

Development of Norms of Specific Physical Fitness Test for Male Cricket Players

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Abstract – The purpose of the study was to development of specific physical fitness norms for cricket players. The Study was delimited to 500 randomly selected state level male cricket players from central zone. Pull ups Test for measuring Arm Strength, Norms of Pull ups clearly shows that 100 points will be awarded to that subject who will score 36 or more Pull ups and 0 points will be awarded to that subject who will score 4 or less Pull ups. In Standing Broad Jump Test for measuring Leg Strength, Norms of Standing Broad Jump Test clearly shows that 100 points will be awarded to that subject who will jump 3.07 meter or more and 0 points will be awarded to that subject who will jump 1.87 meter or less. In Bent Knee Sit ups Test for measuring Abdominal Strength, Norms of Bent Knee Sit ups Test clearly shows that 100 points will be awarded to that subject who will score 72 or more Bent Knee Sit ups in one minute and 0 points will be awarded to that subject who will score 38 or less Bent Knee Sit ups in one minute. In 30 Meters Run Test for measuring Speed, Norms of 30 meters Run Test clearly shows that 100 points will be awarded to that subject who will runs 30 meters in 2.05seconds or less time and 0 points will be awarded that subject who will runs 30 meters in 8.85 seconds or more time. In Cooper 12 Minute Run Walk Test for measuring Aerobic Fitness, norms of Cooper 12 minute Run Walk Test clearly shows that 100 points will be awarded to that subject who will score 3170 meters or more and 1570 meters or less than, Subject will be awarded score 0 point will be awarded. In Phosphate Recovery Test for Measuring Balance and Coordination, Norms of Phosphate Recovery Test clearly shows that 100 points are awarded to a subject when he will manage to score 100 or more and 0 points are awarded when he will score 48 or less. In Bridge-Up Test for measuring Flexibility, Norms of Bridge-Up Test clearly shows that 100 points will be awarded to that subject who will score 25.30 or more and 0 points will be awarded to that subject who will score 7.30 or less. In Dodging Run Test for measuring Agility, Norms of Dodging Run Test clearly shows that 100 points will be awarded to that subject who will score 5.00 seconds or less time and 0 points will be awarded to that subject who will score 26.00 seconds or more time. In Six Second Dash Test for measuring Reaction Time Ability, Norms of Six Second Dash Test clearly shows that 100 points will be awarded to that subject who will score 73.80 meter or more and 0 points will be awarded that subject who will score 41.10 meter or less. In Bass Stick Test for measuring Balance and Coordination, Norms of Bass Stick Test clearly shows that 100 points will be awarded to that subject who will score 116 or more jumps in 15 seconds and 0 points will be awarded to that subject who will score 72 or less jumps in 15 seconds.

Key Words:- Specific Physical Fitness, Development, Good Health, Physical Fitness, Norms, Cricket.

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INTRODUCTION

Presently, In India the selection of players in cricket for state level and national level coaching camps and also for national and international competition are done on the basis of only one factor i.e. competitive performance. In fitness testing as we know there are many tests and test batteries are available so that any coach, players or trainers can assess the fitness or monitor his or her performance related to their games. Also the Author has tried to standardize the test and do research on variables which can directly

affect the performance. The tests which are standardized or delimited are closely related to the game i.e. are functional to the game so that the population can draw out direct help using the test battery rather than through the study, it can be said that the profile of fitness has direct relation with the game. The present study has been conducted basically to construct a physical fitness test for cricketer's performance and can be measured, assessed and evaluated properly. The purpose of the study was to development of norms specific physical fitness test for state level male cricket

players. The Study was delimited to 500 randomly selected male cricket players from central zone, who was participate in state level tournament. Variations in performance due to climatic conditions, ground conditions, player's physical factors and psychological factors that might affect the study was considered as the limitation of this study.

PROCEDURE

Norms was constructed by collecting data on the test item of newly construct specific physical fitness test battery by using 250 state level male cricket players at from central zone. The age group of the subject ranged between 15 to 19 years.

COLLECTION OF DATA

The data on selected specific physical fitness test battery items was collected from the various stations of the central zone like Jaipur, Raipur, Bhopal, Nagpur, etc. The aim of the present study is to represent the various tests from the specific physical fitness battery so that they could have a clear conceptual picture of the various tests they are going to take part in. Before the testing programmed was organized, the research scholar assembled the entire male cricket player together to brief them on the nature, the modalities and the objectives of the present investigation and demonstrating the various test so they could have a clear mental picture of the various test they were going to take part. 250 subjects were selected for the construction of norms. The T-scale was used to prepare the norms for specific physical fitness test for male cricket players from central zone.

TABLE 01

FINAL TEST BATTERY OF SPECIFIC PHYSICAL FITNESS FOR MALE CRICKET PLAYERS OF CENTRAL ZONE

S.N.	FACTOR MEASURED	TEST ITEM	FACTOR LOADING
1	Strength (Arm)	Pull-ups	0.94
2	Strength (Leg)	Standing Broad Jump	0.94
3	Strength (Abdominal)	Bent Knee Sit-ups	0.80
4	Speed	30 Meter Dash	0.94
5	Aerobic Capacity	Cooper 12 Min. Run/Walk Test	0.87
6	Anaerobic Capacity	Phosphate Recovery Test	0.79
7	Flexibility	Bridge-up Test	0.89
8	Agility	Dodging Run	0.94
9	Reaction Time	Six Second Dash	0.91
10	Balance & Coordination	Bass Stick Test	0.81

DEVELOPMENT OF NORMS

Norms have been prepared for the assessment of specific fitness of male cricket players from central zone. The data for the development of norms are collected from 500 male cricket players from central zone on the 10 test items of the specific physical fitness test battery. The norms are prepared by using the T- scale. T scale is located with five sigma's below the mean and five sigma's above the mean. The mean of the data is the 50th T-score will usually be found to a range between 15 and 85. The T- scale

technique has the advantage of placing both the zero and hundred at points so far below and above what possible could be expected in future performances that one is very unlikely to find scores that cannot be placed on the scale. There are some other techniques for the development of norms like sigma scale and hull scale. In sigma scale the lowest score is zero and the highest sigma value is 100. In the hull scale the standard deviation distances three and half sigma's either side of the mean. It goes beyond the somewhat narrow limits but does not leave the ends of the scales, so it is generally unused technique for the development of norms.

TABLE 02

NORMS OF PULL UPS

T- Score	Score of Subjects	Points Awarded
T 100	36	100
T 90	33	90
T 80	30	80
T 70	27	70
T 60	23	60
T 50	20	50
T 40	17	40
T 30	13	30
T 20	11	20
T 10	7	10
T 0	4	0
Mean		22.18
Standard Deviation		3.23
Number of Subjects		250

Table 02 clearly shows that 100 points are awarded to a subject when he will manage to score 36 or more and 0 points are awarded when he will score 4 or less.

TABLE-03

NORMS OF STANDING BROAD JUMP

T- Score	Score of Subjects	Points Awarded
T 100	3.07	100
T 90	2.95	90
T 80	2.83	80
T 70	2.71	70
T 60	2.59	60
T 50	2.47	50
T 40	2.35	40
T 30	2.23	30
T 20	2.11	20
T 10	1.99	10
T 0	1.87	0
Mean		2.47
Standard Deviation		0.12
Number of Subjects		250

Table 03 clearly shows that 100 points are awarded to a subject when he will manage to score 3.07 Meters or more and 0 points are awarded when he will score 1.87 Meters or less.

TABLE-04

NORMS OF BENT KNEE SIT-UP

T- Score	Score of Subjects	Points Awarded
T 100	72	100
T 90	69	90
T 80	65	80
T 70	62	70
T 60	59	60
T 50	55	50
T 40	52	40
T 30	48	30
T 20	45	20
T 10	42	10
T 0	38	0
Mean	55.18	
Standard Deviation	3.40	
Number of Subjects	250	

Table 04 clearly shows that 100 points are awarded to a subject when he will manage to score 72 or more and 0 points are awarded when he will score 38 or less.

TABLE -05

NORMS OF 30 MTS RUN TEST

T- Score	Score of Subjects	Points Awarded
T 100	2.05	100
T 90	2.73	90
T 80	3.41	80
T 70	4.09	70
T 60	4.77	60
T 50	5.45	50
T 40	6.13	40
T 30	6.81	30
T 20	7.49	20
T 10	8.17	10
T 0	8.85	0
Mean	5.45	
Standard Deviation	0.68	
Number of Subjects	250	

Table 05 clearly shows that 100 points are awarded to a subject when he will manage to score 2.05 Seconds or less and 0 points are awarded when he will score 8.85 Second or more.

TABLE -06

NORMS OF COPPER 12 MIN RUN/WALK TEST

T- Score	Score of Subjects	Points Awarded
T 100	3170	100
T 90	3010	90
T 80	2850	80
T 70	2690	70
T 60	2530	60
T 50	2370	50
T 40	2210	40
T 30	2050	30
T 20	1890	20
T 10	1730	10
T 0	1570	0
Mean	2370	
Standard Deviation	160	
Number of Subjects	250	

Table 06 clearly shows that 100 points are awarded to a subject when he will manage to score 3170 Meters or more and 0 points are awarded when he will score 1570 Meters or less.

TABLE -07

NORMS OF PHOSPHATE RECOVERY TEST

T- Score	Score of Subjects	Points Awarded
T 100	100	100
T 90	95	90
T 80	90	80
T 70	84	70
T 60	79	60
T 50	74	50
T 40	69	40
T 30	64	30
T 20	58	20
T 10	53	10
T 0	48	0
Mean	74	
Standard Deviation	5.20	
Number of Subjects	250	

Table 07 clearly shows that 100 points are awarded to a subject when he will manage to score 100 or more and 0 points are awarded when he will score 48 or less.

TABLE -08

NORMS OF BRIDGE-UP TEST

T- Score	Score of Subjects	Points Awarded
T 100	25.30	100
T 90	23.50	90
T 80	21.70	80
T 70	19.90	70
T 60	18.10	60
T 50	16.30	50
T 40	14.50	40
T 30	12.70	30
T 20	10.90	20
T 10	9.10	10
T 0	7.30	0
Mean	16.30	
Standard Deviation	1.80	
Number of Subjects	250	

Table 08 clearly shows that 100 points are awarded to a subject when he will manage to score 25.30 Centimeters or more and 0 points are awarded when he will score 7.30 Centimeters or less.

TABLE-09

NORMS OF DODGING RUN TEST

T- Score	Score of Subjects	Points Awarded
T 100	5.00	100
T 90	7.10	90
T 80	9.20	80
T 70	11.30	70
T 60	13.40	60
T 50	15.50	50
T 40	17.60	40
T 30	19.70	30
T 20	21.80	20
T 10	23.90	10
T 0	26.00	0
Mean	15.50	
Standard Deviation	2.10	
Number of Subjects	250	

Table 09 clearly shows that 100 points are awarded to a subject when he will manage to score

5.00 Seconds or less and 0 points are awarded when he will score 26.00 Seconds or more.

TABLE -10

NORMS OF SIX SECOND DASH TEST

T- Score	Score of Subjects	Points Awarded
T 100	73.80	100
T 90	70.50	90
T 80	67.20	80
T 70	63.90	70
T 60	60.60	60
T 50	57.30	50
T 40	54.00	40
T 30	50.70	30
T 20	47.40	20
T 10	44.10	10
T 0	41.10	0
Mean	57.30	
Standard Deviation	3.30	
Number of Subjects	250	

Table 10 clearly shows that 100 points are awarded to a subject when he will manage to score 73.80 Meters or more and 0 points are awarded when he will score 41.10 Meters or less.

TABLE -11

NORMS OF BASS STICK TEST

T- Score	Score of Subjects	Points Awarded
T 100	116	100
T 90	112	90
T 80	107	80
T 70	103	70
T 60	99	60
T 50	94	50
T 40	90	40
T 30	85	30
T 20	81	20
T 10	77	10
T 0	72	0
Mean	94.18	
Standard Deviation	4.36	
Number of Subjects	250	

Table 11 clearly shows that 100 points are awarded to a subject when he will manage to score 116 or more and 0 points are awarded when he will score 72 or less.

CONCLUSION

A test battery of 10 test items developed by the scholar who has the ability to predict the specific physical fitness of specific fitness of male cricket players from central zone. 10 test items namely Pull ups (Arm-Strength), Standing Broad Jump (Explosive Strength of Legs), Bent Sit ups (Abdominal Strength), 30 Meter Dash (Speed), 12 min Run Walk Test (Endurance / Aerobic Capacity), Phosphate Recovery Test (Anaerobic Capacity), Bridge up Test (Flexibility), Dodging Run Test (Agility), Six Second Dash Test (Reaction Time Ability), Bass Stick Test (Balance & Coordination) indicated a highly significant relationship with the performance of cricket player.

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