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CONSTRUCTION OF SKILL TESTS AND COMPILATION OF NORMS FOR SELECTED FIELD HOCKEY SKILLS

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Abstract

The purpose of the study was to construct the skill tests and compilation of norms for selected field hockey skills among college level players. Five hundred field hockey players were selected from various institutions in Tamilnadu state at random and their age ranged from 18 to 28 years. Data were collected from each subject on dribbling, dribble and push and dribble and hit. The collected data were statistically analysed by using descriptive statistics and hull scale. The players' skills performance was described in the qualitative grading procedure namely low, low average, average, above average, good and outstanding. It was found that there was very less number of players in the outstanding and low performance grading.

Key Words: *Field Hockey, skills, dribbling, hitting and pushing.*

Introduction

Field hockey is a multiple high intensity activity sport with a multidirectional nature. The ability to change direction rapidly while maintaining balance without loss of speed that is, agility is therefore an important physical component necessary for successful performance in field hockey. Elite field hockey players also need high level technical skills such as being able to dribble without losing running speed. For a technically good player, dribbling is essentially an automatic process, and the better players distinguish themselves by their running speed while dribbling the ball (***Reilly and Bretherton, 1986*****).** Coaches, trainers, and players are continually searching for effective methods of identifying and developing those characteristics in a player that may enhance performance. There are a variety of field tests with which to measure the physiological and technical characteristics of players in team games like soccer, rugby, and handball. However, there was no single test to measure both physiological and technical characteristics in field hockey players and for this reason we developed two tests specifically to measure these characteristics. Based on tests for repeated sprint ability (***Aziz, et al., 2000*****)** and dribbling skills of field hockey players (***Reilly and Bretherton, 1986*****)** and soccer players (***Reilly and Holmes, 1983***).

Field hockey is a field invasive sport in which players compete at the same field of action as their opponents (**Hughes and Barlett, 2002**). To obtain expert status in field hockey, players must excel in no less than four domains: physiological,

technical, tactical, and psychological. The unique requirements of field hockey including dribbling the ball and moving quickly in a semi-crouched posture superimpose the work-load demanded by the game (**Reilly and Seaton, 1990**). Technical expertise refers to the degree of sensorimotor coordination from which refined, efficient, and effective movement patterns emerge (**Janelle and Hillman, 2003**). For a technically sound player, dribbling is essentially an automatic process, and the better players distinguish themselves by their running speed while dribbling the ball (**Reilly and Bretherton, 1986**). The execution of tactical skills in field hockey is always related to the physiological and technical limitations of the individual player. All sports are based on fundamental movement skills and sports skills. Basic movement skills include agility, balance, and coordination, while basic sports skills include running, jumping, throwing, kicking, catching, and dribbling. Based on the above facts the purpose of the study was designed ie. Construction of skill tests and compilation of norms for selected field hockey skills among college level players.

Methodology

To achieve the purpose of this study, five hundred field hockey players were selected from various institution in Tamilnadu state at random and their age ranged from 18 to 28 years. Reliability, objectivity, validity and norms were evaluated as per the standard procedure by (**Safrit,1990**). As per the available literature, the following tests were used to collect relevant data on the selected criterion variables and they were presented in the Table I.

TABLE - I

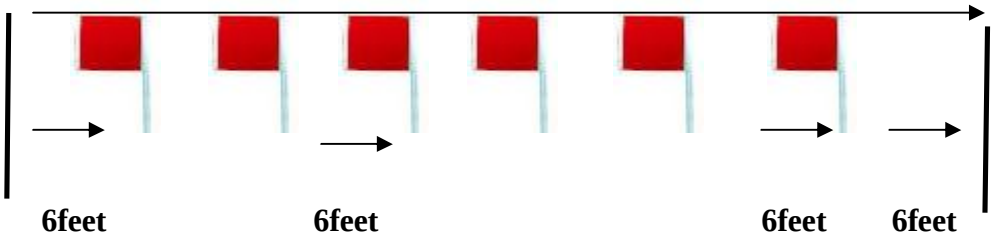
TEST SELECTION.

Variables	Test/Instrument	Unit of Measurement
Dribbling	Dribbling	In Seconds
Dribble and Hit	Dribble and Hit	In Seconds
Dribble and Push	Dribble and Push	In Seconds

The mean and standard deviation of the raw scores were computed by using the formula suggested by **Mathew, 1973**. After calculating the mean and standard deviation, the scores were converted into standard score and construct the Hull Scale. In all the cases to test the significance, 0 .05 level of confidence was used.

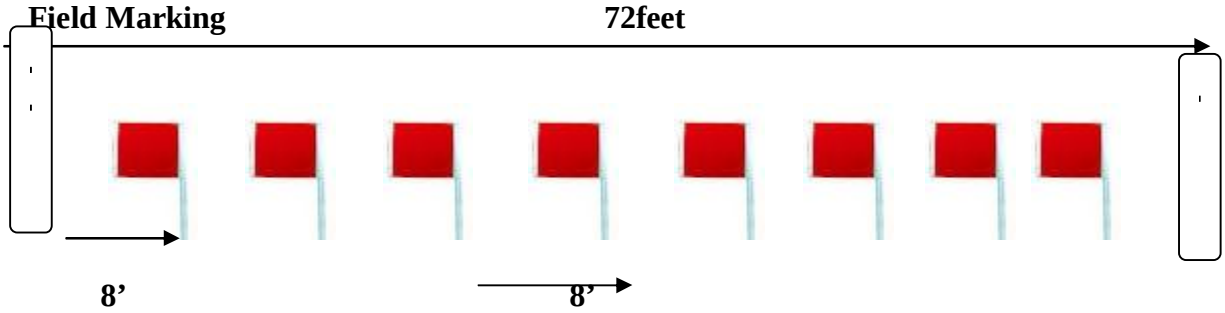
Dribble test

Field Marking **36feet**



Execution : The subjects were asked to stand behind the starting line with a hockey stick. The ball was placed at the centre of the starting line. On the signal "go" the subjects was asked to dribble the ball in between the flag posts placed on the 36 feet long straight line at every six feet as fast as possible. One reaching the last flag he was asked to take a turn around the flag and dribble the ball in the same manner to reach the starting line. **Scoring:**The score as the time elapsed from the signal "go" until the individual crosses the starting line with the ball. Three trails were given and the best time was taken as the score. The time was measured the nearest one hundredth of a second and recorded as one tenth of a second.

Dribbling and pushing ability/ Dribbling and hit test



Execution: The subjects as asked to stand behind the starting line with the hockey ball placed on the starting line at the point on the right side of the starting line. On signal, "Ready Go" the subject was asked to dribble the ball forward in between the flags placed on the straight line and on reaching the end line. The subjects was asked to send the ball back to the starting line using straight push. A total number of three trails were given to each subject and the scores were recorded. Trails were given on a rotation basis.

Scoring: The score was the time elaspsed from the signal "go", until when the ball crossed over the starting line after the push was made by the subjects from end line. If the ball stopped in between the end line and the starting line. Subject was asked to follow the ball to take the push again to send the ball over the starting line. The best of three trials was taken as the score and was measure to the nearest one hundredth of a second and recorded as one tenth of a second.

ANALYSIS OF DATA

The descriptive analysis and qualitative grading of the scores of selected skills has been shown from table I & II.

TABLE - I
DESCRIPTIVE ANALYSIS AND HULL SCALE VALUE FOR SELECTED SKILLS

SKILLS	Mean	SD	Min.	Max.	Hull Scale
Dribbling	11.77	1.43	8.11	15.76	0.1001
Dribble and hit	12.18	1.21	9.01	15.59	0.0847
Dribble and Push	12.86	1.27	9.55	16.21	0.0889

TABLE II
THE QUALITATIVE GRADING FOR THE CONSTRUCTED NORMS FOR THE SELECTED SKILLS

Score	Qualitative grading	Number of players in each grade in		
		Dribbling	Dribble and hit	Dribble and push
Below 25	Low	3	4	1
25 – 35	Low average	31	41	23
36 - 50	Average	179	157	199
51 - 65	Above average	254	286	257
66 - 75	Good	30	8	16
75 and above	Outstanding	3	4	4

THE HULL SCALE NORMS FOR THE DRIBBLING ABILITY

Hull Scale	0	1	2	3	4	5	6	7	8	9
0	16.78	16.67	16.57	16.47	16.37	16.27	16.17	16.07	15.97	15.87
10	15.77	15.67	15.57	15.47	15.37	15.27	15.17	15.07	14.97	14.87
20	14.77	14.67	14.57	14.47	14.37	14.27	14.17	14.07	13.97	13.87
30	13.77	13.67	13.57	13.47	13.37	13.27	13.17	13.07	12.97	12.87
40	12.77	12.67	12.57	12.47	12.37	12.27	12.17	12.07	11.97	11.87
50	11.77	11.67	11.57	11.47	11.37	11.27	11.17	11.07	10.97	10.87
60	10.77	10.67	10.57	10.47	10.37	10.27	10.17	10.07	9.97	9.87
70	9.77	9.67	9.57	9.47	9.37	9.27	9.17	9.07	8.97	8.87
80	8.77	8.67	8.57	8.47	8.37	8.27	8.17	8.07	7.97	7.87
90	7.77	7.67	7.57	7.47	7.37	7.27	7.17	7.07	6.97	6.87
100	6.77									

THE HULL SCALE NORMS FOR THE DRIBBLE AND HIT

Hull Scale	0	1	2	3	4	5	6	7	8	9
0	16.42	16.33	16.25	16.16	16.08	15.99	15.91	15.82	15.74	15.65
10	15.57	15.48	15.40	15.31	15.23	15.14	15.06	14.98	14.89	14.81
20	14.72	14.64	14.55	14.47	14.38	14.30	14.21	14.13	14.04	13.96
30	13.87	13.79	13.70	13.62	13.54	13.45	13.37	13.28	13.20	13.11
40	13.03	12.94	12.86	12.77	12.69	12.60	12.52	12.43	12.35	12.26
50	12.18	12.10	12.01	11.93	11.84	11.76	11.67	11.59	11.50	11.42
60	11.33	11.25	11.16	11.08	10.99	10.91	10.82	10.74	10.66	10.57
70	10.49	10.40	10.32	10.23	10.15	10.06	9.98	9.89	9.81	9.72
80	9.64	9.55	9.47	9.38	9.30	9.22	9.13	9.05	8.96	8.88
90	8.79	8.71	8.62	8.54	8.45	8.37	8.28	8.20	8.11	8.03
100	7.95									

THE HULL SCALE NORMS FOR THE DRIBBLE AND PUSH

Hull Scale	0	1	2	3	4	5	6	7	8	9
0	17.31	17.22	17.13	17.04	16.95	16.86	16.77	16.68	16.59	16.50
10	16.42	16.33	16.24	16.15	16.06	15.97	15.88	15.79	15.70	15.62
20	15.53	15.44	15.35	15.26	15.17	15.08	14.99	14.90	14.82	14.73
30	14.64	14.55	14.46	14.37	14.28	14.19	14.10	14.02	13.93	13.84
40	13.75	13.66	13.57	13.48	13.39	13.30	13.22	13.13	13.04	12.95
50	12.86	12.77	12.68	12.59	12.50	12.42	12.33	12.24	12.15	12.06
60	11.97	11.88	11.79	11.70	11.62	11.53	11.44	11.35	11.26	11.17
70	11.08	10.99	10.90	10.82	10.73	10.64	10.55	10.46	10.37	10.28
80	10.19	10.10	10.02	9.93	9.84	9.75	9.66	9.57	9.48	9.39
90	9.30	9.22	9.13	9.04	8.95	8.86	8.77	8.68	8.59	8.50
100	8.42									

Conclusions

On the basis of hull scale norms in the field hockey skills of dribbling, dribble and hit, dribble and push the following conclusions were drawn.

In field hockey dribbling ability test as per the qualitative grading by the constructed norms it was seen that 3 players out of the 500 were low performer, 31 players were found to be in low average, 179 were average, 254 were seen in the above average group, 30 were found to be good and 3 were seen in the outstanding in performing the dribbling skill.

In field hockey dribble and hitting ability test as per the qualitative grading by the constructed norms it was seen that 4 players out of the 500 were low performer, 41 players were found to be in low average, 157 were average, 286 were seen in the above average group, 8 were found to be good and 4 were seen in the outstanding in performing the dribble and hit skill.

In field hockey dribble and pushing ability test as per the qualitative grading by the constructed norms it was seen that 1 player out of the 500 were low performer, 23 players were found to be in low average, 199 were average, 257 were seen in the above average group, 16 were found to be good and 4 were seen in the outstanding in performing the dribble and pushing skill.

References

*1. Aziz AR***,** et al., (2000), "The relationship between maximal oxygen uptake and repeated sprint performance indices in field hockey and soccer players", ***J Sports Med Phys Fitness.***, *40*, pp.*195*–200.

2. Hughes, M.D. and Barlett, M. (2002), "The use of performance indicators in performance analysis", ***Journal of Sports Sciences***, **20**, pp.739-754.

3. Janelle, C.M. and Hillman, C.H. (2003), "Expert performance in sport Current perspectives and critical issues", ***In Expert performance in sports: Advances in research on sport expertise*** (edited by J.L. Starkes and 4. K.A.

Ericsson), pp. 19-47. Champaign, IL: Human Kinetics.

5. Reilly, T. and Bretherton, S. (1986), "Multivariate analysis of fitness of female field hockey players", ***In Perspectives in kinanthropometry,*** (edited by J.A.P. Day), pp. 135-142. Champaign, IL: Human Kinetics.

6. Reilly T and Holmes M. (1983), "A preliminary analysis of selected soccer skills", ***Phys Educ Rev.***, *6*, pp.*64*–71.

7. Reilly, T. and Seaton, A. (1990), "Physiological strain unique to field hockey", ***The Journal of Sports Medicine and Physical Fitness***, **30**, pp.142-146.