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Execution Of Fundamental Kho-Kho Skill On Clay And Mat Surfaces: A Comparative Study

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ABSTRACT

The present study aims to assess the pole turn performance of inter-university male kho-kho players on clay and synthetic playing surfaces. For this study, a sample of 50 male Kho-Kho players, aged between 18 and 25 years, was selected from interuniversity and national-level participants. The sampling method employed was purposive sampling. The pole turn performance of selected male kho-kho players was assessed by a test constructed by Rinku Tiwari and Reeta Venugopal (2016). Results reveal that players performed significantly better (i.e., faster pole turns) on the mat surface compared to the clay surface. The mat may allow for better force application during directional changes involved in a pole turn, leading to more efficient and quicker movement. Based on the results, it was concluded that the male kho-kho players were able to achieve better pole turn performance on the mat surface as compared to the clay surface. It can also be concluded that the pole turn performance was better on synthetic mat surfaces as compared to clay surfaces due to the smoother and more uniform surface, which facilitates quicker and more controlled turning movements around the pole with reduced risk of slipping or injury.

Keywords: Pole turn, playing surfaces, kho-kho

INTRODUCTION

Kho-Kho is a traditional Indian sport that demands speed, agility, and sharp reflexes. The playing surface plays a crucial role in influencing player performance, safety, and execution of skills. While clay surfaces have been commonly used, especially in rural areas, mat surfaces are gaining popularity with the sport's growing professionalization. Clay surfaces offer natural grip and cushioning but can be affected by weather. In contrast, mat surfaces provide uniformity, better injury prevention, and enhanced movement, though they may alter certain skills like diving and turning. This study examines how clay and mat surfaces impact core Kho-Kho skill i.e. pole turn exhibited by male players.

REVIEW OF LITERATURE

Several studies have highlighted the influence of playing surfaces on athletic performance. Girard et al. (2009) found that surface type affects foot pressure in tennis players, with Greenset reducing toe pressure but increasing hallux pressure compared to clay. Gains et al. (2010) reported improved speed and agility on field turf over natural grass in soccer players, particularly in change-of-direction movements. Kanaras et al. (2014) observed that young soccer players had better sprint performance on artificial grass. Brito et al. (2017) noted that players covered more distance on artificial turf than on natural grass. Sourabh Pradhan and C.D. Agashe (2019) concluded that synthetic surfaces enhance acceleration more effectively than clay. Modric et al. (2023) concluded that artificial surfaces are more physically demanding, especially for midfielders and defenders. Ponce-Bordon et al. (2024) found that players experienced higher perceived exertion during training on natural turf compared to artificial surfaces.

OBJECTIVE

The present study aims to assess the pole turn performance of inter-university male kho-kho players on clay and synthetic playing surfaces.

HYPOTHESIS

It was hypothesized that the nature of the playing surface would significantly affect pole turn performance of male kho-kho players.

METHODOLOGY

The following methodological steps were taken to conduct the present study.

Sample

For this study, a sample of 50 male Kho-Kho players, aged between 18 to 25 years, was selected from interuniversity and national-level participants. The sampling method employed was purposive sampling.

Tools:

The pole turn performance of selected male kho-kho players was assessed by a test constructed by Rinku Tiwari and Reeta Venugopal (2016). Three trials are given and the best timing is recorded. The subject in the initial position is sitting at the first square box and after receiving a kho runs around the pole and gives kho to the player sitting in the first square. The total time taken is recorded.

Procedure:

50 Inter University male kho-kho players were selected. Each player performed pole turn on clay and synthetic surfaces. The best time on both surfaces was recorded. The data is tabulated in the respective groups and a paired sample 't' test was used for data collection. The results are given in Table 1.

RESULT AND DISCUSSION

Table 1

Paired Comparison of Pole Turn Performance of Kho-Kho Players on Different Playing Surfaces

N	Pole Turn Performance (Second) Kho-Kho Players				Mean Difference	't'
	Clay		Mat			
	Mean	S.D.	Mean	S.D.		
50	2.91	0.34	2.73	0.38	0.18	2.45*

* Significant at 0.05 level

Table 1 presents the paired comparison of the pole turn performance of Kho-Kho players on different playing surfaces—clay and mat. The data includes 50 players, and their performance is measured in seconds. The mean time taken for the pole turn on the clay surface was 2.91 seconds with a standard deviation of 0.34, whereas on the mat surface, the mean time was 2.73 seconds with a standard deviation of 0.38. The mean difference between the two surfaces was 0.18 seconds, and the calculated t-value was 2.45, which is statistically significant at the 0.05 level. This indicates that the difference in performance is not due to chance and suggests that players performed significantly better (i.e., faster pole turns) on the mat surface compared to the clay surface. The mat may allow for better force application during directional changes involved in a pole turn, leading to more efficient and quicker movement.

CONCLUSION

Based on the results, it was concluded that the male kho-kho players were able to achieve better pole turn performance on the mat surface as compared to the clay surface. It can also be concluded that the pole turn performance was better on synthetic mat surfaces as compared to clay surfaces due to the smoother and more uniform surface, which facilitates quicker and more controlled turning movements around the pole with reduced risk of slipping or injury.

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