



Test MFT Hockey Women Athletes in Central Java Facing PON XIX West Java Year 2016

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History Article

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Abstract

The aim of the research was to know the physical condition of female Hockey athletes of Central Java especially in cardio capacity endurance to participate in PON XIX West Java, 2016. The type of this research was quantitative descriptive, with 22 female athletes as the population. The technique in data collection used was population research that is all samples in this study were taken all. The sampling method used was quantitative technique with descriptive approach. The result of this research was the average physical condition especially in endurance was tested using the MFT in the degrees of being. It was proven that the average VO₂max of female Hockey athletes of Central Java was 39.6 ml/kg/min or 8.5 in MSFT reverse. The conclusion was the physical condition of the female Hockey athletes of Central Java who would attend PON XIX 2016 in West Java was in moderate level.

How to Cite

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INTRODUCTION

Hockey has proven to be one of the most ancient sports. The relief of Hockey which was drawn as game scene with sticks and balls was on the cemetery wall in the Valley of the King near Bani Hasan in Ancient Egypt. Today, in many remote places in Egypt, this ancient game is still played with the sticks made from the palm and hardball. The name is also similar, that is "hoksa". From Egypt, "hoksa" spreaded to Arab tribes and other parts of North Africa, as well as possibly via train to Greece. The Arabs call it "bahwa" and it was played with wooden balls. The Bahuka tribe in Africa calls it "thepu" and it is played with a rubber ball.

In today's modern era, hockey is growing. In Malaysia, this sport is well-known by the society. It is proven by Sultan Azlah Syah hockey championship world cup is held annually and Malaysia currently got Hockey ranked 14 in the world. In Indonesia, although Hockey is unwell-known by the society like volleyball, soccer, but in the current development, it is pretty exciting. It is proven that Hockey was being contested in PON XVII 2008 in Kalimantan. In PON XVIII 2012 in Riau, hockey was failed to be contested because host was not ready yet to prepare the facilities and infrastructures especially the Hockey field. In 2013, Indonesia sent Hockey national team in 27th Sea Games in Myanmar and Indonesia chosed female sector to be participated in 28th Sea Games in 2015 in Singapore. While in PON XIX 2016, in West Java, Hockey was contested to get 4 gold medals, 2 gold medals for Indoor Hockey and 2 gold medals for Outdoor Hockey. These indicate that Hockey still has existence in Indonesia.

In Central Java the competition in Hockey is still low compared to East Java, West Java and DKI Jakarta. It is based on the area that has built this sport still minimal, there are 1. Semarang City, 2. Kendal Regency, 3. Kudus Regency, 4. Demak Regency, 5. Jepara Regency, 6. Temanggung Regency, 7. Kebumen Regency. The players in these seven areas in Central Java are mostly teenagers. For the senior age at this time, the center of Hockey coaching is still concentrated in the Universitas Negeri Semarang in Semarang City.

In November 2015, to participate in Pre-PON XIX in Jakarta and Bandung, Central Java Province had passed one field number for female category and 2 numbers for indoor category. In order to participate in PON XIX, the Central Java Hockey team had been doing Training Center (TC) at Universitas Negeri Semarang (UNNES)

in January with almost of all players were alumni of FIK students and some were high school students. This was the best achievement of Central Java because the team could pass in 2 numbers with 3 categories at once in Pre-PON round. In conducting Training Center (TC) from January to September ahead of PON XIX, Hockey coach team of Central Java, especially the female team had been doing physical tests, eventhough KONI of Central Java did the initial test.

The Essence of Hockey

Hockey is a sport game performed by men and women using a bat and ball, it is almost the same with football and futsal. There are two numbers in Hockey, those are Outdoor Hockey and Indoor Hockey, each has different rules, there are limitations in the use of techniques. The number of Outdoor Hockey players is 18 with 11 players who are in the field. The length of the field is 91.40 m and the width is 55 m and in front of the goal, there is a line that resembles the letter D with a length of 23 m. While the number of Indoor Hockey is consisting of 6 people who play in the field with a total of one team consisting of 12 players and the size of the field is 40 m of length and 20 m of width. The use of reflected boards is the distinctive sign on the side of the field so that the ball can be reflected like in a carrom game.

The Essence of MFT

Multi Stage Fitness Test (MSFT) is a way to gather information to make performance evaluations and decisions specifically in measuring physical fitness related to a person's physical condition. The purpose of MSFT was developed by Leger and Lambert (1982), that was to monitor the development of the maximum Aerobic Capacity of the athletes. This test is good for "game players" because their natural movements are so. But because the tests have to turn and spin rapidly, it may be less suitable for rowing athletes, runners and cycling athletes. Facilities which are required in performing this test are as follows:

1. The surface of the ground should be flat and not slippery
2. Distance meter of 30 cm
3. Cone as the marker
4. Tape or CD MSFT
5. Tape recorder or CD Player
6. Book to take notes
7. Assistant

How To Do MSFT

It requires the athlete to run at a distance

of 20 m each beep of recording. The athlete shall show one of his legs outside the 20 m marker at the end of 20 m of each shuttle or reversal. Here are the procedures for performing the MSFT test as follows:

1. Athlete warms up for 20 minutes.
2. Assistant measures the distance and mark with cone in each end.
3. Assistant plays CDs and athlete starts running tests.
4. When the athlete arrives before the next beep, then he must wait for the beep again before running.
5. If the athlete fails to reach the marker, he is given 2 more chances before being expelled.
6. The assistant records the level and number of stages performed by the athlete perfectly before he is expelled.
7. The assessment is Maximum Aerobic Capacity of the athlete. It can be seen in MSFT table using level and stage that he did successfully.
8. The following is the normative data for female (Heywood 2006), values in ml/kg/min:

Table 1. Normative Data For Female

Age	Poor	Fair	Good	Excellent	Superior
20-29	< 36	36-39	40-43	44-49	> 49
30-39	< 34	34-36	37-40	41-45	> 45
40-49	< 32	32-34	35-38	39-44	> 44
50-59	< 25	25-28	29-30	31-34	> 34
60-69	< 26	26-28	29-31	32-35	> 35
70-79	< 24	24-26	27-29	30-35	> 35

METHODS

The type of research used in this study was quantitative research with a descriptive approach. The variable in this research was single variable that was MFT test of Central Java Hockey athletes. The population in this study was Central Java female athletes participated in PELATDA in 2016, there were 23 females. The data collection instruments in this research was using MFT (Multi Fitness Test). While the data analysis technique in this research was analyzed by calculation of the increase of each test result and it would be described in the table.

Data Collection Research Technique

The data would be obtained through direct tests and carried out periodically and had been programmed and recorded in the training program conducted by the trainer team. To calcula-

te fitness norm, the assessment guidelines from Kenneth H. Copper was used as in Table 2.

Table 2. VO2Max Norms

Consumption Oxygen VO2Max	Fitness Category
28.0' or less	Very Poor
28.1 s/d 34	Poor
34.1 s/d 42	Fair
42.1 s/d 52	Good
52.1 or more	Excellent

Table 3. MFT (MultiStage Fitness Test) Guideline

Description	Level	Reverse	VO ₂ max	Writing
LOWER LIMIT	1	1	21,3	1.1
UPPER LIMIT	21	2	85.2	21.2

The percent of final result used formula below ;

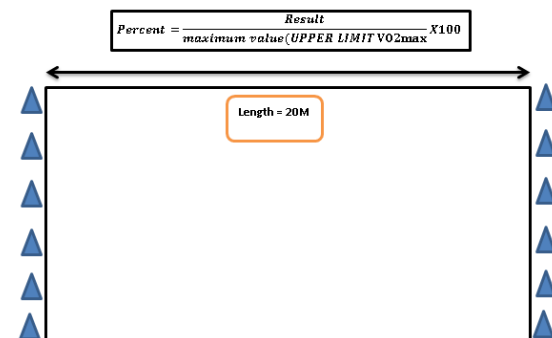


Figure 1. The MFT field

RESULT AND DISCUSSION

This study aimed to determine the physical condition of female Hockey athletes of Central Java to participate in PON XIX 2016. The results was described in Table 4.

After viewing the table of the MFT test results above, it showed that the implementation of the test 1 to 3 every 2 months had increased slowly, by referring to the criteria and classification of the results that can be reported that the average of first MFT was 39.4 ml/kg/min or in the average second MFT achieved by all athletes was 39.7 ml/kg/min or it was in moderate level. Whereas in the 3rd MFT, it was 39.8 ml/kg/min or it was also in moderate level. By looking at the results

Table 4. Test Result of Central Java Hockey athletes

NAME	MFT I, 12th MARCH 2016	RE- SULT	MFT II, 3rd MAY 2016	RE- SULT	MFT III, 2nd JUNE 2016	RE- SULT	Average	Percent
PSR	8.1	40.2	8.4	41.1	8.1	40.2	40.5	47.54
KS	6.1	36.4	6.3	33.9	6.8	35.7	35.3	41.47
MV	8.1	40.2	7.1	39.9	7.4	37.8	39.3	46.13
DABPB	8.2	40.5	7.8	39.2	7.5	38.1	39.3	46.09
AEY	7.4	37.8	8.1	40.2	8.5	41.4	39.8	46.71
AA	7.7	38.8	8.1	40.2	7.8	39.2	39.4	46.24
TW	9.1	43.6	8.7	42.1	8.7	42.1	42.6	50.00
SA	7.1	36.7	7.9	39.5	7.3	37.4	37.9	44.44
LFP	7.8	39.2	7.1	36.7	6.3	33.9	36.6	42.96
HA	8.11	43.3	8.1	43	8.9	42.7	43.0	50.47
PLP	8.4	41.1	6.3	33.9	6.1	33.2	36.1	42.33
ZDA	8.11	43.3	8.4	41.1	8.5	41.4	41.9	49.22
RGA	8.6	41.8	10.2	47.4	9.4	44.5	44.6	52.31
RA	7.1	39.9	7.4	37.8	7.2	37.1	38.3	44.91
NNS	9.6	45.2	10.2	47.4	9.4	44.5	45.7	53.64
AA	8.5	41.4	7.1	39.9	7.9	39.5	40.3	47.26
WAS	8.4	41.1	8.8	42.4	9.2	43.9	42.5	49.84
DR	7.7	38.8	8.1	43	8.6	41.8	41.2	48.36
ECN	8.5	41.4	9.5	44.8	9.8	45.9	44.0	51.68
RO	4.3	27.2	4.5	27.9	7.2	37.1	30.7	36.07
NH	6.9	36	7.4	37.8	7.1	39.9	37.9	44.48
WR	5.7	32.1	6.4	34.3	7.4	37.8	34.7	40.77
AVERAGE		39.4		39.7		39.8	39.6	46,50

of the overall percentage of MFT that had been done by female Hockey athletes of Central Java, although the expected results had not been maximized but the female Hockey teams of Central Java in indoor number could get the rank 3 and rank 7 in field number.

CONCLUSIONS

The results of the research analysis showed that there was an increase in the physical condition of the female Hockey athletes of Central Java who had not been maximal in facing PON XIX, but some athletes also experienced a physical decline in the third test. It can be seen in the table above. Based on direct monitoring from the researcher the decline was happening due to several things as follows: The athletes still had

some lectures everyday because they did not get permission to leave the class from the lecturer; Irregular eating habit; Some athletes who were also in indoor numbers still practiced during the night, it made the sleep patterns changed, it also caused the target and intensity of the exercise changed and required further adaptation; Due to delay in supplementation, some athletes were over training so it was causing pain; Healing of injury during TC, injured athletes required passive rest, so they could not attend some materials in physical training.

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