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A comparison of three selected teaching methods in learning rolling, passing, receiving and goal shooting ability in field hockey

Puja Kumari**Abstract**

The purpose of conducting this study was to find out the effective method of learning rolling, passing, receiving and goal shooting ability to beginners. The study was conducted by randomly selected 30 female players from Lakshmbai National Institute of Physical Education, Gwalior with their age ranging between 18 to 21. The total subjects (N=30) were further divided into three groups ten subjects in each group named whole part whole method group (GA), whole method group (GB) and observation method group (GC). Group A was given 6 weeks training program by using whole part whole method thrice a week for a session of one hour, Group B was received same training program by using whole method whereas Group C have observed the training program. After six weeks the data was collected by conducting Akhil Mehrotra hockey skill test. The data was analyzed using mean and standard deviation as descriptive statistics. To find out the most effective method of teaching ANOVA was employed and tested at 0.05 level of significance. The result reveal that whole part whole method was found to be most effective method of learning rolling, passing, receiving and goal-shooting ability to beginners.

Keywords: Goal shooting, one way ANOVA, passing, rolling, receiving, test scores, teaching methods

Introduction

Physical educators and coaches all over the world are facing greatest challenge in handling problems in scientific way i.e. to provide sportsmen proper and progressive guidelines based on scientific approach which leads to desired results. With the advancement of scientific knowledge and the research findings, the training of athlete for any game is carried out on the basis of certain principles. Due to new findings and research these principles are modified time to time. A method or technique may be applied today but may get rejected tomorrow, if say there is an improved technique and new method. It is a difficult task for the coach to know, without adopting, as to which of the methods will be more effective and important for this training program.

In the teaching-learning process if the correct training method is used students learn the skills with high degree of perfection and the result can be obtained in short period of time. The wastage of time, doing unnecessary exercises is avoided. Executions of sports skills help evaluate the teaching process and also measure the individual's skills. Because of the wider range of skills in hockey, a selection of the most important skill is necessary. But sports skill varies in discriminatory ability. A simple item might suffice for a gross classification into homogenous teaching groups yet to be wholly inadequate for diagnostic grading or research purposes. The emphasis in the skill is on the ability to perform a fundamental sports skill and does not take into account many other variables that affect play in game situations.

Important to the development of any hockey skill or strategy is an understanding of the "feel" or rhythm of the activity. In order to improve the game, the player should clearly understand how the activity flows from one segment to the next when executed correctly. As coach, it's crucial that you begin instruction with what is known as the "whole-part-whole" teaching philosophy. A beginner hockey player must understand the concept of the entire (whole) movement before instruction moves to the individual parts. The theory is that without "whole" knowledge of the activity, the individual components are worthless. This is true for both individual skills as well as team strategies.

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When learning, it is important to understand the end result that you are aiming for. Once that "whole" part is presented, the task can be broken down into smaller "parts" to practice. This is as important for learning how to shoot, pass, or dribble as it is for developing team defense or for executing an offense.

Methodology

Selection of Subjects

For fulfilling the purpose of the study thirty (N=30) female novice players were selected as subjects from Lakshmibai National Institute of Physical Education, Gwalior M.P with their age ranging between 18 to 21 years. The total number of subjects were further divided into three groups with 10 subjects in each group i.e., experimental group 1, experimental group 3 & control group. The selection of subjects was randomly done from the students of the B.P.Ed III semester. The experimental groups were exposed to six weeks training of selected skills of field hockey whereas control group was just observing the training.

Selection of Variables

The purpose of the study was to compare the effectiveness of three teaching methods namely whole part whole method, whole method and observation method for teaching basics skills (rolling, passing, receiving and goal shooting) in field hockey.

Administration of test and collection of data

To start with the actual experiment of 6 weeks the subjects were divided into three groups. Whole part whole method group known as group-A, whole method group known as group-B and observation method known as group-C. Group A and B practiced rolling, passing, receiving and goal shooting three days in a week for the duration of one hour. In every practice session the investigator himself taught and supervised hitting and goal-shooting skill and evaluation was done after the 6 weeks practice by the selected test. After six weeks of training data was collected by conducting Akhil Mehrotra hockey skill test. The skill test consists of three test battery named rolling and passing, angular passing and receiving, dodging and goal shooting test.

Statistical Procedures

The data was analyzed by using Analysis of variance (ANOVA) and level of significant was set at 0.05 levels.

Results

The result of the total sample (N=30) in whole part whole method (N=10), whole method group (N=10) and observation method group (N=10) investigated on the basis of post test scores, their descriptive statistics and an analysis of hitting and goal shooting skill has been presented in the following tables.

Table 1: Descriptive statistics of rolling and passing test of GA, GB and GC

Name of groups	N	Mean	SD
GA	10	55.90	3.78
GB	10	63.20	4.78
GC	10	71.80	6.43

Table 1 shows the mean and standard deviation of selected groups on rolling and passing test. In GA the mean along with standard deviation was 55.90±3.78. Similarly in GB the mean

along with standard deviation was 63.20±4.78 and GC the mean along with standard deviation was 71.80±6.43. The mean value is illustrated in Figure No 1.

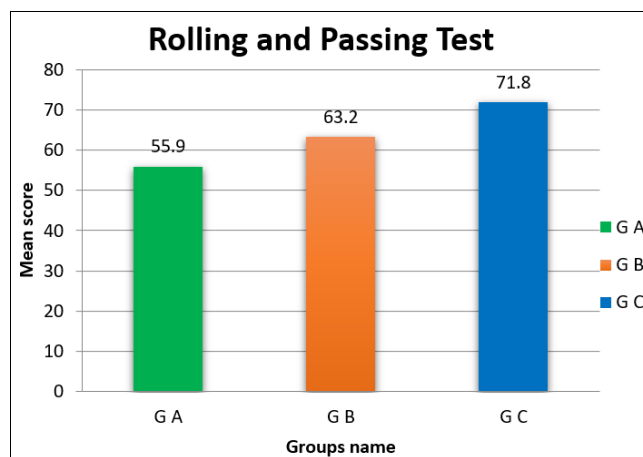


Fig 1: Mean score of rolling and passing test for the GA, GB and GC

Table 2: Anova table of GA, GB AND GC ON the rolling and passing test

Name of groups	Sum of squares	DF	Mean squares	F	Sig.
Between groups	1266.87	2	633.44	24.23	.000*
Within groups	706.10	27	26.15		

Significant at 0.05 level.

Table 2 gives the calculated F value of 24.23, this also represents that p-value is .000 that is less than 0.05; hence significant difference occurs.

So, Post hoc test would be used to compare the mean difference of all the three selected groups.

Table 3: Multiple comparisons of GA, GB and GC on the rolling and passing test

(I) Name of groups	(J) Groups name	Mean Difference (IJ)	Std. Error	Sig.
G A	G B	-7.30	2.29	.004
	G C	-15.90	2.29	.000
G B	G C	-8.60	2.29	.001

Table 3 reveals that there was the significant difference between GA and GB, GA and GC as well as between GB and GC because p-value .000 > 0.05.

Similarly, the difference between Group B and Group C on their learning skill rolling and passing test is significant at 5% level because the p-value for this mean difference is 0.000 which is less than 0.05.

Table 4: Mean and standard deviation of GA, GB and GC on angular passing test

Name of groups	N	Mean	Std. Deviation	Std. Error
G A	10	13.90	3.70	1.17
G B	10	7.10	1.66	.526
G C	10	4.20	1.14	.359

Table 4 shows the mean and standard deviation of selected groups on the angular passing test. In GA the mean along with standard deviation was 13.90±3.70. Similarly in GB the mean along with standard deviation was 7.10±1.66 and GC the mean along with standard deviation was 4.20±1.14. Mean value is illustrated in Figure No 2.

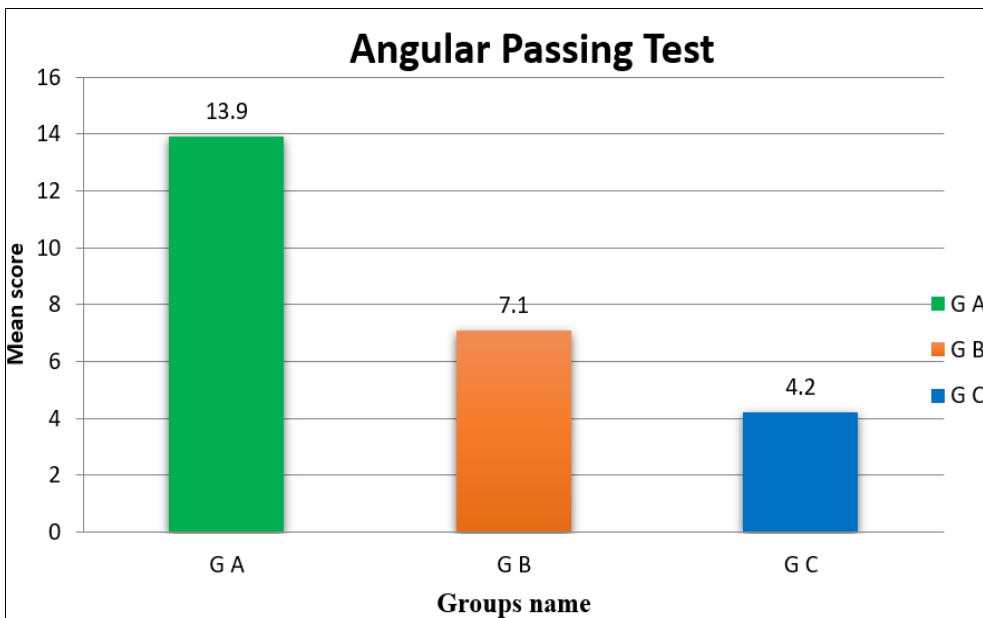


Fig 2: Mean score of angular passing test skill for GA, GB and GC.

Table 5: Anova table of GA, GB and GC on the angular passing test

Name of groups	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	495.80	2	247.90	41.99	.000*
Within Groups	159.40	27	5.90		
Total	655.20	29			

Significant at 0.05 level.

Table 5 gives the calculated F value 41.99, this also represents that p-value is .000 that is less than 0.05; hence significant difference occurs.

So, Post hoc test would be used to compare the mean difference of all the three selected groups.

Table 6: Multiple comparisons of GA, GB and GC on the angular passing test

(I) Name of Groups	(J) Groups Name	Mean Difference (IJ)	Std. Error	Sig.
G A	G B	6.80	1.09	.000
	G C	9.70	1.09	.000
G B	G C	2.90	1.09	.013

Table 6 reveals that there was a significant difference between GA and GB, GA and GC as well as between GB and GC because p-value .000 > 0.05.

Similarly, the difference between Group B and Group C on their learning skill angular passing test is significant at 5% level because the p-value for this mean difference is 0.000 which is less than 0.05.

Table 7: Mean and standard deviation of GA, GB and GC on dodging and shooting test

Name of groups	Groups name	Mean	Std. Deviation	Std. Error
G A	10	9.50	1.66	.53
G B	10	6.20	1.39	.45
G C	10	4.40	1.08	.34

Table 7 shows the mean and standard deviation of selected groups on dribbling and shooting tests. In GA the mean along with the standard deviation was 9.50±1.66. Similarly in GB the mean along with standard deviation was 6.20±1.39 and GC the mean along with standard deviation was 4.40±1.08. The mean value is illustrated in Figure No 3.

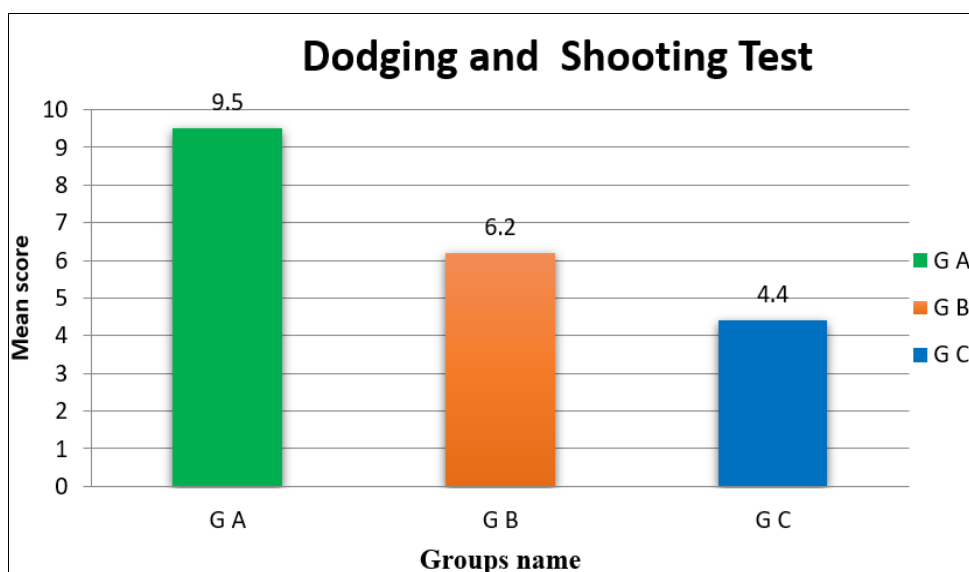


Fig 3: Mean score of dodging and goal shooting test for GA, GB and GC

Table 8: Anova table of GA, GB and GC on the dodging and shooting test

Name of groups	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	133.80	2	66.90	34.41	.000*
Within Groups	52.50	27	1.94		
Total	186.30	29			

Significant at 0.05 Level.

Table 8 gives the calculated F value 34.41, this also represents that p-value is .000 that is less than 0.05; hence significant difference occurs.

So, Post hoc test would be used to compare the mean difference of all the three selected groups.

Table 9: Multiple comparisons of GA, GB and GC on the dodging and shooting test

(I) Name of Groups	(J) Groups Name	Mean Difference (IJ)	Std. Error	Sig.
G A	G B	3.30	.62	.000
	G C	5.10	.62	.000
G B	G C	1.80	.62	.008

Table 9 reveals that there was a significant difference between GA and GB, GA and GC as well as between GB and GC because p-value .000 > 0.05.

Similarly, the difference between Group B and Group C on their learning skill dribbling and shooting test is significant at 5% level because the p-value for this mean difference is 0.000 which is less than 0.05.

Discussion

The aim of the study was to compare the effectiveness of whole method, a whole part whole method and observation method for teaching basic skills like rolling, passing receiving and goal-shooting ability to beginners. The finding of study indicates that there was significant difference among three selected teaching methods for learning selected basic skills of field hockey.

The following abbreviations were used for better understanding of groups i.e., GA is known as whole part whole method group, GB is known as whole method group and GC is known as observation method group.

The data was collected after six weeks of training on rolling, passing, and receiving goal-shooting skills by using Akhil Mehrotra Hockey skill test. The data was analysed by using analysis of variance statistical technique at 0.05 level of significance. The result of the study shows that whole part whole method was most effective method of teaching in

comparison to whole method and observation method.

By using Akhil Mehrotra hockey skill test, it was found that there was a significant difference among GA, GB & GC as well as comparison Tables 1.3 and 2.3 indicates that GA is performed better than the other two groups. The reason behind this finding may be due to the fact that GA learned the skill through the very effective technique that was the Whole part whole method. In this method, the students repeatedly practice the skill in order to strengthen the selected skills. This type of practice is best with discrete, closed skills.

References

1. Matveyev LP. Fundamentals of sports training. English translation of the revised Russian version. Moscow: Progress; c1981.
2. Kent SL. The Ultimate History of Video Games: from Pong to Pokemon and beyond. The story behind the craze that touched our lives and changed the world. Three Rivers Press; c2010.
3. Siedentop D, Hastie PA, Van der Mars H. Complete guide to sport education. Human Kinetics; c2011.
4. Elizabet Anders. Field hockey step to success 2nd Edition Human Kinetics; cp. 24.