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Motor fitness and playing ability: A case study of university level women hockey players

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Abstract
During the present study Motor fitness was analyzed among the female hockey players. There were 4 parameters related to fitness components which were analyzed in the present study. Data was analyzed statistically in order to find the relationship between motor fitness and playing ability. And upon Pearson's text, it was reported that there is a direct relation between the motor components with the playing ability. The results obtained were statistically significant at 0.5%.
Though from the results it was also concluded that in university there must be a good coaching staff in order to get better results. The results were not satisfactory as were expected. The low correlation between the motor fitness and the playing ability is because of lack of coaching staff and various instruments required. Therefore, upon concluding the results it was obtained the athletes have not the proper coaching staff which is utmost for the game in order to show the positive motor fitness and playing ability.

Keywords: hockey, motor ability, performance

Introduction

Motor ability is considered as an important aspect for the athletes in order to gain success in his/her game. It has been revealed by researchers that motor abilities are directly related to the performance. Akgün (1996) has revealed that speed can be increased by developing the muscles. And speed is considered as one of the most important components of the motor ability.
Physical fitness and motor fitness is used interchangeably by various authors. Motor ability is a vast concept. There are various components of motor fitness which include:

1. Cardio-vascular Endurance
2. Speed
3. Agility
4. Explosive Power.

Nabhendra Singh, (2010) has revealed that well collective motor abilities help in better results in the game for an athlete. For the athlete these collective abilities must be there for his success. In case of hockey which is very fast and energy demanding there must be too sharp reflexes. In hockey there must be all the variables present in the athlete viz. speed, endurance, explosive power and momentum. Hockey player must have all the abilities like endurance, strength, speed and flexibility. It is a fastest game and involves both aerobic and anaerobic activities during the play. Manna, I., *et al*., (2010) [2] have stated that athletes those who play have hockey have well developed motor abilities and performance skills.
Abant Izzet Baysal (2015) also in his studies have revealed that various components are developed with playing hockey. He has reported that motor abilities in the athletes are much developed as compared to non athlete individuals.
For hockey players with outstanding motor abilities he/she must possess some various essential components for his/her success, among them are

1. Body Position
2. Foot placement during the play
3. body posture
4. Body weight
5. Strength of the legs
6. Hand/eye coordination
7. Hitting power
8. Goal conversion
9. Positive attitude
10. Muscular strength
11. Stamina
12. Endurance
13. Flexibility
14. Techniques
15. Arm strength
16. Abdominal strength

These all components determine how successful will be the athlete in the game.

Materials and Methods

The purpose of the present study was to determine the correlation between the motor performance level and playing ability among the women hockey players of the university.
During the present study a total of 20 women Hockey players were selected. Hockey players were selected on random basis. The age group of the athletes were 18-30
Motor fitness assessment

1. Measurement of speed
2. Measurement of agility.
3. Power and jump measurement.
4. Measurement of Coordinative ability by Alternate hand wall test

The playing ability was analyzed which was judged by the 3 experts. The motor ability was determined and its correlation was also recorded with the playing ability of the athletes. These 4 selective fitness components which belong to playing ability have been measured. Different tests were analyzed to determine their fitness level also.

During the match organized by the university, 3 experts were watching the match. For the correlation of motor ability, Pearson test was conducted and the level of significance was chosen at 0.05%.

Discussion of Findings

The findings of the present study revealed that there was a very low correlation between the motor fitness components with the playing ability among the women hockey players. Various authors in their studies have found a positive correlation with these parameters. Our results were in conformity with many reports who have also reported low correlation among the motor fitness and playing ability. In some report's authors have found positive correlation in motor fitness and playing ability in various games like Kabaddi, soccer, Kho-kho etc. It might be because these games are of short duration while hockey is of long duration. But in some games like football, it has been reported that there was a positive correlation among the motor fitness with related to playing ability. The results of the present study revealed low correlation which might be because of the anxiety which the players feel before or during the game. Various physiological aspects can also be behind the low correlation among the motor fitness and playing ability.

Rosch *et al*., (2000) [4] have revealed in their studies that low performance can also be that players are losing technical skills and tactical performances. Hockey is the game in which players should have these qualities in order to be success.

Conclusion

It was concluded that there was a low correlation between the motor fitness and playing ability among the women hockey players. The obtained results may be because the players are not technically sound. Only technical skills and tactical performances players have positive correlation between the two components. Other reasons may also be there related to low correlation between motor fitness and playing ability which include: fatigueness, lack of exercises and physiological aspects. Therefore keeping all the aspects into consideration, low correlation was reported between motor fitness and playing ability among University level women Hockey players

Results

Table 1: Relationship between motor fitness and playing ability

Variables Correlated	Coefficient of Correlation ®
Motor fitness/playing ability	0.41
Level of significance 90.05)	

Correlation value obtained was 0.41 as given in table 1. The relationship between motor fitness and playing ability was found to be low and was significantly non significant at 0.05%. The results revealed that there was low correlation between the motor affinity and motor ability among the women hockey players.

References

1. Boyle PM, Mahoney CA, Wallace WF. The competitive demands of elite male field hockey J Sports Med Phys fitness. 1994; 34(3):235-41
2. Manna I, Khanna GL, Dhara PC. Effects of training on anthropometric, physiological and biochemical variables of elite field hockey players. International Journal of Sports Science and Engineering. 2010; 4; 229-134
3. Cox, R.H and Yoo, H.S. Playing position and physiological skill in American football. Journal of Sport Behaviour. (1995)18(3); 183-194
4. Rosch D, Hodgson R, Peterson TL, Graf-Baumann T, Junge A, Chomiak J and Dvorak J. Assessment and evaluation of football performance. The American Journal of Sports Medicine. 2000. 28: 29-39.
5. Reilly T. Energetics of high-intensity exercise (soccer) with particular reference to fatigue. Journal of Sports Sciences, 1997.15: 257–263.