Role of motor fitness and playing ability in sports: A case study of women hockey players

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Abstract
The current study highlights the significance of motor fitness and playing ability among women Hockey players. Four motor fitness components such as speed, agility, power and coordinative ability were chosen as criterion measures for the current study. Pearson product moment correlation methodology was used for the task of data interpretation and analysis. Level of confidence was observed to be 0.05 levels.
The evaluation of all four selected motor fitness components (speed, agility, power and coordinative ability) was performed. The outcome of the study revealed that motor fitness had a significant relation with women Hockey players. The correlation between motor fitness and playing ability was found to be lower.
Style of coaching could be the reason for lower correlation. From the survey, lack of coaching aspects was found which results into lower correlation between motor fitness and playing ability.

Keywords: Hockey, motor ability, performance

Introduction
Motor ability variables play a vital role in better performance of sports persons. In order to do well in the field of sports, a player need to concentrate on these variables like speed, agility, power etc. In this case, the role of coach becomes quite significant. These motor abilities ensure the good performance of the players.
It is observed that motor skills can be achieved with the help of motor ability. It can be used to observe level of the players with regards to performance. The physical demands of the players can be handled with the help of various components of fitness.
The level of fitness directly depends on the efficiency of body and how it works. Optimal fitness can be achieved by doing proper physical activities with a disciplined life style and good habits.
It is observed that there are a lot of conditions which are found to be in improper manner in the game of Hockey. From the last two or three decades, Hockey has become very popular in India. Also, now the prospective of this game has changed with the time. Earlier, Hockey was supposed to be a game of skill. Now, the concept of power has adjoined with it; making it more competitive sports. Master of skills is needed to engage with this sport.
In the game of Hockey, for wrist and fore-man; the main factor is physical fitness. Also, physical fitness ensures the good performance in the field of sports. To enhance the efficiency of women Hockey players, speed, acceleration and movement speed are considered as the big factors.
It is found that the role of cohesion is very much in getting success in a team game. This theory is also applicable for the sport of Hockey. A bunch of physically fit players in a cohesive team leads to the success with exception level of performance.
In modern style of coaching, coaches use scientific information obtained from research. With the help of technology, the weakness of players can be found and can work on that particular weakness and performance of the player can be improved.
A lot of activities are done by the players in order to perform better to attain physical fitness. The team goal is achieved by individual performances. There can be a day when the performance of an individual is not up to the mark but this little thong can be negotiated by
high performance of other players. A lot of physical activities like weight lifting, running, swimming, cycling and yoga etc. are done by players so as to enhance their performance. There are two types of physical fitness. One is health related and another is skill related.

Skill related fitness ensures the ability of an individual to participate in the game. Coordination, speed, agility and reaction time etc. are some examples of components of skill-related fitness. Proper diet, regular exercise, disciplined life style come under the category of health related fitness. Flexibility, muscular strength, respiratory endurance etc. are considered as the components of health-related fitness. Taking drugs and performance enhancing doses are prohibited for the players. Smoking and drinking are also prohibited by the players. These things also decrease the level of health among the players.

Research Study
Motor ability has been defined as “the present acquired innate ability to perform motor skills of general of fundamental nature exclusive of highly specialized sports or gymnastic techniques.

To look at the history of sports is to look at the social history of a society. Sport reflects the society in which it is found. Therefore, the sports and society are interlinked and they cannot be separated. Before discussing the relationship between them the author wishes to explain: What the society is? Society is the structural composition of a community of people. It is a national identity in which a large group of people form a unique organization, which is also linked with culture, recreation and traditions etc. Culture is an important part of society, which explains the ways this society functions. It describes the unique patterns of a society summarized in the term Life Style. It reflects the customs, attitudes and values of the people and can be analysed at ethical-socio-economic and artistic levels. Societies have institutions and organisations within their structure and these normally have some degree of autonomy with their own unique cultural interpretation.

Sport is a social phenomenon because it is a playful, competitive, skilful and institutionalized activity. On the one side society puts some goals as inputs before the sports system and on the other sports provide some significant output to the society. On one side society provides the goals, facilities, infrastructure, competitions, awards and punishment on the other hand sports provide to the society the fame, physical and mental fitness, character formation, glory, money, recognition and international peace. Sports, indeed, are and had been mirror of society. Throughout the world, sports were popular and appealing to the people of all ages and both sexes.

In modern society, sports have very important role to play. Much of the attraction of the sports comes from the wide variety of experience and feelings that result from participation, namely, joy, anguish, success, failure, pain, relief and a feeling of belonging. Sports competitions offer us heroes and heroines. For many youths, the sports stars are better known than the leading politicians of a country. Sports have ever reflected development in society.

Primitive sports were limited and regulated by taboos and traditions. Modern sports are played by prescribed rules and set of norms. The difference between the primitive and modern sports rules is that modern sports are rationalized rather than prescribed by traditions. The primitive societies and sports were the integral part of the religious practices.

Dancing, singing, wrestling and melas were quite popular, as they were integral part of their socio-cultural traditions. Plato advocated that girls and boys should be put to vigorous exercises during their bringing up. Romans were fond of Athletics. They aimed at military proficiency through games and sports.

Methodology
Total 20 women Hockey players were selected for this study. The subjects were selected by random sample selection. Their age ranged between 18-27 years.

Motor fitness assessment
1. Speed was measured by 50 m Dash.  
2. Agility was measured by 10x4 Shuttle run.  
3. Power was measured by standing broad jump.  
4. Coordinate ability was measured by Alternate hand wall test

To assess Playing ability of players, researcher used 10 different skills which are scored by the 3 experts through subjective judgment. These 4 selective fitness components which belong to playing ability have been measured. The tests were administrated to measure the fitness components of the selective subjects of sports group.

Firstly, Selective fitness components were evaluated. Next day these 20 women Hockey players were played a friendly Hockey match, where 3 experts were observed this match and gave their subjective Judgment. In order to find out the relationship between motor fitness ability and playing ability Pearson product moment correlation ship was applied and the level of significance chosen for the study was at. 05.

Analysis of the Data

Table 1: Relationship of Motor fitness and playing Ability

<table>
<thead>
<tr>
<th>Variables correlated</th>
<th>Coefficient of Correlation (r)</th>
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</thead>
<tbody>
<tr>
<td>Motor fitness and playing ability</td>
<td>0.37</td>
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</tbody>
</table>

The obtained value of r = 0.37 from table 1 clearly indicated low correlation between motor fitness and playing ability, which is not significant because the required value at 0.05 level of significance with 18 degree of freedom is 0.37. Because of the total 20 subjects, degree of freedom was 18; it could have significant in 0.44 correlation coefficient. That indicates that there is low correlation between motor fitness and playing ability of University level women Hockey Players.

Discussion of Findings
The result of the study clearly discloses that motor fitness had considerable relationship with the playing ability of the University level women Hockey players. Result contraindicate with the earlier researchers, which have shown the significant relationship of these two variables i.e. motor fitness and playing ability. The other fact might be that if the playing ability was scored after end of the match, then the players got fewer score comparative to the considered scores by influencing the various factors. i.e. Fatigueness, Psychological pressure, Rush of the game, match situation etc.

It was possible that, Players were fresh in the starting part of the game so definitely they will perform all the skills very well as compare at the last minute of the game, therefore somewhere the difference in scoring of all individual skills and playing abilities. The present study shows that
relationship of Motor fitness & Playing ability was below average the reason might be due to the fact that the players was belongs to different different places therefore players had lack of coordination during the match. The other reason was also for low correlation that players have also the burden of their academic courses, that’s why they didn’t get sufficient time for practice in whole year.

**Conclusion**
On the basis of results and associated discussion it may be concluded that motor fitness and playing ability have low correlation. However from the earlier research, literature and the experience the motor fitness must be significant relationship with playing abilities but in this study there is the outcome of Low Correlation between them. This might be because of many influencing factors which are described in the discussion of findings. So lastly it concluded that the motor fitness of the University level women Hockey players was no significant relationship with the playing abilities, and had Low Correlation between them.

**References**