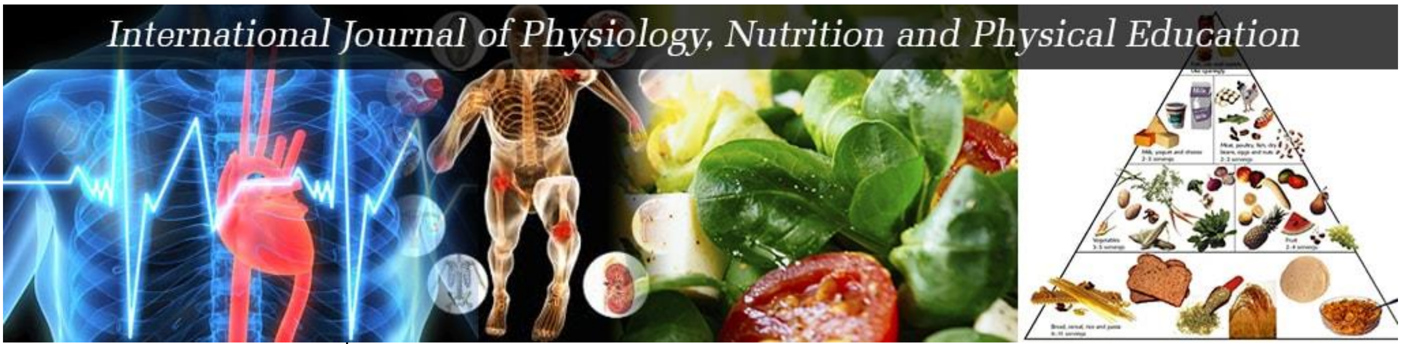

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Aslam N Khan
D.P.E.S, R. S. Sci. College,
Chandur Railway, Amravati,
Maharashtra, India

Corresponding Author:
Aslam N Khan
D.P.E.S, R. S. Sci. College,
Chandur Railway, Amravati,
Maharashtra, India

Impact of six weeks of ladder skill training on hockey players' vital capacity

Aslam N Khan

Abstract

This study sought to determine how six weeks of ladder skill training affected hockey players' vital capacity. In order to accomplish this, forty (n = 40) male hockey players who practice daily in clubs and have at least competed in intercollegiate or state tournaments were chosen at random from Chandur Railway, Amravati. Peak Flow Meter equipment was used to measure the criteria variable of vital capacity. Players were split into two groups: experimental group (20) and control group (20). The program, which was designed with expert consultation and lasted for six weeks, was limited to the experimental group and involved ladder skill training. Following a six-week training program, post-tests were given to the experimental and control groups, and data was gathered. Result, with regard to vital capacity, difference observed in the pre and post-tests of both groups of hockey players. To determine whether significant or not, 't' test was further computed by the researcher, and it indicates that significant was revealed between the experimental group of hockey players' pre and post test results since the 't' stat 5.028 is higher than the critical 't' 2.093. However, there is no discernible difference between the pre and post test results for the control group. Result, with regard to vital capacity, indicates that significant was revealed between the experimental group of hockey players'. This implies, ladder skill training has an impact on hockey players' vital capacity and may also have an impact on one's fitness and health. Because ladder skill training can be programmed in a limited space, it is therefore far superior. Compared to regular workout, it burns calories far more quickly. In addition to strengthening their core muscles, ladder skill training encourages them to engage in a range of body-moving physical activities and reduces the risk of injury.

Keywords: Ladder skill training, vital capacity, Hockey players, etc.

Introduction

Person is physically healthy, performs at their best at work, and is free from illness and disability. Maintaining a healthy lifestyle is essential for physical health and wellbeing. The process of preparing someone for any activity, occasion, or job is known as training. The process of preparing players for their peak performance is commonly referred to as 'sports training' in sports. However, training is more than just a phrase these days; it is a crucial topic that impacts everyone who participates in sports or physical activity, whether for fitness or competitive purposes. Therefore, we can define sports training as the process of preparing an athlete or player through physical workouts on all levels—physical, technical, intellectual, psychological, and moral.

In order to maximize athletic performance, ladder workouts are utilized to enhance footwork. Performing the assignment on the ladder is a lot of fun. By teaching the body and mind different foot combinations and executing drills in a rhythm, the ladder drill training session will assist an individual in achieving various levels of fitness. Drills must progress from easy to difficult in order to enhance coordination and footwork and raise performance levels. Drills can also incorporate certain game-specific moves that are essential and consistent throughout the game. The athlete can grab, strike, block, or tackle the component with the aid of ladder drills. Ladder drills were utilized by coaches of several sports to increase their athletes' agility.

In the current world, physiological characteristics appear to be crucial in producing better performance in day-to-day tasks. In addition, women's abilities may vary due to changes in physiological parameters and time differences. It is commonly recognized that a person's performance in any activity is influenced by their physiological characteristics throughout the day. The pattern technique can be used to train a person to function at their best when their daily physiological factors alter. Regretfully, there is not much research literature on these topics. As a result, physiological factors including heart rate, vital capacity, hemoglobin, and cardio-vascular endurance are given more weight and are necessary for exceptional performance in any activity.

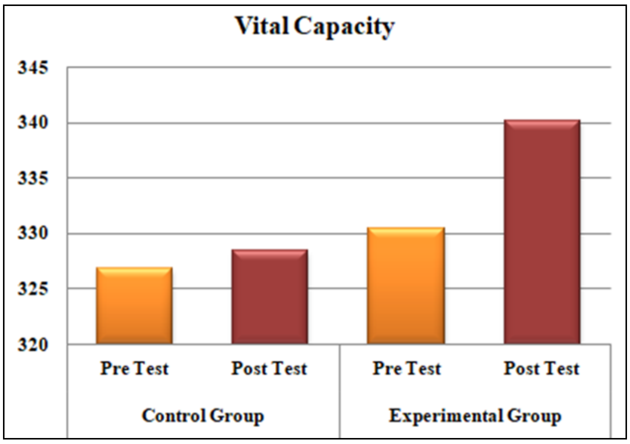
Methodology
This study sought to determine how six weeks of ladder skill training affected hockey players' vital capacity. In order to accomplish this, forty (n = 40) male hockey players who practice daily in clubs and have at least competed in intercollegiate or state tournaments were chosen at random from Chandur Railway, Amravati. Peak Flow Meter equipment was used to measure the criteria variable of vital capacity. Players were split into two groups: experimental group (20) and control group (20). The program, which was designed with expert consultation and lasted for six weeks, was limited to the experimental group and involved ladder skill training. Following a six-week training program, post-tests were given to the experimental and control groups, and data was gathered.

Interpretation
Interpretation of data was analyzed through 't' test.

Table 1: Vital Capacity

Vital Capacity				
Test	Control Group		Experimental Group	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Mean	326.8	328.45	330.4	340.2
Variance	74.0631579	131.83947	27.2	45.431579
Observations	20	20	20	20
df	19		19	
t Stat	0.737020475		5.028687106	
P(T<=t) two-tail	0.470113912		7.45697E-05	
t Critical two-tail	2.09302405		2.09302405	

Result, with regard to vital capacity, difference observed in the pre and post tests of both groups of hockey players. To determine whether significant or not, 't' test was further computed by the researcher, and it indicates that significant was revealed between the experimental group of hockey players' pre and post test results since the 't' stat 5.028 is higher than the critical 't' 2.093. However, there is no discernible difference between the pre and post test results for the control group.



Graph 1: Vital Capacity

Conclusion
Result, with regard to vital capacity, indicates that significant was revealed between the experimental group of hockey players'. This implies, ladder skill training has an impact on hockey players' vital capacity and may also have an impact on one's fitness and health. Because ladder skill training can be programmed in a limited space, it is therefore far superior. Compared to regular workout, it burns calories far more quickly. In addition to strengthening their core muscles, ladder skill training encourages them to engage in a range of body-moving physical activities and reduces the risk of injury.

References
1. Ariana P, Arif N. An introduction to the human development capability approach: freedom and agency. London: Earthscan; 2009.
2. Meng HC, Lee JLF. Effects of agility ladder drills on dynamic balance of children. J Sports Sci Phys Educ. 2014;2(1).
3. Rao M, Rao K. Human resources for health in India. Lancet. 2011.
4. Topend Sports. Lung function tests: Peak flow [Internet]. [cited 2025 Apr 13]. Available from: https://www.topendsports.com/health/tests/lung-peak-flow.htm
5. Hockey India. Official website of Hockey India [Internet]. [cited 2025 Apr 13]. Available from: https://www.hockeyindia.org/
6. Wikipedia. Hockey [Internet]. [cited 2025 Apr 13]. Available from: https://en.wikipedia.org/wiki/Hockey
7. Encyclopaedia Britannica. Field hockey [Internet]. [cited 2025 Apr 13]. Available from: https://www.britannica.com/sports/field-hockey