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Impact of S.A.Q. training on volleyball players' skills

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Abstract
Fifty junior male volleyball players from Raghogarh College in Madhya Pradesh state served as the study's subjects. The following factors were chosen by the researcher for the current investigation: For the purposes of this study, volleyball skills performance ability was regarded as a dependent variable. The three independent variables were quickness, agility, and speed. A pre-test–post-test randomized group design including a control group and an experimental group at junior level was employed for this study. Data was gathered before to, during, and following six and twelve weeks of instruction. Using the Analysis of Covariance (ANCOVA) Technique, the data was examined. A significance threshold of 0.05 was used.

Keywords: Volleyball, quickness, drill, Raghogarh

Introduction
Training for speed, agility, and quickness, or S.A.Q., has gained popularity among athletes. Training for quickness, agility, and speed may help everyone, from elite athletes at a training camp to schoolchildren playing football. Although this approach has been around for a while, not all athletes adopt it, mostly because they are not well-informed about the workouts. Training in speed, agility, and quickness can help improve strength, speed, or the capacity to apply maximum force during fast-moving activities. Increased muscle power in all multi-planar actions, brain signal efficiency, kinesthetic or bodily spatial awareness, motor abilities, and response time are a few advantages of speed, agility, and quickness training.
The research set out to find out "How S.A.Q. Drills Affect Junior Volleyball Players' Skills." The present study's specific goals were to:

1. Examine the overall impact of particular S.A.Q. workouts on junior volleyball players' skill sets.
2. Making training plan recommendations that work for junior volleyball players. It was predicted that junior volleyball players' abilities will improve as a result of S.A.Q. drill training.

Methodology
50 junior male volleyball players from Madhya Pradesh State served as the study's participants. For the sake of the investigation, they were chosen at random. The following variables were chosen for the current investigation by the researcher with consideration for the feasibility criterion: For the purposes of this study, volleyball skills performance ability was regarded as a dependent variable. The three independent variables were quickness, agility, and speed. The current study employed a pre-test–post-test randomized group design with a control group and an experimental group for junior volleyball players to determine the impact of S.A.Q. exercises training on the players' skill performance. Data was gathered before to, during, and following six and twelve weeks of instruction. Junior volleyball players' skills were assessed using the Analysis of Co-Variance (ANCOVA) Technique to determine the impact of S.A.Q. exercises. A significance threshold of 0.05 was used.

Results
Tables Nos. 1 through 4 exhibit the findings of the analysis of covariance between the experimental group and the control group on the pre- and post-test volleyball skills of junior

players, respectively.

Table 1: ANCOVA on Junior Volleyball Players' Pre- and Post-Test Skills for the Experimental and Control Groups

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			

Table No. 1 showed that, in comparison to the tabulated value of 4.04 needed to be significant at the 0.05 level with 1/47 df, the obtained 'F' value of 43.08 was determined to be very significant at the 0.05 level with 1/47 df. The same chart showed that the junior volleyball players' adjusted means of a few chosen abilities differed significantly between the experimental and control groups.

The least significant difference post hoc test was used to ascertain the significance of the difference between matched means since the differences were found to be very significant. Additionally, table No. 2 presents the L.S.D. analysis for paired means on volleyball skills.

Table 2: Paired means of junior volleyball players' pre- and post-test volleyball skills between the experimental and control groups

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		

Table No. 2 investigation unequivocally shown that the experimental group subjected to treatment had an adjusted final mean score of 24.06, which is higher than the control group's score of 22.53. The mean difference of 1.53, which is more than the crucial difference of 0.52 at the 0.05 level, was determined to be significant.

Table 3: ANCOVA of junior volleyball players' pre- and intermediate test skills for the experimental and control groups

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			

Table No. 3 showed that, in comparison to the tabulated value of 4.04 needed to be significant at the 0.05 level with 1/47 df, the obtained "F" value of 45.77 was determined to be very significant at the 0.05 level with 1/47 df. The same chart showed that the junior volleyball players' adjusted means of a few chosen abilities differed significantly between the experimental and control groups.

The least significant difference post hoc test was used to ascertain the significance of the difference between matched means since the differences were found to be very significant. Additionally, table No. 4 presents the L.S.D. analysis for paired means on volleyball skills.

Table 4. Paired Means of Junior Volleyball Players' Pre- and Intermediate Test Scores for the Experimental and Control Groups.

Table 4: Paired means of junior volleyball players' pre- and intermediate test scores for the experimental and control groups

Group	Sample Size	MX	MY	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		

Table No. 4 makes it abundantly evident that the experimental group that received therapy had an adjusted final mean score of 23.06, which was higher than the control group's score of 22.14. It was determined that the mean difference, which is.92 and smaller than the critical difference, which is 1.0 at the 0.05 level, is not significant.

Discussion

The results showed that, for the pre- to post-12-week test, the experimental group's treatment improved junior volleyball players' skills performance compared to the control group, as evidenced by the calculated value, which was found to be roughly eleven times higher than the required value to be significant. This might be because the junior players are experiencing S.A.Q. drills for the first time, which is a very scientific and methodical training method. Additionally, Hardyal Singh's book "Science of Sports Training" provides evidence that novices adapt more quickly. When athletes utilize new activities to which they are not used, they also adapt more quickly.

In light of this, it has been discovered that for beginners, the results of the pre-intermediate (6-week) test are extremely highly significant; this is greater than the results of the intermediate-post (12-week) and pre-post-tests. This is possible because the beginners are still undergoing the processes of physical, psychological, and physiological growth and development, all of which directly aid in the quicker process of adapting to new drills, or S.A.Q. Additionally, it has been demonstrated in M.L. Kamlesh's "Psychology in Physical Education and Sports" that an athlete's learning curve initially displays a rising gain pattern when learning a new ability, but as he approaches the objective, the pattern changes to a falling gain pattern. The learner's curiosity, interest in the activity, and novelty all seem to create more energy in the beginning, enabling him to put in more effort right away, which is why the early boost in progress is typically attributed to these factors. This is the cause of the enormous improvement in a skill's gross performance during its early stages.

The results for the junior players were found to be highly

significant during the second stage of training (intermediate to post-test). This finding may be related to the fact that the ratio of skill performance improvement resulting from S.A.Q. drills training is significantly higher at the start of training, but it is relatively lower at the end because the CNS and motor components become "motor stereo-typed" or stabilized after a certain amount of training. Harre (1986) states that a speed barrier arises when children get training that is only focused on improving speed through speed exercises, and when high performance training neglects specific activities designed to build explosive strength. He refers to the speed barrier as a "motor stereo type," however. The speed barrier's occurrence may have something to do with how C.N.S. operates. The CNS must continually operate at the same pace and in the same way when speed training is done at maximal speed with a particular action. Repeating this too frequently can stabilize CNS functioning and lead to a certain level of automatization. The C.N.S. cannot operate faster than it is accustomed to because to this automatization.

Consequently, speed barriers are a direct effect of speed training. To increase speed, one must, on the one hand, employ certain actions at top speed. However, the likelihood of a speed barrier becoming increases if this is done too frequently. So, it is not ideal to use the same workouts again for an extended length of time. According to psychologists, an athlete's learning curve initially exhibits an increasing gain pattern when they are learning a new ability, but as they get closer to their objective, the pattern shifts to a falling gain pattern.

Conclusion

The following conclusions were reached in light of the study's limitations and the data: In terms of junior level skills performance, the experimental group improved at a faster pace than the control group. Novice S.A.Q. drills help to increase skill performance from the first six weeks of training and even more if the training period is prolonged to six weeks or longer. Junior volleyball players' skills are comparatively better improved when they participate in inclusive S.A.Q. drills. Overall, juniors' pre-to-post-test progress is eleven times higher. Given this, the study's author believes it would be greatly appreciated if S.A.Q. drills were used from the very beginning of the programme.

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