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IMPACT OF SPECIFIC SKILL TRAINING ON PERFORMANCE VARIABLES OF COLLEGE LEVEL HOCKEY PLAYERS

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ABSTRACT
Field hockey performance depends greatly on fundamental skills such as dribbling, hitting, ball receiving, and goal shooting, which are essential for both individual excellence and team success. The present study aimed to examines the effect of specific skill training on selected performance variables among college-level hockey players. A total of 40 male players aged 18–23 years were randomly divided into an experimental group and a control group. The experimental group underwent a structured game-specific skill training program for eight weeks, four sessions per week, while the control group followed conventional training. Skill performance was assessed using standardized tests for dribbling, hitting, goal shooting, and ball receiving, and the data were analyzed using the 't' test at a 0.05 level of significance. The results showed significant improvements in all selected skill variables in the experimental group, with calculated 't' values exceeding the table value, whereas the control group showed no significant changes. The findings indicate that specific skill training significantly enhances performance in fundamental hockey skills and should be incorporated into regular training programs to improve competitive performance.
KEYWORDS: *Hockey, Field Hockey, Specific Training, Skill Training*

INTRODUCTION

In field hockey, four fundamental skill dribbling, hitting, receiving the ball, and goal shooting serve as the core determinants of individual and team success. Dribbling enables players to maintain control and advance the ball through defensive structures. Hitting facilitates accurate long-distance passing and powerful shot execution. Ball receiving ensures smoother transitions, possession retention, and efficient link-up play. Goal shooting, perhaps the most decisive skill, directly influences the team's scoring ability and match outcomes. Mastery of these skills is therefore essential not only for individual excellence but also for tactical implementation and team cohesion. FIH (2021).

The modern game of hockey has evolved significantly due to advancements in playing surfaces, stick technology, training methodologies, and game strategies. Speed of play has increased, defensive systems have become more complex, and offensive techniques now demand greater precision and creativity. As a result, players can no longer rely solely on generalized training approaches; instead, there is a growing need for sport-specific and skill-specific training interventions. Specific skills training refers to training programs designed to improve particular technical components through targeted drills, structured practice, and deliberate repetition. Such training enhances neuromuscular coordination, improves technique efficiency, and promotes better skill retention and transfer to match situations. FIH (2021).

Despite the recognized importance of technical skill development, many college-level hockey training programs tend to overemphasize general conditioning or traditional drill-based approaches without adequately addressing individual skill weaknesses. Players may practice regularly but still show inconsistencies in ball handling, ineffective striking techniques, poor receiving under pressure, or low accuracy in goal shooting. These deficiencies often result from a lack of structured and scientifically designed skill-enhancement programs that focus directly on specific performance variables. Consequently, the true potential of the athletes may not be realized, and their performance may fall short in competitive matches. FIH (2021).

SELECTION OF THE SUBJECTS

The participants for this study were college-level field hockey players who were actively involved in their institution's hockey program during the academic year. They were selected using a random sampling method, ensuring inclusion only of players who met specific criteria relevant to the research objectives. Eligible participants were officially enrolled in a college or university and part of their institution's hockey team or training squad. Additionally, they were aged between 18 and 23 years and met the institutional eligibility requirements for sports participation.

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SELECTION OF VARIABLES AND TEST

TABLE - I

S.NO	VARIABLES	TEST ITEMS	UNIT OF MEASUREMENT
SKILL PERFORMANCE VARIABLES			
1	Dribbling	Henry-Friedel Field Hockey Test	In Seconds
2	Hitting	Suresh Kumar Field Hockey Test	In Points
3	Goal Shooting	Shooting Ability Test	In Points
4	Receiving Ball	Akhil Mehrotra's Hockey Receiving Test	In points

RESEARCH DESIGN

The study involved a total of 40 selected subjects, who were equally divided into two groups. Experimental Group I participated in a structured game-specific skill training program (GSSTG), designed to enhance performance-related skills relevant to field hockey, while Group II served as the Control Group (CG) and continued with standard, traditional training methods typically practiced by the team. The experimental group underwent this specialized training regimen for sixty minutes per session, four days each week, consistently over a period of twelve weeks, allowing sufficient time for skill acquisition, practice, and adaptation to the training stimulus.

STATISTICAL TECHNIQUES

't' test used to find out the significant difference between the pre-test and post-test means of two group. The data were analysis with the computer using SPSS statistics package. In all the cases 0.05 level of significance is fixed to test the hypothesis.

TABLE - I

COMPUTATION WITH 't' TEST OF DRIBBLING ON EXPERIMENTAL AND CONTROL GROUP ON HOCKEY PLAYERS

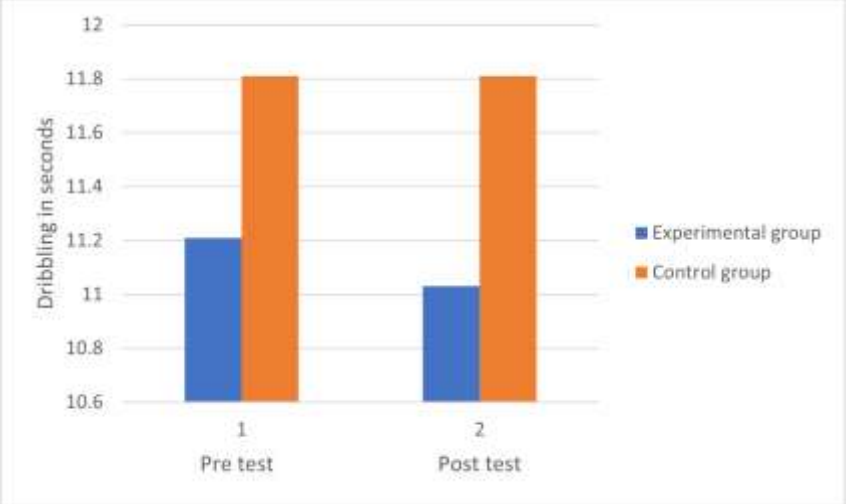
Variable	Group	Test	Mean	S. D	D.M	σ DM	't'
Dribbling	Experimental Group	Pre Test	11.21	0.69	0.17	0.10	7.47
		Post Test	11.03	0.66			
	Control Group	Pre Test	11.81	0.50	0.002	0.03	0.30
		Post Test	11.81	0.51			

Level of significant was fixed at 0.05 with df 19 Table value 2.09

Table - I Indicates that experimental and control group of dribbling on mean and standard deviation of men hockey players. The experimental group pre and post-test mean values are 11.21 and 11.03 and standard deviation values are 0.69 and 0.66 and obtained 't' value is 7.47
which is greater than table value 2.09 with df 19. And control group mean values are 11.81 and 11.81 and standard deviation 0.50 and 0.51 and obtained 't' value 0.30 which is lesser than table value 2.09. The finding of the study indicates that experimental group significant improvement on dribbling due to concurrent specific skill training on college hockey players.

FIGURE - 1

THE BAR DIAGRAM SHOWS THAT THE PRE AND POST TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON DRIBBLING OF COLLEGE HOCKEY PLAYERS.



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Figure: 1 clearly indicate that experimental group compared with control group with significant improvement on Dribbling on college level hockey players.

TABLE - II
COMPUTATION WITH 't' TEST OF HITTING ON EXPERIMENTAL AND CONTROL GROUP ON COLLEGE HOCKEY PLAYERS

Variable	Group	Test	Mean	S. D	D.M	σ DM	't'
Hitting	Experimental	Pre Test	10.50	3.59	3.50	2.35	6.65
		Post Test	14.00	2.05			
	Control Group	Pre Test	7.75	3.43			
		Post Test	8.25	2.93	0.50	3.59	0.62

*Significant Level of significant was fixed at 0.05 with df 19 Table value 2.09

Table - II Indicates that experimental and control group of Hitting on mean and standard deviation of Hockey players. The experimental group pre and post-test mean values are 10.50 and 14.00 and standard deviation values are 3.59 and 2.05 and obtained 't' value is 6.65 which is greater than table value 2.09 with df 19. And control group mean values are 7.75 and 8.25 and standard deviation 3.43 and 2.93 and obtained 't' value 0.62 which is lesser than table value 2.20. The finding of the study indicates that experimental group significant improvement on Hitting due to concurrent specific skill training on college Hockey players.

FIGURE - 2
THE BAR DIAGRAM SHOWS THAT THE PRE AND POST TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON HITTING OF COLLEGE HOCKEY PLAYERS.

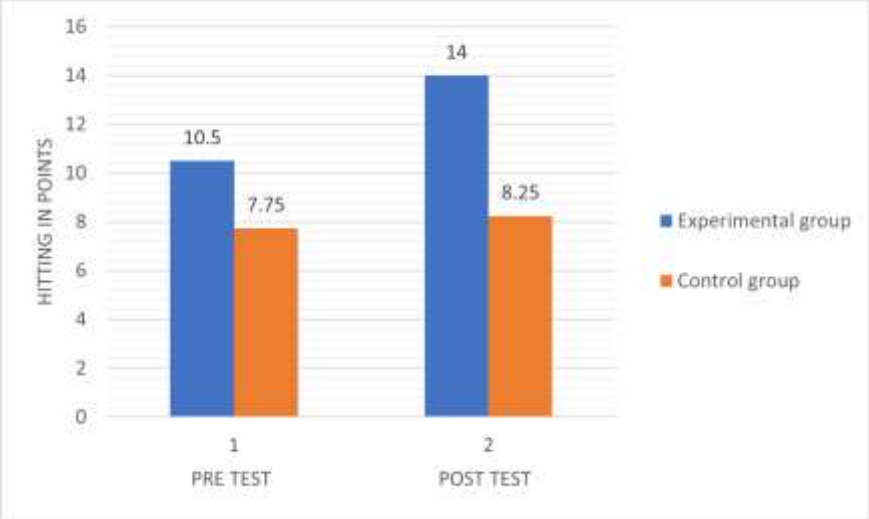


Figure: 2 clearly indicate that experimental group compared with control group with significant improvement on Hitting on college level Hockey players.

TABLE - III
COMPUTATION WITH 't' TEST OF GOAL SHOOTING ON EXPERIMENTAL AND CONTROL GROUP ON HOCKEY PLAYERS

Variable	Group	Test	Mean	S. D	D.M	σ DM	't'
Goal shooting	Experimental	Pre Test	11.30	1.59	3.30	1.30	11.33
		Post Test	14.60	1.31			
	Control Group	Pre Test	9.20	2.28			
		Post Test	9.20	2.01	0.00	0.91	0.00

*Significant Level of significant was fixed at 0.05 with df 19 Table value 2.09

Table - III Indicates that experimental and control group of Goal Shooting on mean and standard deviation of college Hockey players. The experimental group pre and post-test mean values are 11.30 and 14.60 and standard deviation values are 1.59 and 1.31 and obtained 't' value is 11.33 which is greater than table value 2.09 with df 19. And control group mean values are 9.20 and 9.20 and standard deviation 2.28 and 2.01 and obtained 't' value 0.00 which is lesser than table value 2.09. The finding of the study indicates that experimental group significant improvement on Goal Shooting due to concurrent specific skill training on college Hockey players.

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FIGURE - 3
THE BAR DIAGRAM SHOWS THAT THE PRE AND POST TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON GOAL SHOOTING OF COLLEGE HOCKEY PLAYERS.

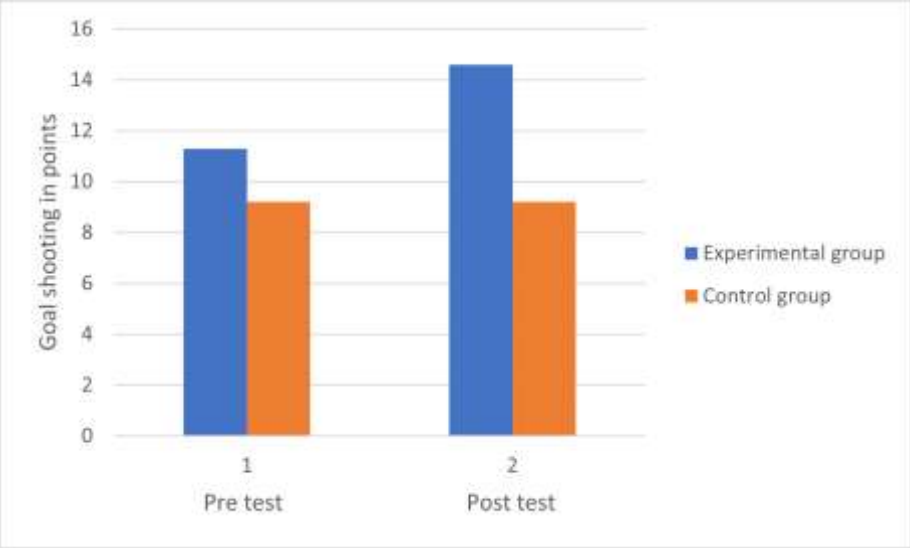


Figure: 3 clearly indicate that experimental group compared with control group with significant improvement on Goal shooting on college level Hockey players.

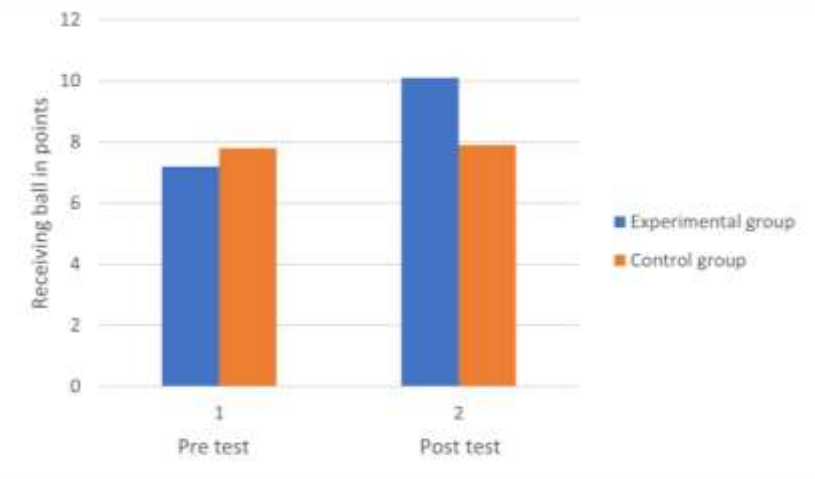
TABLE - IV
COMPUTATION WITH 't' TEST OF RECEIVING BALL ON EXPERIMENTAL AND CONTROL GROUP ON COLLEGE HOCKEY PLAYERS

Variable	Group	Test	Mean	S. D	D.M	σ DM	't'
Receiving Ball	Experimental	Pre Test	7.20	1.36	2.90	0.91	14.22
		Post Test	10.10	1.11			
	Control Group	Pre Test	7.80	2.23	0.10	0.85	0.52
		Post Test	7.90	2.38			

*Significant Level of significant was fixed at 0.05 with df 19 Table value 2.09

Table - IV Indicates that experimental and control group of Receiving Ball on mean and standard deviation of college hockey players. The experimental group pre and post-test mean values are 7.20 and 10.10 and standard deviation values are 1.36 and 1.11 and obtained 't' value is 14.22 which is greater than table value 2.09 with df 19. And control group mean values are 7.80 and 7.90 and standard deviation 2.23 and 2.38 and obtained 't' value 0.52 which is lesser than table value 2.09. The finding of the study indicates that experimental group significant improvement on Receiving Ball due to concurrent Specific skill training on college Hockey players.

FIGURE - 4
THE BAR DIAGRAM SHOWS THAT THE PRE AND POST TEST MEANS OF EXPERIMENTAL AN CONTROL GROUPS ON RECEIVING BALL OF COLLEGE HOCKEY PLAYERS.



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Figure: 4 clearly indicate that experimental group compared with control group with significant improvement on Receiving the ball on college level hockey players.

DICUSSION ON FINDINGS

The results of the study indicates that significant improvement of the intervention of concurrent specific skill training on performance variables of sports dribbling, hitting, goal shooting, receiving the ball on college level hockey players. The specific skill training on hockey players for eight weeks of training had significantly improved the selected the criterion variables are performance variables of sports dribbling, hitting, goal shooting, receiving the ball From the result of the present investigation, it was concluded that the college level hockey players are under gone specific skill training it was improved their performance variables of sports dribbling, hitting, goal shooting, receiving the ball on college level hockey players of the experimental group compared with control group. Bompa and Buzzichelli (2015), Magill and Anderson (2017), and FIH (2021), Senthil Kumar (2023) and Rangaraj (2022)

CONCLUSIONS

Within the limitation of the present study, the conclusions were drawn.

1. It was observed that there was significant improvement on selected performance variables dribbling, hitting, receiving the ball, and goal shooting of field hockey players due to the eight weeks of specific skill training.
2. It was observed that there was significant improvement on selected specific skill performance of field hockey players due to the eight weeks of specific skill training.

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APPENDIX

SPECIFIC SKILL TRAINING PLAN

WEEKLY MICRO CYCLE

DAY	SKILL FOCUS	TRAINING ACTIVITIES	DURATION
MONDAY	DRIBBLING	Straight-line dribble, zig-zag cones	60 min
TUESDAY	Rest	Rest	Rest
WEDNESDAY	HITTING	Basic grip, stationary hit, 10–15 m hits	60 min
THURSDAY	Rest	Rest	Rest
FRIDAY	RECEIVING	Stationary reception, soft-hand control	60 min
SATURDAY	GOAL SHOOTING	Basic shooting form, zone shooting	60 min
SUNDAY	Rest	Rest	Rest

*Duration Of Training Per Day: 60 Minutes

*Intensity May Change According to the Weekly