

Development and Standardization of a Test Battery for the Selection of Basketball Players in Vidarbha Region

Vasistha Arun Khodaskar

Director of Physical Education & Sports Nerhu Mahavidhyalaya, Nerpersopant, Dist Yavatmal, MS, India

Abstract

The basketball players of the Vidarbha playing at school level basket ball tournaments were considered as the total population of the study. The total population convenience sampling method was used to select the sample for the current study. The data was collected from total of 1200 samples who participated at various school and association during 2013 to 2015. After step wise data collection, they were processed through a series of statistical analysis. The descriptive statistics of the collected score was done. The mean, median, and standard deviation was calculated. To find out the normality of the scores the skewness and the kurtosis were found out. Some of the scores from the data were removed as they were outliers. The outliers were found with the help of box plots through SPSS. The percentile method was used to create norms. The present norms of 3 skill performance finally selected test items indicate that the distribution of scores of almost all the test items resides in the normal range of probability curve. The raw data was further converted into standard scores for the combining or comparing scores.

KEYWORDS :- Development, Standardization, Test Battery, Basketball.

Introduction:-

“Game for the fun of it” is a common saying and it is indicative of the pleasure one derives though participation in games and sports. Among the most popular of modern games, Basketball is one, and in American sports it taken its pride of place as the most popular, and more people in USA play Basketball than any other game. The standard of play there is so good and the game so exciting that the Basketball fans of that continent outnumber all other. This wonderful game, which originated in the United States, has spread to other countries of the world, thanks largely to YMCA. Basketball is enjoyable, and it has all elements of a first rate sport. Action during the play is fast, defense changes are according to the need of offence, and thrill is provided by abundant scoring opportunities arising all through the game. With all these there is still the individual responsibility. While one player guards closely the opponent whom he is to prevent from taking an easy shot, or making an easy pass, and another makes a difficult break through with a dribble or cuts to new positions on the court, there is every element of excitement in these moves, and not only judgment and speed are called into play but almost all the skill and the resources the players can command.

Basketball is an indoor game, and as well as outdoor game also. It demands a high degree of physical fitness as well as sharp mind. Running, jumping, passing, dribbling, shooting, intercepting, rebounding are some fundamental skill involved in the game, and the capacity to master them in practice and use them in co-ordination, has to be acquired by long term and hard training. Its is also essentially a game of speed and endurances.

Gradually Basketball has turned into a competitive sport that required as optimum level of fitness. (Of course, the required level of fitness of School Level of Basketball players.) Unfortunately in school level the emphasis during selection of team, has so far been given only on skill and tactics without much consideration for the performances related physical fitness status of the Basketball players. As there are tests available as so for our selection authorities are not able to administer the same as a criterion prior to find selection of Basketball players. No specific physical fitness factors are assessed prior, to select a School Level of Basketball players. Moreover selecting a player only on the skill during a game performance may not be truthful in the long run. The difficulties stated above indicated that there is an eminent need to conduct research in the areas of school level of Basketball with special reference to development of skill test of selection criteria of Basketball players. This may not only enhance the performances standard norms of Basketball of the Vidharaba. Therefore, the present study entitled **“Development and Standardization of a Test Battery for the Selection of Basketball Players in Vidarbha Region”**.

Objectives :-

1. To Development a test battery for selection of basketball players.
2. To Standardize a test battery for selection of basketball players.

Methodology:-

The school level boys Basketball players, from various districts of Vidarbha of the age group between 13 to 17 years those who are playing in Basketball school team is the major characteristics or interest of the researcher. The population for the current study is the school level Basketball players participating in inter school competition.

The approximate population of school level Basketball players of various groups are 2040.

The purposive sampling method was used to select the sample for the current study. The data collection was done for two consecutive years. Inter school Basketball tournament organised by the districts sports office and districts Basketball association of Vidarbha region and various club are taken as the sample for this study. The data was collected from total of 1200 sample.

Basketball Skill Tests

□□□**3 Min Field Goal Lay Up Shot-** Speed, control and accuracy of the players was assessed through 3 minute field goal lay up shot. The subjects started dribbling from right side centre line and went to the board and took lay up shot. Picked the ball and sent to another side of centre line in 3 minutes. The attempts of lay up shots scores was recorded.

□□□**2 Min Free throw Shooting-** The players stood behind a free throw line from target and threw a Basketball on over head shooting. The attempts of throw shooting scores was recorded

□□□**1 Min Three point shooting-** The subjects took three point shoot in one minute. The freedom of variation of shooting angle was given to the subjects. The attempts and score was recorded.

Pilot Study

The present study investigator first try out of these new test items was conducted on Forty (n = 40) Basketball players under 17 years old boys of H.V.P.M. Club, Amravati

district. The limitation, if any, in administering each test item were recorded for further improvement of the test battery. During the pilot study various factors related to administration of the test were checked for further data collection.

Statistical Analysis

After step wise data collection, it was processed through a series of statistical analysis. The descriptive statistic of the collected score was done. The mean, median, and standard deviation was calculated. To find out the normality of the scores the skewness and the kurtosis were found out with the help of box plots through SPSS. The percentile method was used to create norms. The present norms of nine finally selected test items indicate that the distributions of scores of almost all the test items resides in the normal range of probability curve. The raw data was further converted into standard scores for the combining or comparing scores.

Table Reliability, objectivity, and validity of the test battery

The test battery was standardization by determining the reliability and validity. Test retest for reliability, correlation between different observers for validity were taken into consideration for the standardization of the test battery, data of the same in presented in table and garding sacle is in table. The simple correlation method was also used in analyzing the data to establish validity. After obtaining the subjective rankings, interjudge correlations indicated an acceptable agreement ($r = 0.356$) between two judges. The sum of the ratings of these judges was used as a portion of the overall ranking. Correlations for the third judge with both of the other judges were low. For this reason, ratings by the third judge were deleted. The two judges whose ratings correlated highly had both been involved recently with teaching and coaching Basketball. This was not true of the third judge. All test scores used in establishing validity were an average of those recorded on day 1.

Table 1
Reliability Coefficients for Test-Retest, within day and Stepped Up within Day

Test Phase	Test-retest	Day 1 and Day 2
3 min Lay-up Shot	0.525	0.587
2 Min Free Throw	0.334	0.417
1 Min Three Point	0.211	0.400

Table 2
Norms Table for Constructive Offensive Skill Test Performance Tests of Basketball Players

Percentile	3 Minute Lay-up Shot Performance	2 Minute Free Throw Shooting Performance	1 Minute Three Point Shooting Performance
99	22	29	21
90	21	28	19
80	19	27	18
70	17	27	17

60	15	26	16
50	14	25	15
40	13	25	14
30	12	24	13
20	10	23	12
10	9	22	10

Table 3
Grading Scales of Variables

Variables	Poor	Average	Satisfactory	Good	Excellent
3 Minute Lay-up Shot Performance	12 & below	13 to 14	15 to 18	19 to 21	22 & above
2 Minute Free Throw Shooting	24 & below	25	26	27 to 28	29 & above
1 Minute Three Point Shooting	12 & below	13 to 14	15 to 16	17 to 18	19 & above

Result and Conclusion

The present study will be a significant contribution to the field of Basketball and sports in general. The knowledge from this study will supplement the literature of Indian Physical Education and Sports, in general, and school level Basketball in particular. The study was helpful to selection committee, coaches, physical education teachers, clubs and players. The test battery constructed should be used by selectors to select school level Basketball teams. The norms could be certainly one of the criteria to be reached by players to be in the school level Basketball team. Even if the test battery is constructed for selection school level Basketball players it should be used as an assessment tool of the players to determine the standards of the player. The Norms available should be use to distinguish players having excellent potential. Basketball coaches and physical education teachers could use the norms for assessing and evaluating their players and getting feedback of improvements.

References

1. AAPHER, Special fitness text manual, American Association for health, Physical Education and Recreation, (N.E.A. Fitness Development D.C., 1967), P. 217
2. Anthony & Plotz.. (2006). "A comparison of talented south African and English youth rugby players with reference to game-specific-, anthropometric-, physical and motor variables" South African Journal for Research in Span, Physical Education ami Recreation Vol. 28(1): p. 101-107.
3. Ashok, C, and Babu, P. S. (2000), "A study on correlation between accuracy and anthropometric variables of university tennis players", Indian Journal of Sports Studies. 5, 2, p. 5-7.

4. Khetmalis Mahesh S. (2012) Development and standarzation of test battery for selection of football players, Online International Interdisciplinary Research Journal (Bi Monthly) Vol II, Issue V Sept Oct 2012
5. Barrow Harold M., Man and Movement – Principles of Physical Education, Third Edition, Lea an Febiger, Philadelphia, 1983, P-167
6. Battles, J. (1980), "Prediction equation for selection of intercollegiate basketball team members", Abstract research paper. AAPHERD convention, p. 65.
7. Bayios, I. A., Bergcles, N. K., Apostolidis, N. G., Noutsos, K. S., & Koskolou, M. D. (2006), "Anthropometric, body composition and somatotype differences of Greek elite female basketball, volleyball and handball players", The Journal of Sports Medicine and Physical Fitness, 46, p.271-280.
8. Bergemann, B. (1995), "Analysis of Selected Physical and Performance Attributes of the United States Olympic Team Handball Players", Preliminary Study. Doctoral dissertation, Campbell University.
9. Best, J., & Kahn, J. (2006), *Research in Education*, (9th Ed.). New Delhi: Prentice Hall. p. 19.
10. Biswas A. K., (2005), "Age specific norms for speed. Agility and Leg explosive strength for primary school children of West Bengal", Journal of Exercise Science and Physiotherapy, 1,2.
11. Bose, K.. (1987), "Morphological profile of champion Indian school footballers", MIS Scientific Journal. 10.3.p. 30-34
12. Brown-Miner, K. (1989), "Relationship of physical characteristics, physiological capabilities, and nutritional habits to female basketball team selection", Completed Research. 31,p. 389
13. Bucher C.A., Foundation of Physical Education and Sports, 9th Ed : (London : The Mosby Co. St. Louis, 1983), P. 7
14. Buchheit, M.,(2009), "Cardio respiratory responses during running and sport-specific exercises in handball players", Journal of Science and Medicine in Sport. Vol.12 (3): p. 399-405.
15. Calderia, S. and Mastudo, V. K. R. (1988), "Evaluation of physical fitness variables in Brazilian national volleyball players", Abstracts New Horizons of Human Movement. SOSCO, Seoul Olympic (Day7),p.65.
16. Can, F., (2004). "Morphological characteristics and performance variables of women soccer players", Journal of Strength Conditioning and Research. 18(3), p.480-485.
17. Casady Donald R., Handbook of Physical Fitness Activities, (New York : Callier Macmillan Limited, London), P.607.
18. Cavala, M, Rogulj, N., Srhoj, V., Srhoj, L. & Katie, R. (2008), "Biomotor structures in elite female handball players according to performance". Collegium Antropologicum, 32, 231 -239.

19. Chaouachi, A. (2009), "Anthropometric, physiological and performance characteristics of elite team-handball players", *Journal of Sports Science*, Vol: 27,(2), p. 151 -157
20. Chelly, M.S., & Hermassi, S. (2011), "Match analysis of elite adolescent team handball players", *Journal of Strength conditioning*, vol; 25(9), p.2410-2417.
21. Cherif, M, & Said, M. (2012), "The Effect of a Combined High-Intensity Polymeric and Speed Training Program on the Running and Jumping Ability of Male Handball Players", Retrieved, 10 March 2012 from *Asian Journal of Sports Medicine*, Web site:<http://asjasm.tums.ac.ir/index.php/asjasm/article/view/157>
22. Cicirko, L., Scott, D., Bennett, P., & Hodson, A. (2007), "General arid special physical fitness level in young football players", Retrieved, 12 February 2010 from *Journal of Sports Science and Medicine* web Site: [http// www.jssm.org](http://www.jssm.org).
23. Clarke H. Harrison, Ed., *Physical Fitness News Letters*, (March 1977), P.2.
24. Cox, R. H. (1974), "Relationship between selected volleyball skill components and team performance of men's Northwest "AA" volleyball teams", *Research Quarterly*, 44, 4, p.441.
25. Das, T.K. (1980), "Norms in physical fitness for boys of classes IX to XI of government school of Delhi administration", Unpublished Master's Thesis in Physical Education, Jiwaji University, Gwalior.
26. Debnath K. and Bawa G. S. (1995), "Physical structure and competition performance of the Indian sub- junior girl gymnasts", *MS Scientific Journal*. 18.1, p.37-45.
27. Debnath S. and Dey R.N. (1999), "Relationship of performance with physiological traits of national archers", *SAI Scientific Journal*, 22, 2, p. 27-30.