion of six weeks training program, this group was directed to participate in the post test. The post test consisted of Stork Stand Test items which were conducted same as pre-test. These post test records were carefully recorded and collected for analysis.

III. RESULTS AND DISCUSSION

Table-1

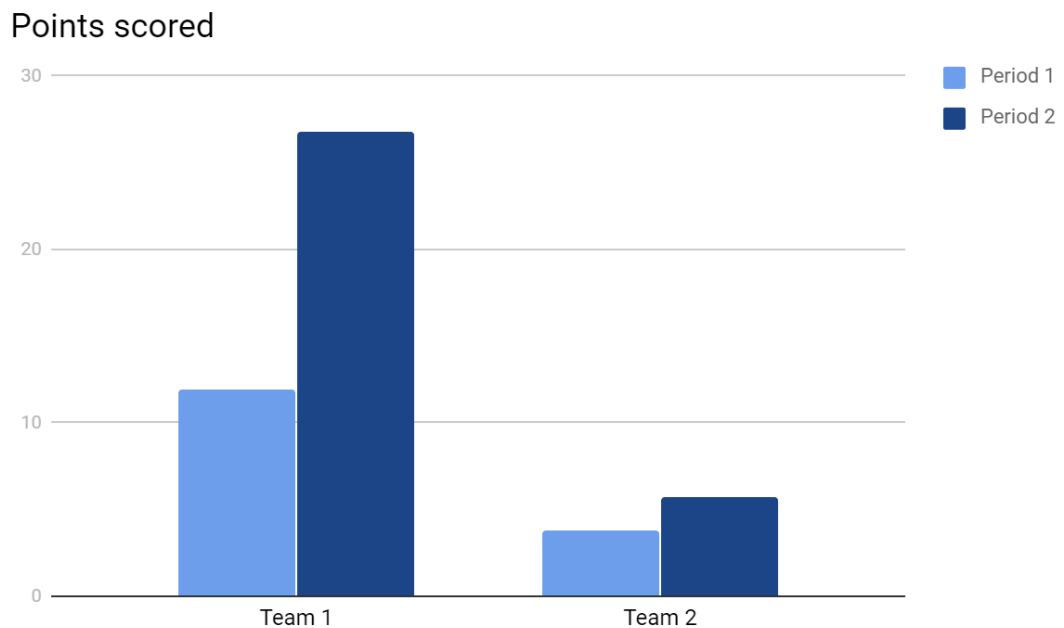
Strok stand balance of 16 years girls gymnasts

Character (Activity)	Treatment (Test)	N	Mean in Sec.	Std. Deviation	't'	Significance	
Stork stand balance	Pre- Test	15	11.93	3.77	22.55	0.00	S
	Post-Test	15	26.73	5.73			

NS= Not Significant, S= Significant

The value of 't' was 22.55 was highly significant at the 0.01 level, i.e, there was a significant exist in between the pre-test and post –test scores of the girls group in performing stork stand balance. The superiority went in favour of post-test. From this table it was interpreted that there found the positive effect due to the treatment of some selected acrobatics practice to the girls group in performing stork stand balance. The initial and final strock stand for leg static balance for girls group is present in **Fig-1**

Fig. 1-Represents the mean and S.D difference between pre-test and Post in Stroke stand for leg static balance for girls



	PRE TEST	POST TEST	
MEAN	11.26	26.73	
S.D	3.77	5.73	

❖ **Results of Balance for girls:**

After Acrobatics Gymnastics training the strok stand balance performing for static balance of girls was gradually increased.

❖ **Discussion of result:**

In present study the effect of selected acrobatics gymnastics training on balance of the subjects (n=15) have been measured by strok stand test for better understanding the data have been present. Similar study has been done earlier. For instance the Review of related literature by FatmaÇelikKayapnar(2011)- which aimed at evaluating the effect of movement education program on static balance skills of preschool children (5-7 years). Paired Samples T Test was used for differences between pre- and post-tests in both groups. Significance level was taken as (p<0.05). The results tell us that movement education program which was implemented, positively affected static balance of preschool children.

V. Mohammadi(2011) also conducted alike research investigation to examine the effects of six weeks of strength training on static and dynamic balance in young male athletes. Thirty 15-17 young male athletes with mean and SD ($62.79 \pm 3.62 \text{kg}$ ∞ $171.1 \pm 4.46 \text{cm}$) were divided into two groups (15 subjects for each group). We used the SEBT and Romberg adjusted balance test before and after exercise programs to test balance. A possible reason for increased balance in the experimental group maybe increasing strength muscle in lower extremity after exercise program, the process of decreasing and stimulating of muscles' spindles during strength training .

IV. CONCLUSION

Within the limitation of the present study some conclusion were drawn on the basis of results obtained

After six week acrobatics Gymnastics training the strok stand balance performing for static balance for girls is gradually increasing.

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