

Effect of S.A.Q. drills on skills of junior Volleyball Players

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Abstract

Background: The purpose of the study was to investigate the effect of S.A.Q. drills on skills of Junior Volleyball players. **Method:** For the present study the subjects were 50 junior male volleyball players from Delhi state participating in junior & school national Championships conducted by the VFI & SGFI. The researcher had been selected the following variables for the present study: The skills performance ability of volleyball was considered as dependant variable for the present study. Independent Variables were: Speed, Agility and Quickness. For the present study pre test – post test randomized group design which consists of control group and experimental group for junior level, was used. The data was collected before, after six and twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) Technique. The level of significance was set at 0.05. **Result:** The findings of the present study have strongly indicates that S.A.Q. drills training programme improve the skills performance among the volleyball players of junior level. Hence the hypothesis earlier set that S.A.Q. drills training programme may have positive effect on skills performance of junior volleyball players in light of the same the hypothesis is accepted. **Conclusion:** On the basis of findings and within the limitations of the study the following conclusions were drawn: The rate of improvement in skills performance was higher for the experimental group in comparison to control group for junior level. Among the novice S.A.Q. drills contribute in improving the skills performance right from six weeks training and it further improve if training period has been extended up to six weeks and more. Training and training inclusive S.A.Q. drills improves skills among junior volleyball players relatively more. As a whole pre to post test improvement for junior is eleven times high. Author of the study feels in light of the same it will be highly appreciable if S.A.Q. drills will be included from the day one of the training.

Key words: Speed, Agility, Quickness, Drill, Skill and Volleyball

1. Introduction

Speed, agility, and quickness (S.A.Q.) training has become a popular way to train athletes. Whether they are school children on a soccer field or professional in a training camp, they can all benefit from speed, agility, and quickness training. This method has been around for several years, but it is not used by all athletes primarily due to a lack of education regarding the drills. Speed, agility, and quickness training may be used to increase speed or strength, or the ability to exert maximal force during high-speed movements. Some benefits of speed, agility, and quickness training include increases in muscular power in all multiplanar movements; brain signal efficiency; kinesthetic or body spatial awareness; motor skills; and reaction time.

The purpose of the study was to investigate the “Effect of S.A.Q. Drills on Skills of Junior Volleyball Players.” The specific objectives of the present study were: (i) To study overall effectiveness of specific S.A.Q. drills training on skills of Junior volleyball players. (ii) To suggest effective training programme to junior volleyball players. It was hypothesized that S.A.Q. drills training shall have positive effect on skills of Junior volleyball players.

2. Procedure and Methodology

For the present study the subjects were 50 junior male volleyball players from Delhi state participating in junior & school national Championships conducted by the VFI & SGFI. They were selected randomly for the purpose of the study. Keeping the feasibility criterion in mind, the researcher had been selected the following

variables for the present study: The skills performance ability of volleyball was considered as dependant variable for the present study. Independent Variables were: Speed, Agility and Quickness. For the present study pre test – post test randomized group design which consists of control group and experimental group for junior level, was used to find out effect of S.A.Q. drills training on the skills performance of junior volleyball players. The data was collected before, after six and twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) Technique to find out the effect of S.A.Q. drills on skills of junior volleyball players. The level of significance was set at 0.05.

3. Results and Discussions of the Findings

The results pertaining to analysis of co-variance between experimental group and control group on volleyball skills of junior players for pre-post test respectively have been presented in table No.1 to 6.

Table - 1

ANCOVA between Experimental Group and Control Group on Volleyball Skills of Junior Players for Pre and Post Test

Sources of Variations	df	SS X	SS Y	SS XY	SS YX	MSS YX	F-Value
Treatment Group Means	2-1=1	13.52	84.5	33.8	37.05	37.05	43.08**
Error	50-2-1=47	132.96	118	101.4	40.67	.86	
Total	48	146.48	202.5	135.2			

** Significant at 0.05 level.

df: $1/47 = 4.04$

Table No. 1 Revealed that the obtained 'F' value of 43.08 was found to be highly significant at 0.05 level with 1/47 df as the tabulated value of 4.04 required to be significant at 0.05 level with 1/47 df. The same table indicated that there was a significant difference in adjusted means of selected volleyball skills of junior players between experimental group and control group.

Since the differences were found to be highly significant therefore, the least significant difference post hoc test was applied in order to determine the significant of difference between paired means. Further, the L.S.D. analysis for paired means on volleyball skills has been presented in table No.2.

Table - 2

Paired Means between Experimental Group and Control Group on Volleyball Skills of Junior Players for Pre and Post Test

Group	Sample Size	M X	M Y	Adjusted Final Means	Mean Difference	Critical Difference
A. Experimental	25	22.4	24.6	24.06	1.53	.52
B. Control	25	21	22	22.53		

* Critical Difference at 0.05 level.

An examination of table No.2 clearly revealed that the adjusted final mean score of experimental group, exposed to treatment is 24.06, which are higher than the score of 22.53 of control group. The value of mean difference was found to be significant that is 1.53, which is more than the value of critical difference that is 0.52 at 0.05 level.

The graphical representation of data has been presented in figure No. 28.

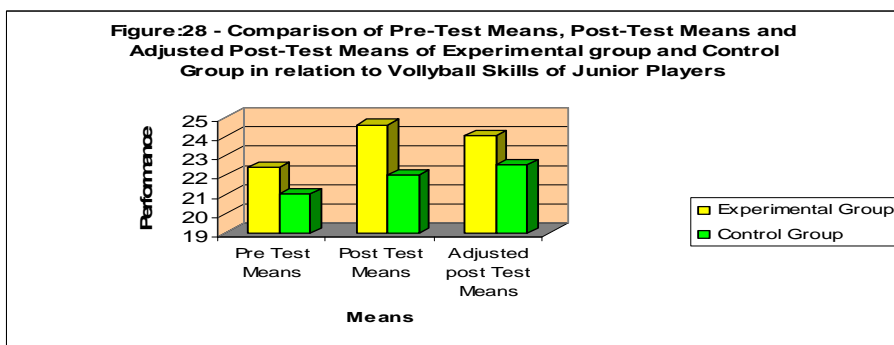


Table - 3

ANCOVA between Experimental Group and Control Group on Volleyball Skills of Junior Players for Pre and Intermediate Test

Sources of Variations	df	SS X	SS Y	SS XY	SS YX	MSS YX	F-Value
Treatment Group Means	2-1=1	13.52	67.28	30.16	18.31	18.31	45.77**
Error	50-2-1=47	132.96	154.72	134.24	19.19	.40	
Total	48	146.48	222	164.40			

** Significant at 0.05 level, df: 1/47 =4.04

Table No. 3 Revealed that the obtained 'F' value of 45.77 was found to be highly significant at 0.05 level with 1/47 df as the tabulated value of 4.04 required to be significant at 0.05 level with 1/47 df. The same table indicated that there was a significant difference in adjusted means of selected volleyball skills of junior players between experimental group and control group.

Since the differences were found to be highly significant therefore, the least significant difference post hoc test was applied in order to determine the significant of difference between paired means. Further, the L.S.D. analysis for paired means on volleyball skills has been presented in table No. 4.

Table - 4

Paired Means between Experimental Group and Control Group on Volleyball Skills of Junior Players for Pre and Intermediate Test

Group	Sample Size	M X	M Y	Adjusted Final Means	Mean Difference	Critical Difference
A. Experimental	25	22.4	23.76	23.06	.92	1
B. Control	25	21	21.44	22.14		

* Critical Difference at 0.05 level.

An examination of table No.4 clearly revealed that the adjusted final mean score of experimental group, exposed to treatment is 23.06, which are higher than the score of 22.14 of control group. The value of mean difference was found to be insignificant that is .92, which is less than the value of critical difference that is 1.0 at 0.05 level.

The graphical representation of data has been presented in figure No.29.

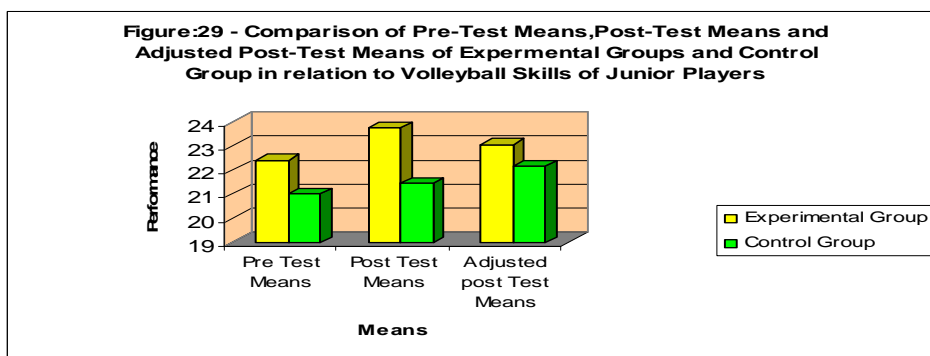


Table – 5
ANCOVA between Experimental Group and Control Group on Volleyball Skills of Junior Players for Intermediate and Post Test

Sources of Variations	df	SS X	SS Y	SS XY	SS YX	MSS YX	F-Value
Treatment Group Means	2-1=1	67.28	84.5	75.4	14.01	14.01	29.80**
Error	50-2-1=47	154.72	118	121.6	22.44	.47	
Total	48	222	202.5	197			

** Significant at 0.05 level, df: 1/47 =4.04

Table No. 5 Revealed that the obtained 'F' value of 29.80 was found to be highly significant at 0.05 level with 1/47 df as the tabulated value of 4.04 required to be significant at 0.05 level with 1/47 df. The same table indicated that there was a significant difference in adjusted means of selected volleyball skills of junior players between experimental group and control group.

Since the differences were found to be highly significant therefore, the least significant difference post hoc test was applied in order to determine the significant of difference between paired means. Further, the L.S.D. analysis for paired means on volleyball skills has been presented in table No.6.

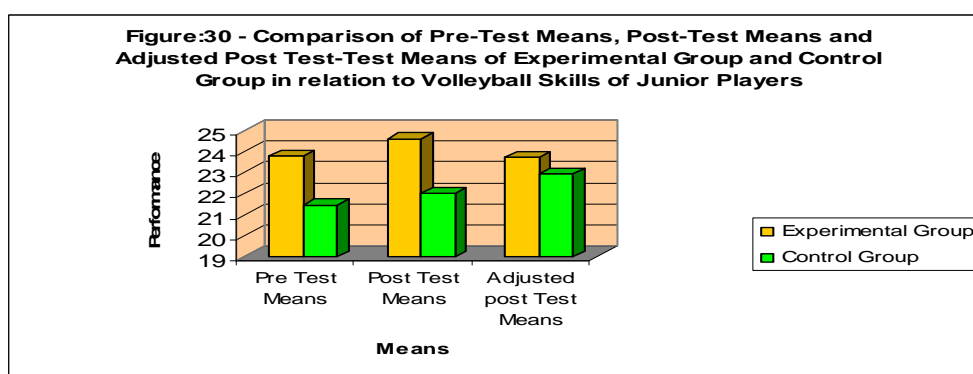
Table - 6
Paired Means between Experimental Group and Control Group on Volleyball Skills of Junior Players for Intermediate and Post Test.

Group	Sample Size	M X	M Y	Adjusted Final Means	Mean Difference	Critical Difference
A. Experimental	25	23.76	24.6	23.69	.78	.38
B. Control	25	21.44	22	22.91		

* Critical Difference at 0.05 level.

An examination of table No.6 clearly revealed that the adjusted final mean score of experimental group, exposed to treatment is 23.69 which are higher than the score of 22.91 of control group. The value of mean difference was found to be significant that is .78 which is more than the value of critical difference that is 0.38 at 0.05 level.

The graphical representation of data has been presented in figure No.30.



4. Discussion of Findings

From the findings it was evident that the treatment given to experimental group found to enhance the volleyball skills performance of junior players in comparison to control group for pre to post (12 weeks) test because the calculated value was found approximately eleven times higher than required value to be significant. The reason for this may be that: The junior players also first time exposed to such kind of highly scientific and systematic training of S.A.Q. drills. It has also been proved in "Science of Sports Training" by Hardyal Singh that the

adaptation takes place faster in case of beginners. Faster adaptations also occur when new exercises are used to which the sportsmen are not habituated.

In the light of same in case of beginners the results between pre and intermediate (6 weeks) test has been found very highly significant this is more than intermediate to post (12 weeks) and pre to post test this is possible because still they are under process of physical, psychological, and physiological growth and development which directly contribute to the faster adaptation process to new drills that is S.A.Q. It has also been proved in "Psychology in physical education and sports" by M.L. Kamlesh that when an athlete begins to learn a new skill, his learning curve shows an increasing gain pattern but as his move closer to the goal, the pattern change in decreasing gain. The initial rise indicates rapid progress generally attributed to novelty of the activity, interest and curiosity of the learner, which seem to generate greater energy enabling him to put in harder effort right at the outset. That is the reason why there is tremendous amount of improvement in the gross performance of a skill in the early phase.

Among the junior players the result was found highly significant during the second stage of training (intermediate to post test) which may attribute to the facts that the ratio of improvement in skills performance due to S.A.Q. drills training is much higher at the beginning of training whereas it is comparatively lower at the end of training because motor components as well as central nervous system (C.N.S.) become stabilized or 'motor stereo-type' to one kind of training. According to Harre (1986) Speed barrier occurs when the children's training is one sided directed at speed improvement through speed exercises and in high performance training the special exercises for explosive strength are ignored. He, however, calls speed barrier as a 'motor stereo type'. The reason for the occurrence of speed barrier perhaps relate to the functioning of C.N.S. When speed training is done with maximum speed using specific movement then the CNS has to function repeatedly in the same manner with same speed. If this is repeated too often then the C.N.S. functioning become stabilized and can result in a sort of automatisisation. This automatisisation does not allow the C.N.S. to function at a higher speed than to which it is habituated.

Speed training, therefore, itself results in the occurrence of speed barrier. On the one hand one has to use specific movements at maximum speed for improvement of speed. But on the other hand if this is repeated too often the chances of speed barrier increase. Hence, the use of the same exercises for a long period is not desirable. Psychologist supports that when an athlete begins to learn a new skill, his learning curve shows an increasing gain pattern but as his move closer to the goal, the pattern changes in decreasing gain.

5. Discussion of Hypothesis

The findings of the present study have strongly indicates that S.A.Q. drills training programme improve the skills performance among the volleyball players of junior level. Hence the hypothesis earlier set that S.A.Q. drills training programme may have positive effect on skills performance of junior volleyball players in light of the same the hypothesis is accepted.

6. Conclusion

. On the basis of findings and within the limitations of the study the following conclusions were drawn: The rate of improvement in skills performance was higher for the experimental group in comparison to control group for junior level. Among the novice S.A.Q. drills contribute in improving the skills performance right from six weeks training and it further improve if training period has been extended up to six weeks and more. Training and training inclusive S.A.Q. drills improves skills among junior volleyball players relatively more. As a whole pre to post test improvement for junior is eleven times high. Author of the study feels in light of the same it will be highly appreciable if S.A.Q. drills will be included from the day one of the training.

7. References

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