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Effect of twelve week sports training on selected motor variables of hockey players

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Abstract
The present study was an attempt to evaluate the degree of motor fitness variables between hockey girl's players of Karnataka. To carry out this study, 25 hockey players girls hockey game. The age limit of players was ranged between 14 to 17 years. The samples were taken from the vijayapur district in Karnataka. Only speed and agility, co-ordination and flexibility were used to measure the motor fitness variables. To assess the significance of differences between the means in case of significant t-values test was applied.

Keywords: substituted Li ferrite, magnetostatic and spin waves, microstrip array antenna, X-band frequency range

Introduction
Motor learning and motor performance are inextricably linked to sensation. As a motor task is practiced, the individual learns to anticipate and correct or modify movements based on sensory input organized and integrated by the central nervous system (CNS). The CNS uses this information to influence movement by both feedback and feed forward control. Feedback control uses sensory information received during the movement to monitor and adjust output. Feed forward control is a proactive strategy that uses sensory information obtained from experience. Success in field hockey is often associated with speed, but balance and quick feet, or agility, are the most important physical attributes to possess. Little can do to improve your innate sprint speed, but balance and foot agility can be improved significantly through practice. Proper body balance is controlled by the head, feet, and hands with the stick. When these extremities are in balance your body is ready to move quickly and skilfully. It is essential to have control of the body

Objectives of the study
1. To examine the effects of Twelve week training on the Motor Performance of hockey players.
2. To assess the Pre & Post training effect on motor performance of hockey players.

Hypotheses
1. There would be a significant difference in speed variable between control and experimental groups.
2. There would be a positive effect of 12 weeks training on flexibility variable between control and experimental groups.
3. The experimental training leads to increase in the agility component comparing to the control group.
4. The experimental group would show better coordinating ability compared to the control group.
5. There would be significant difference in the dependent variables of control and experimental groups.
6. There will be no significant difference between the motor variables of the control group at both pre and post-test.

Selection of subject
To this study, 25 hockey players (50 girls). The age limit of players was ranged between 14 to 17 years. The sample was collected from Vijayapur district in Karnataka.

Selection of variables

Table 1: Out of the three test items, the following three were selected for this study

Sl. No	Components	Tests	Unit of Measurement
1	Agility	Shuttle run - 4X10	Time
2	Speed	50 Mts dash	Time
3	Coordination	Jumping Jack in all the four directions	Time
4	Flexibility	Sit and Reach test	Inches

Statistical Techniques

Mean and standard deviation were calculated in order to study the motor fitness variables speed and agility, co-ordination and flexibility of the boys hockey players vijayapur district Karnataka. To the assess of significance of differences between the means in case of significant "t-values'' test was applied. The level of significance 0.05

Table 2: Showing the Mean, SD and t-value of 50 meters Dash speed of control group and experimental Group collected at Pre-Post condition during the study

	Speed Variables	Mean	SD	t-value	D f	p-value	Remark
Control Group	Pre test	6.8000	0.39791	1.459	24	0.065	S
	Post test	6.8880	0.42360				
Experimental Group	Pre test	7.5280	0.22642	20.640	24	0.000	S
	Post test	7.2440	0.18726				

The level of significant is 0.05

In the table we see that the Mean, SD and 't' value score of control group with respective speed variable for pre-and post-test condition is 6.80 and 6.88 respectively and calculated 't' value is 1.459, as it is lesser than table value 0.05 level of significant, Hence the formulated hypothesis there would be no significant difference between speed variable of the control group at both pre and post-test and thus the hypotheses was rejected, and alternative hypothesis that null hypothesis is accepted. Shows that the Experimental group's mean performance value of speed of pre-test is 7.5280 and the post test is 7.2440 the post-test speed performance is less than pre and post-test speed performance and also the t value is 20.640,which is more than the table value. Hence, it indicates that there is a significant development of speed. Thus, the hypothesis is accepted.

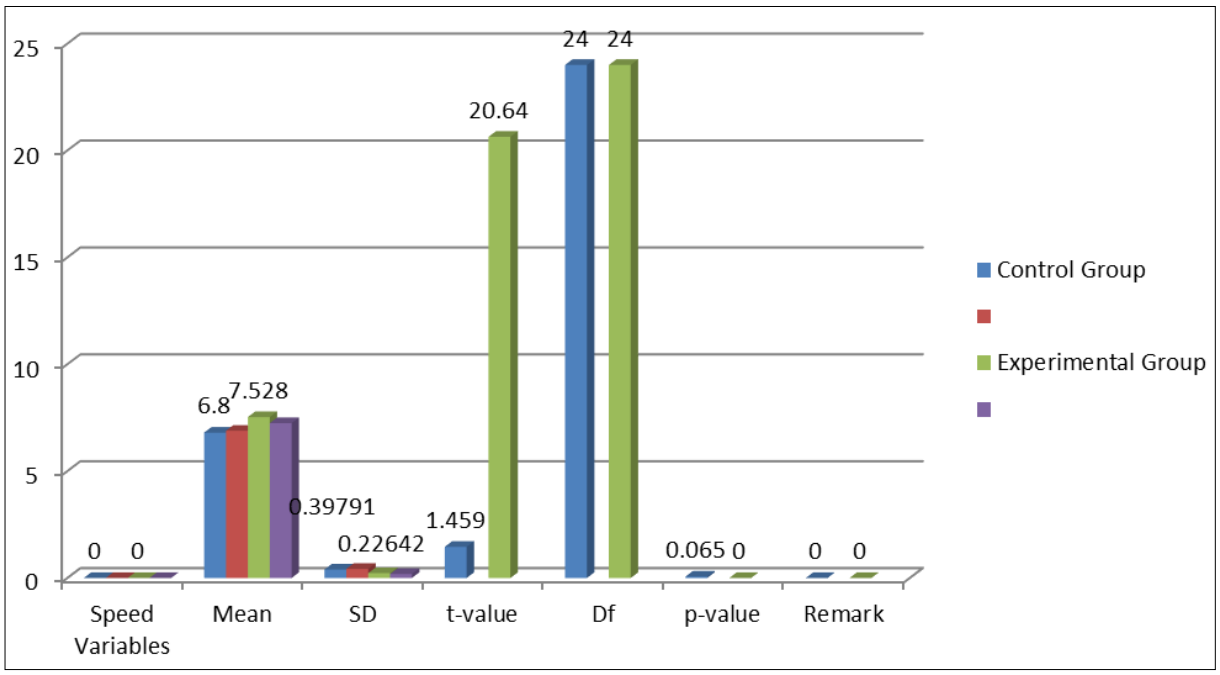

Fig 1: The Graph showing the mean, SD and 't' value of Speed Variables of control group and Experimental Group

The above table and graph clearly express that the interval session did not influence and not effected on speed variables of the control group, when it was tested at pre-post-test. It is assumed that because the control group was not made to expose to any kind of training at pre and post-test; hence twelve-week training gap given to control group also does not make any significant influence on their speed factors. The constant and similar life style condition and environment and sample nature has maintained previous status in their motor qualities. The above figure clearly indicates that 12 weeks motor variable (Speed) for the game of (Hockey), training performance is statistically improved the speed variable of girls. The pre and post-test of 50 mtrs dash has improved in the motor ability component of speed.

Table 3: Mean, SD and t-value of Sit and reach test for Flexibility of control group and Experimental to pre- test and post-test of secondary school students of Vijayapur

	Flexibility Variables	Mean	SD	t-value	D f	p-value	Remark
Control Group	Pre test	2.0000	0.95743	1.326	24	0.0689	S
	Post test	2.7200	0.79162				
Experimental Group	Pre test	3.0000	.81650	9.364	24	.000	S
	Post test	4.2400	.59722				

The level of significant is 0.05

The mean and SD score of control group at pre-and post test is 2.0000and 2.7200 respectively and calculated' value is 1.326, it is lesser than table value i.e.0.005 level of significant, hence as per the formulated hypothesis there would be no significant difference between control group variables of Flexibility at both pre and post test, the hypotheses was rejected, and alternative hypothesis that null hypothesis is accepted. The mean and SD score of Experimental group at pre-and post-test is 3.0000and 4.2400 respectively and calculated' value is 9.364, it is lesser than table value i.e.0.005 level of significant, Hence it indicates that there is a significant development of flexibility component. Thus, the hypothesis is accepted.

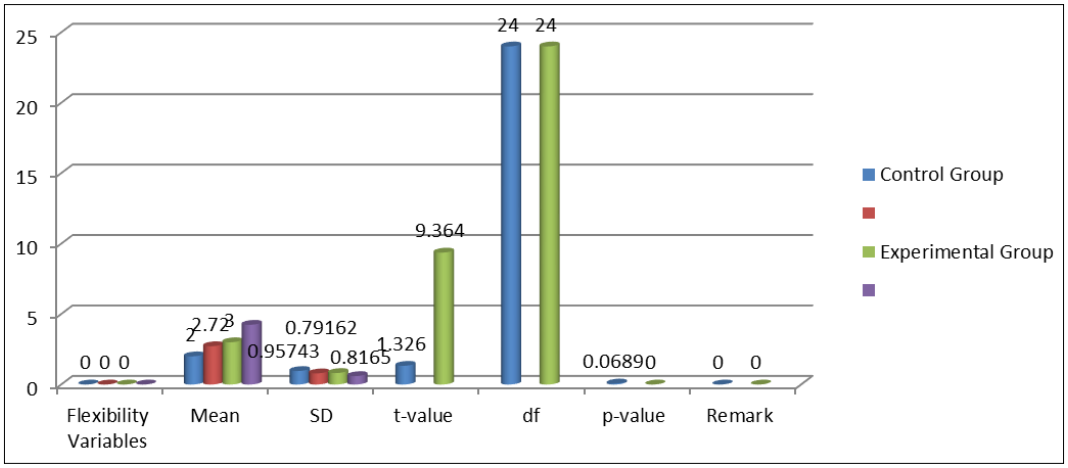

Fig 2: The Graph showing the Flexibility means and t value of pre-post impact of control group and Experimental Group

The above table and graph clearly express that the interval session did not influence and not effected on flexibility variables of the control group, when it was tested at pre-post-test. It is assumed that because the control group was not made to expose to any kind of training at pre and post-test; hence twelve-week training gap given to control group also does not make any significant influence on their flexibility factors. The constant and similar life style condition and environment and sample nature has maintained previous status in their motor qualities. The above figure clearly indicates that 12 weeks motor variable (flexibility) for the game of (Hockey), training performance is statistically improved the Flexibility of girls. The nature of sit and reach test for flexibility has shown the significant difference in the flexibility. Hence, the hypothesis was accepted.

Table 4: Mena, SD and t-value of Shuttle Run test for Agility of control and Experimental group to pre- test and post-test of secondary school students of Vijayapur

	Agility Variables	Mean	SD	t-value	D f	p-value	Remark
Control Group	Pre test	18.2220	.78177	1.265	24	.055	S
	Post test	18.1996	.77799				
Experimental Group	Pre test	16.8740	2.04317	9.265	24	.0011	S
	Post test	18.5900	.61223				

The level of significant is 0.05

The mean and SD score of control group at pre-and post test is 18.2220 and 18.1996 respectively and calculated' value is 1.265, it is lesser than table value i.e.0.005 level of significant, hence formulated hypothesis there would be no significant difference between control variables of Agility after pre and post test and the hypotheses was rejected, and alternative hypothesis that null hypothesis is accepted. The mean and SD score of experimental group at pre-and post test is 16.8740 and 18.5900 respectively and calculated' value is 9.267, it is lesser than table value i.e.0.005 level of significant, hence formulated hypothesis there would be significant difference between experimental group variables of Agility after and post test. And thus the hypothesis is accepted.

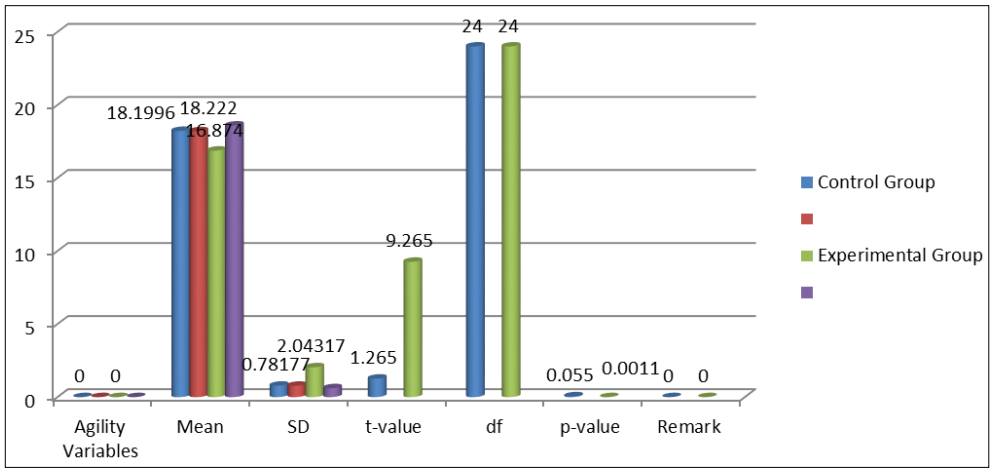

Fig 3: The Graph showing the Agility means and t value of pre-post impact of Control group and Experimental Group

The above table and graph clearly express that the interval session did not influence and not effected on Agility variables of the control group, when it was tested at pre-post-test. It is assumed that because the control group was not made to expose to any kind of training at pre and post-test; hence twelve-week training gap given to control group also does not make any significant influence on their agility factors. The constant and similar life style condition and environment and sample nature has maintained previous status in their motor qualities. The above figure clearly indicates that 12 weeks motor variable (Agility) for the game of (Hockey), statistically improved the Agility of girls. The nature of the shuttle run, the subject has undergone the test to reach and touch the particular lines for a given time. This shows that there is a significant difference in the agility. Hypotheses were accepted.

Table 5: Mena, SD and t-value of Jumping Jack test for coordination of control and Experimental group to pre- test and post-test of secondary school students of Vijayapur

	Coordination Variables	Mean	SD	t-value	D f	p-value	Remark
Control Group	Pre test	4.6000	1.19024	1.369	24	.0639	N S
	Post test	5.2800	1.06145				
Experimental Group	Pre test	5.4800	1.26227	7.2364	24	.005	S
	Post test	7.5200	.58595				

The level of significant is 0.05

The mean and SD score of control group at pre-and post test is 4.6000 and 5.2800 respectively and calculated t value is 1.369, it is lesser than table value i.e.0.005 level of significant, hence formulated hypothesis there would be no significant difference between control group variables of Coordination at both pre and post-test and thus the hypotheses was rejected, and alternative hypothesis that null hypothesis is accepted. The mean and SD score of experimental group at pre-and post-test is 5.4800 and 7.5200 respectively and calculated' value is 7.2364, it is lesser than table value i.e.0.005 level, hence formulated hypothesis there would be significant difference between experimental group variables of Coordination at both pre and post-test. Thus, the hypothesis is accepted.

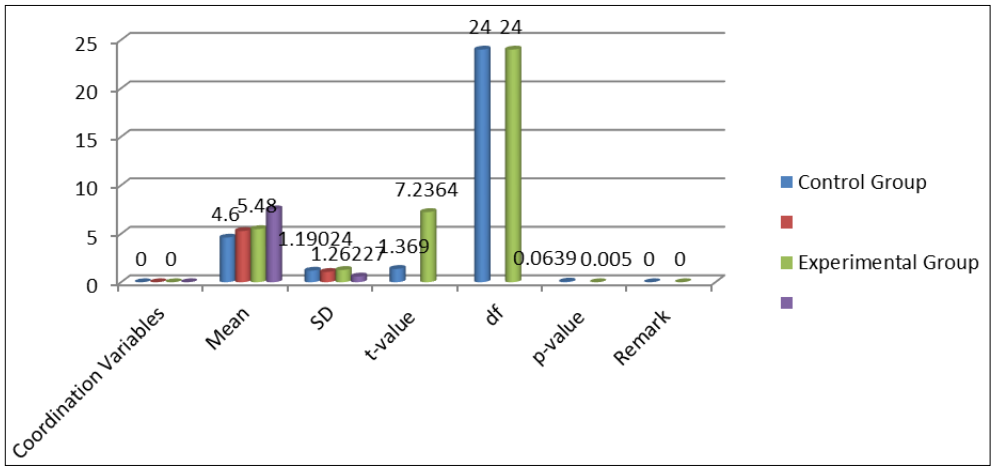

Fig 4: The Graph showing the Coordination means and t value of pre-post impact of Control and Experimental group

The above table and graph clearly express that the interval session did not influence and not effected on coordination variables of the control group, when it was tested at pre-post-test. It is assumed that because the control group was not made to expose to any kind of training at pre and post-test; hence twelve-week training gap given to control group also does not make any significant influence on their coordination factors. The constant and similar life style condition and environment and sample nature has maintained previous status in their motor qualities. The above graph has shown the significance difference in the coordination ability. The subject has practiced the four-count jumping jack at all the four directions. The nature of the test has shown the significance difference of motor ability component in the coordination. This shows that there is a significant difference in the coordination. Hypotheses were accepted.

Recommendations

1. This study could be more effective by using other new standardized tests for each of the physical fitness component.
2. This Coordination training program can be applied in all sports for improving some specific Skills related to coordinative abilities
3. It is recommended from the results obtained from the analysis that some selected fitness components can be improved which have direct relation with the performance of Hockey game.

Conclusions

1. The statistical significant difference between pre and post-test of Speed of experimental group is due to the prospective training, there is no statistical significant difference between pre and post-test of the control group due to absence of training.
2. The statistical significant difference between pre and post-test of Agility of experimental group is due to the prospective training, there is no statistical significant difference between pre and post-test of the control group due to absence of training.
3. The statistical significant difference between pre and post-test of Flexibility of experimental group is due to the prospective training there is no statistical significant difference between pre and post-test of the control group due to absence of training.
4. The statistical significant difference between pre and post-test of Coordination of experimental group is due to the prospective training there is no statistical significant difference between pre and post-test of the control group due to absence of training.
5. For subjects the significant difference exists on motor fitness variables through prospective training.

References

1. Anderson T, Durston BH, Poole M. Thesis and assignment writing New Delhi: Wiley Eastern Limited. 1984
2. American physical education Review, 1899; 1-4:1896-1899
3. Claire Mitchell. Field hockey techniques &tactics Taverner. 2005
4. Elizabeth Anders. Field Hockey, Steps to success
5. Garth Vaughan, JW Fitseell. Hokey History. 1987