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## ***Analysis of the physical condition test results of east java cricket PON BK athletes***

**Djalu Pratama<sup>1</sup>, Imam Hariadi<sup>2\*</sup>**

*<sup>1,2</sup> Faculty Sports Science , Universitas Negeri Malang, Jl. Semarang No. 5 Malang, East Java, Indonesia*

### **Abstract**

This study aims to analyze the physical condition of cricket athletes from East Java who participated in the PON Qualification Round, based on eight components of physical fitness. The research employed a descriptive quantitative approach involving 31 athletes (16 male and 15 female), measuring eight key physical fitness components: abdominal muscle strength, leg power, upper arm strength, lower back strength, upper arm endurance, abdominal endurance, flexibility, and cardiorespiratory endurance. The results showed that male athletes demonstrated good lower back strength and abdominal endurance (60%), but had weaknesses in speed and upper arm strength (70% fell into the moderate-poor category). Female athletes exhibited widespread deficiencies, particularly in the chin-up and single-leg squat tests, with 80% scoring in the low category. These suboptimal physical conditions significantly affect technical performance in cricket, including throwing, sprinting, and fielding, which demand strength, speed, and endurance. The findings suggest the need for a more targeted and specific physical training program to support the technical performance of athletes during competition.

**Keywords:** Strength, Endurance, Speed, Power, Cricket.

### ***INTRODUCTION***

Nowaday the cricket sports show significant developments in Indonesia. In general national cricket starts competed in a way official in National Sports Week (PON) event since PON XIX in 2016 which was held in the Province West Java. However Thus, in the East Java region, sports This new get confession official and under shade Committee Indonesian National Sports Committee (KONI) East Java since 2022. Although Still classified as new branch sport This has welcomed with enthusiastic by the community, which is shown by the emergence of a number of contingent from cities and districts in the East Java region. This reflect existence potential big for development of cricket in the region mentioned, which is necessary supported through coaching programs athlete in a way systematic, including strengthening aspect condition physique as one of the component main in effort improvement performance.

The sport of cricket has demands complex and unrelated physical lost challenge compared to branch sport others. In every match, cricket athletes are required For play in

relative duration long even can ongoing during a few hours with intensity volatile game (Lim et al., 2023; Ward, 2016). Condition the demand Power stand tall physique as well as stable concentration throughout match (Weldon, Duncan, Turner, Christie, & Pang, 2021). A hitter *batsman* need reaction fast, strong muscle good arms and shoulders, as well coordination optimal (Mathankar, S, Maney, & Prajapati, 2023). While that, player bowler sued For own strength core and body muscles part sufficient bottom to produce throw fast and accurate in a way repetitive in term long time (Anand, Khanna, Chorsiya, & Rana, 2017). Therefore that, condition optimal physical condition is one of the component crucial determining factor quality performance athlete in face competition.

Although various study has identify characteristics ideal physique required in cricket game, research about condition physique Cricket athletes in Indonesia, especially at the regional level such as East Java, are still very limited. Most available studies Still focus on aspects technique (Hidayatulloh & Susanto, 2022; Muhammad & Kusumawati, 2022; Putra, Murniati, & Yanto, 2025) temporary in -depth study about profile physiology and fitness cricket athletes in context coaching performance national Not yet Lots done. Moreover again, in face half National Sports Week (PON) qualifications, data regarding readiness physique athletes are very important For made into base in preparation of training programs, selection, and competitive strategies. Without existence mapping condition physique in a way scientific and standardized, coaching process will nature speculative and less directed.

## **METHOD**

Design study This is study descriptive quantitative with approach surveys that aim For give description about condition physique athlete East Java cricket which will follow half National Sports Week (PON) qualifications. Subject in study This is all over registered East Java cricket athletes as participant half 2025 PON qualification, with a total of 31 athletes, consisting of of 16 athletes sons and 15 athletes princess. Selection technique sample use total sampling method, with criteria subject active follow a training program official and declared Healthy For follow test fitness.

Data collection was carried out through a series test fitness physical consisting of of 9 instrument items, namely : *Sit Up* (strength) muscle stomach), 20 meter *sprint* (speed), *Vertical Jump* (leg power), *Chin Up* (strength) muscle arm upper and back), *Sit and Reach* (flexibility), *Multi-Stage Fitness Test / Bleep Test* (strength) stand cardiovascular), *Single Leg Squat* (balance and strength) legs), *Hover / Plank Hold* (power stand core muscles), and *Superman Back Hold* (strength muscle back lower).

Test implemented during One day in the field exercise East Java Cricket official with supervision direct from researchers and trainers. Before test started, all athlete follow session warm-up and briefing regarding procedure implementation test For ensure validity and security during data collection. Result data test analyzed in a way quantitative use tabulation distribution frequency and percentage, with help device soft *Microsoft Excel*. Measurement results classified to in five categories level fitness, namely : very good, good, moderate, poor, and very poor, based on established norms determined for each test item.

## RESULTS AND DISCUSSION

### Results

Test results condition physical activity performed to athlete sons and daughters of the East Java PON Cricket BK who performed varying results. The data presented is from implementation test on each components. The results obtained from test furthermore processed and analyzed before finally served in formal tables and their explanations. Here is data analysis from test component *Sit Ups*, *20 meter Sprint*, *Russian Twist*,

**Table 1.** Test results condition physique athlete East Java PON Cricket BK son

Indicator	Norm	F	Percentage
Sit Up	> 45	1	6
	36-44	5	32
	26-35	9	56
	15-25	1	6
	< 15	0	0
Sprint	< 2.31	0	0
	2.32-2.76	0	0
	2.77-3.16	8	50
	> 3.17	8	50
Chin up	> 21	0	0
	14-20	2	13
	8-13	7	44
	5-7	2	13
	< 4	5	32
Vertical jump	> 68.5	6	38
	62.5-68.4	4	24
	< 62.4	6	38
Single leg squat	> 27	0	0
	24-27	0	0
	20-23	0	0
	16-19	15	93
	< 16	1	7
Hover	> 6	0	0
	4-6	0	0
	2-4	10	63
	1-2	6	37
	< 1	0	0
Superman Black Hold	> 40	13	81
	27-39	3	19
	19-26	0	0
	11-18	0	0
	< 10	0	0

Indicator	Norm	F	Percentage
Sit and Reach	> 19	8	50
	13-18	5	32
	< 12	3	18
Multi Fitness Stage	> 52.6	0	0
	49.3-52.5	0	0
	43.9-48.7	6	36
	39.9-43.3	5	32
	< 39.2	5	32

Based on Table 1. Measurement results condition physique against 16 athletes East Java cricket son shows enough variety significant in each component fitness. On the indicators strength and power stand muscle stomach *sit ups*, the majority athletes (56%) are in the category moderate (26–35 repetitions), and only 6% achieved very good category (>45 repetitions). Test results speed (20 meter sprint) shows less than optimal performance, with all over athlete is in the category Enough until less, without someone recorded it best sprint time. On the test strength arm top and back *chin up*, 44% of athletes is at in category enough, while 32% are in very poor category (<4 repetitions), indicating existence need For improvement strength body part above. Muscle power legs *vertical jump* show sufficient distribution balanced, with 38% of athletes in very good category and 38% others in category less, reflect inequality between individuals. While that, strength and balance legs *single leg squat* also shows imbalance, with 93% of athletes reach category not enough.

Test component other indicate the area that needs attention serious. Endurance *hover core muscles* classified as good in part big athletes, with 63% lasting 4–6 minutes, however Still there are 37% who only capable lasts 1–2 minutes. The most amazing condition seen on the test *Superman back hold* strength muscle back below, where 81% of athletes is at in very good category (>40 repetitions), indicates excess common to groups muscle said. On the test flexibility (sit and reach), 50% of athletes is at in category good (>19 cm), but 18% still in category less. Meanwhile Power stand cardiovascular *multi-stage fitness test* show that majority athlete is in the category currently until less, without none of them reached the very good level. Based on results said, can concluded that although strength and balance legs become strength the main athletes, other aspects such as strength back bottom and power stand aerobics need get priority in the coaching program physique to front.

**Table 2.** Test results condition physique athlete East Java PON Cricket BK daughter

Indicator	Norm	F	Percentage
Sit Up	>40	1	7
	31-39	3	20
	21-30	7	46
	11-20	3	20
	<11	1	7
Sprint	< 3.03	0	0

Indicator	Norm	F	Percentage
	3.04-3.35	0	0
	3.36-3.64	3	20
	> 3.65	12	80
Chin up	> 15	0	0
	10-14	0	0
	5-9	0	0
	2-4	2	13
	< 1	13	87
Vertical jump	> 58	0	0
	50-57	2	14
	< 49	13	86
Single leg squat	> 21	0	0
	13-21	0	0
	9-12	0	0
	5-8	8	54
	< 4	7	46
Hover	> 6	0	0
	4-6	0	0
	2-4	15	100
	1-2	0	0
	< 1	0	0
Superman Black Hold	> 40	15	100
	27-39	0	0
	19-26	0	0
	11-18	0	0
	< 10	0	0
Sit and Reach	> 22	3	20
	21-26	2	13
	< 20	10	67
Multi Fitness Stage	> 50.2	0	0
	45.2-49.4	0	0
	42.4-44.9	0	0
	36.5-41.9	3	20
	< 35.7	12	80

Based on results measurements in table 2. Against 15 athletes East Java cricket princess, in general can concluded that part big component condition physique Still is at in category low until moderate. On the test strength muscle stomach (sit up), majority athletes (46%) are in category moderate, and only 7% achieved very good category. Test speed (20 meter sprint) shows that 80% of athletes record time above 3.65 seconds, which is classified as low. Similarly, the results test strength muscle arm top and back *chin up* indicates weakness significant, with 87% of athletes only capable do One repetition or less. Condition similar results were also seen in muscle power tests. legs *vertical jump*, where 86% of athletes is at in category less, as well as on the single leg squat, with 100% of athletes is at in very less and less categories. Meanwhile that, power stand core muscles through hover test shows results moderate, with all over athlete stay in range time 2–4 minutes (category currently).

Aspect condition physique other show similar tendencies. Test strength back lower through superman back hold produces lowest yield, where all athlete record time not

enough of 10 seconds, which shows weakness strength muscle back lower in a way comprehensive. Flexibility through test *sit and reach* is also included low, with 67% of athletes is at in very poor category. As for the results test Power stand cardiovascular through *multi-stage fitness test* show that 80% of athletes is at a very low level (<35.7), while the rest (20%) are in category less. Based on findings this, can concluded that condition physique athlete daughter Still Far from optimal to face demands cricket game that requires Power stand height, strength good muscles, as well as efficient mobility. Therefore that, is necessary exercise program intervention more physical targeted and specific to improve capacity performance athlete in a way comprehensive.

### **Discussion**

Measurement results to condition physique East Java cricket athletes show existence disparity performance sufficient physical striking between group sons and daughters, and between component fitness. Findings This describe that although part athlete show capacity adequate physical aspects certain, many component base fitness that is still not optimal for support performance in branch cricket sport.

Aspect condition physique East Java male cricket athletes show existence inequality striking between components main fitness. Although strength muscle back bottom and power stand core muscles are located in category Good until Very good signify postural stability and strength that supports moment *batting* or *fielding* in position bow in long time but weakness in the component speed, strength arm top and back, and Power stand cardiovascular is worrying findings. Likewise in athletes Woman part big component fitness physical is in the category low until medium. Components strength muscle stomach, muscle power legs, strength back below, and flexibility show weakness dominant. In terms of In particular, the chin up and single leg squat tests show very low yield almost everywhere respondents. Conditions ideal physique of a person athlete cricket covers Power stand aerobics For maintain stamina during match, capacity anaerobic as well as required speed in do repeated sprints with intensity height, strength and power play a role important in batting, bowling, and fielding activities, as well as agility and coordination that supports ability do change direction and response fast in the field. All aspect the strengthened with composition balanced body mass muscle awake with low fat content and supported by flexibility as well as optimal reaction to reduce risk injury at a time increase effectiveness skills technical (Weldon, Clarke, Pote, & Bishop, 2021).

In fact, cricket is a very demanding sport. ability multidimensional physical, namely combination strength explosive and speed reaction, power stand as well as mobility body in a way overall (Breese, 2024; Pote, King, & Christie, 2020) In the context of game, cricket

athletes must capable produce explosion power moment do a distance sprint short For chasing the ball or scoring runs, which demands strength muscle legs and speed optimal reaction. In addition, the power muscle arms and shoulders holding role important in skills *throwing* and *batting* (Andika, 2022), because both of them need power size, accuracy, and control precise movement in time very short reaction. Not less important, capacity aerobic and anaerobic also become aspect crucial, considering cricket match can ongoing in quite a long duration, even reach a few hours to all day full (Sarmah, Bordoloi, Narvariya, & Thapa, 2025).

Condition physical deficiencies competent Of course will impact on technique, because technique effective *bowling* need core strength and flexibility bone behind (Jamaluddin, Susanto, & Mustar, 2020) For guard stability posture and accuracy movement during *delivery phase*, as well as strength explosive from muscle legs For generate enough momentum moment off runway (Ali & Yanto, 2022). If the power muscle back lower and core muscles are weak, then stability body moment throw will disturbed, which can reduce speed and accuracy of the ball. Likewise, weakness in the muscles arms and shoulders will be greatly affected technique *throwing* and *batting* (Cronin et al., 2016; Kurnia, Lesmana, Yendrizal, & Mardela, 2020), because athlete No capable control direction and speed of the ball optimally. In the context of fielding, the reaction slow consequence speed and coordination the lower body will also lower effectiveness catch and speed run towards the ball.

### **CONCLUSION**

Based on results measurement condition physique East Java cricket athletes, good son and princess, can concluded that in a way general there is inequality in development aspects fitness essential physical for optimal performance in cricket sport. Athletes son show strength muscle back bottom and power stand core muscles that are classified as Good to very good, but weakness striking seen in the aspect speed, strength arm top and back, and Power stand cardiovascular. On the other hand, athletes daughter show more results worrying, with majority component condition physique like strength muscle legs, flexibility, strength muscle arm, up to capacity aerobics is at in category low to very low. Findings This show that capacity supportive physical movement explosive, efficient mobility, as well as ability endure in duration game long Not yet develop optimally. Therefore that, a training program is needed more physical directed and specific so that the ability physique athlete can develop in accordance demands branch cricket sport.

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