

Development of a Test Instrument for Basic Technical Skills of Playing Handball

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Abstract

A series of tests of special technical skills in handball games, for handball players that match the characteristics in actual handball training and matches. The norms of passing and catching tests carried out with wall media for 30 seconds with the acquisition of values 15 times down the category Less Once, 16-25 times the category is less, 26-55 times the category is moderate / sufficient, 56-65 times the category is good, and 66 times and above the category is very good. Within a distance of 7 meters shooting to the goal obtained target target 0 then the category is very less, target target point 1 category is less, target target point 2 is moderate, target target point 3 is good, and target target point 4 is very good. While the speed of the shot time obtained time above 0.58 seconds is classified as a very poor category, time 0.52-0.57 seconds is classified as a poor category, time 0.38-0.51 seconds is classified as moderate, time 0.30-0.35 seconds is classified as a good category, and time under 0.29 seconds is classified as a very good category. In a distance of 9 meters shooting to the goal obtained target target 0 then the category is very less, target target point 1 category is less, target target point 2 is moderate, target target point 3 is good, and target target point 4 is very good. While the speed of the shot time obtained time above 0.61 seconds is classified as a very poor category, time 0.56-0.6 seconds is classified as a poor category, time 0.42-0.55 seconds is classified as moderate, time 0.37-0.41 seconds is classified as a good category, and time below 0.36 seconds is classified as a very good category. Based on the data that has been analyzed, it can be concluded as follows: 1. The series of passing and catching technique tests using wall media is carried out for 30 seconds. 2. The series of shooting technique tests for bolatangan games consists of 3 types of tests that cannot be separated from one another and are a single unit. 3. The types of shooting technique skill tests selected to be a series of technical tests in bolatangan games: a) Fly Shoot tests carried out at a distance of 7 and 9 meters in the middle. b) Standing Shoot tests carried out at a distance of 7 and 9 meters right in the middle position straight with the goalkeeper. c) Side Shoot tests carried out with a distance of 7 and 9 meters with a position in the middle straight with the goalkeeper.

Keywords: *passing and catching test, goal shooting test, test norms.*

INTRODUCTION

The current handball coaching pattern in Indonesia is still lagging behind other countries, the lack of competition is a delay in the development of handball. In addition, it is important to conduct measurement tests both physically and technically accurate in coaching players so that they can achieve the desired target. Besides physical exercises, coaches always need to develop technical exercises. Because only players who have good technical skills are able to practice and play optimally, because only players who practice and play optimally allow optimal achievement (Wiranti, 2012) . Coaches who have not really mastered the components of technical skills by handball players in order to play optimally. Evaluation of each of these aspects must help find out various aspects.

According to Susanto(2017) basically the handball game consists of several basic techniques such as *warming-up, attacking, defencing, and fast break exercise* but in the game only three basic techniques are most often used, including; (1) *dribbling* technique, which is the player's effort to bring the ball close to the opponent's defense area by bouncing the ball on the floor, (2) *passing* technique, which is an effort to give the ball to a friend using one or two hands, (3) *shooting* technique or shooting the ball into the goal, (4) *catching* technique, which is an effort to catch the ball using one or two hands, (5) *feinting* technique, which is an effort to avoid or pass opposing players.

The needs analysis in the sport of handball consists of actions that help overcome problems in the sport of handball. Development of Basic Technical Skills Test Instruments Playing Handball is carried out to overcome problems, and help increase training capacity.

METHOD

This research will develop the types of general technical skill tests into a series of special technical skill tests in handball games, for handball players that match the characteristics in actual handball training and matches.

The type of research used in this study is development research and not descriptive research. Because the purpose of descriptive research is only to make a

description, a systematic, factual and accurate description of the facts, properties and relationships between the phenomena being investigated. While development research is a process of steps to develop a new product or improve existing products, which can be accounted for (Richey & Klein, 2005) .

So in this study will develop the types of general technical skill tests into a series of special technical skill tests in handball games, for handball players that match the characteristics in actual handball training and matches.

Type of Research

The first step in this study is to analyze the technical and technical components of handball games. These components include passing, dribbling, and shooting. The technical components include passing, catching, gripping, and shooting. The second step is to develop a handball game using the rules and techniques given in the first step. The third step involves adapting, memorizing, and adjusting the rules to suit the needs of handball players. The fourth step is to analyze the data collected from the first step, using purposive sampling and Pearson correlation analysis. The data collected is then analyzed to determine the best handball game that matches the technique components. The results are then compared with the best handball game to determine the best handball game.

RESULTS

From the discussions with experts conducted by researchers, the following results were obtained:

1. The basic technical skill components needed in Handball players are,
 - a. *Passing and catching* test
 - b. Shooting test
2. The types of tests used to measure the basic technical skill components of playing Handball, are

Table 1. Components of Basic Technical Skills for Playing Handball

No	Basic Techniques	Basic Technique Components	Test Type Composed Technique
1	<i>Passing dan Catching</i>	Free hand passing Two-handed catching	Wall Passing Modification Distance 2 and 3 meters

2	<i>Shooting</i>	Standing throw shoot Jump shoot Flying shoot Side shoot Dive shoot Reverse shoot	Modified Shooting Distance 7 and 9 meters from 3 - 5 in front of the goal
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Table 2. *Passing and Catching Test Data*

		2 Meter	3 Meter	6 Meter	Nilai Total
N		30	30	30	30
Normal Parameters ^{a,b}	Mean	50.0333	50.0667	50.1333	149.9000
	Std. Deviation	10.12162	10.03763	10.10201	21.99114
Most Extreme Differences	Absolute Positive	.156	.148	.125	.107
	Negative	.146	.148	.125	.107
		-.156	-.107	-.080	-.094
Kolmogorov-Smirnov Z		.852	.812	.687	.586
Asymp. Sig. (2-tailed)		.462	.525	.733	.882

Based on the table above, it can be seen that the Kolmogorov Smirnov (K- S) value, for a distance of 2 meters is 0.852 with a probability value of 0.462 (Asymp. Sig. (2- tailed), the K-S value for a distance of 3 meters is 0.812 with a probability value of 0.525 (Asymp. Sig. (2-tailed), and the K-S value for a distance of 6 meters is 0.687 with a probability value of 0.733 (Asymp. Sig. (2-tailed).

Table 3. Calculation results of shooting test types

		Standing Shoot 1	Standing Shoot 2
Standing Shoot 1	Pearson Correlation	1	.911**
	Sig. (2-tailed)		.000
	N	42	42
Standing Shoot 2	Pearson Correlation	.911**	1
	Sig. (2-tailed)	.000	
	N	42	42
		Flying Shoot 1	Side Shoot 2
Flying Shoot 1	Pearson Correlation	1	.921**
	Sig. (2-tailed)		.000
	N	42	42
Flying Shoot 2	Pearson Correlation	.921**	1

		Sig. (2-tailed)	.000
		N	42
			42
		Side Shoot 1	Side Shoot 2
Side Shoot 1	Pearson Correlation	1	.905**
	Sig. (2-tailed)		.000
	N	42	42
Side Shoot 2	Pearson Correlation	.905**	1
	Sig. (2-tailed)	.000	
	N	42	42
	Sig. (2-tailed)		.000
	N	42	42

Based on the table above, it can be seen that the correlation value of the three types of technical skills tests playing bolatangan has a significant correlation, so the three types of technical skills tests playing bolatangan with Standing Shoot (STS) 1 and 2 (value $r = 911$), Fly Shoot (FLS) 1 and 2 (value $r = 921$), and Side Shoot (SDS) 1 and 2 (value $r = 905$) have a significant validity value, so they can be used to measure shooting skills playing bolatangan. However, of the three types of bolatangan playing skills tests that have the highest validity value (r) is the first type of skill test is Fly Shoot (FLS) with a value of ($r = 921$), second Standing Shoot (STS) with a value of ($r = 911$), third Side Shoot (SDS) with a value of ($r = 905$),. Thus the three tests can represent the skill test shooting techniques playing ballatangan.

DISCUSSION

After getting the types of basic technical skills tests for playing handball, the next step is to make Test Norms. With consideration of practicality, the types of tests selected henceforth are named as follows. 1) *passing and catching* test, 2) *Fly Shoot* test, 3) *Standing Shoot* test, 4) *Side Shoot* test.

Table 4. Selected types of technical skill tests

No	Komponen Teknik Dasar	Jenis Tes	V	R
1	<i>Passing and Catching</i> Jarak 2 meter	Catch Throw Test	0.933	0.986
2	<i>Fly Shoot</i>	Goal Shot Test	1.002	0.921
3	<i>Standing Shoot</i>		0.879	0.911

4	<i>Side Shoot</i>	0.814	0.905
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This study focuses on the statistical analysis of the level of technical skills in playing handball, using a five-point scale to measure the effectiveness of these skills, which are categorized as: Good, Bad, Medium/Sufficient, Deficient, and Very Deficient.

Table 5. 2-meter *Passing and Catching* Test Norms

Rentan Skor	Kategori
66 - >	Baik Sekali
56 – 65	Baik
26 – 55	Sedang/Cukup
16 – 25	Kurang
< - 15	Kurang Sekali

Table 6. 7-meter *Passing and Catching* Test Norms

SHOOTING 7 METER			
Point			Kriteria
0			Kurang Sekali
1			Kurang
2			Sedang
3			Baik
4			Baik Sekali
Waktu			Kriteria
0.58	-	\geq	Kurang Sekali
0.52	-	0.57	Kurang
0.36	-	0.51	Sedang
0.30	-	0.35	Baik
\leq	-	0.29	Baik Sekali

Table 7. 9-meter *Passing and Catching* Test Norms

SHOOTING 9 METER			
Point			Kriteria
0			Kurang Sekali
1			Kurang
2			Sedang
3			Baik
4			Baik Sekali
Waktu			Kriteria
0.61	-	\geq	Kurang Sekali

0.56	-	0.6	Kurang
0.42	-	0.55	Sedang
0.37	-	0.41	Baik
≤	-	0.36	Baik Sekali

CONCLUSION

Based on the data that has been analyzed and as described in Chapter IV, in general, this research can be concluded as follows:

1. The series of passing and catching technique tests using the wall media were carried out for 30 seconds.
2. The shooting technique test series of ballatangan games consists of 3 types of tests that cannot be separated from one another and are a single unit.
3. The types of shooting technique skill tests that were selected became a series of technical tests in the ball game:
 - a) *Fly Shoot tests were conducted at 7 and 9 meters in the center.*
 - b) *Standing Shoot tests are carried out at a distance of 7 and 9 meters right in the middle position straight with the goalkeeper.*
 - c) *Side Shoot tests are carried out with a distance of 7 and 9 meters with a position in the middle straight with the goalkeeper.*

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