

Standardization of Artistic Gymnastic Skill Test on Salto Backward Stretched Dismount for Sub Junior Girls

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Abstract

The purpose of this study was to standardization of artistic gymnastic skill test on salto backward stretched dismount for sub junior girls. A sample size or design is a definite plan for determining before any data is actually collected for obtaining a sample from a given population. The subjects of this study was girls Gymnastic players who represented minimum state level or 3 year game age (as per certified by coach) with the help of purposive sampling. The age group of the subjects were below 14 years only. To construct the gymnastic skills test battery's face validity was formulated by the researcher. A researcher taken different kinds of gymnastic skills from the FIG rulebook. After that we sent the skills to 13 experts for rating through likert scale. Then the experts rated & gave suggestions. When we finalized the skill by looking at the ratings. Highly rated skill had been considered for skill test battery. It is concluded that the gymnastic skill test ultimately could retain better skill item among the various skill items, which can successfully measure the gymnastic skill ability of the sub-junior gymnastic players with acceptable face validity, highly reliability and objectivity.

Keywords: *Artistic, Gymnastics, cast.*

Introduction

Gymnastics is a dynamic sport that combines strength, flexibility, balance, and grace, requiring athletes to perform a series of acrobatic movements, jumps, and routines on various apparatus such as the balance beam, vault, uneven bars, and floor exercise. It is a physically demanding discipline that not only showcases the athletes' athleticism but also their artistry and precision. Gymnastics has a rich history and has evolved into a highly competitive sport practiced at both recreational and elite levels around the world. According to Guan and Gao (2020), gymnastics is a sport that encompasses a wide range of movements and skills performed on different apparatus. It combines elements of strength, flexibility, and coordination, demanding a high level of physical fitness and technical mastery. Artistic gymnastics is a captivating and awe-inspiring sport that showcases the perfect blend of athleticism, strength, grace, and artistic expression. It involves performing a

variety of challenging and intricate routines on different apparatus, including the vault, uneven bars, balance beam, and floor exercise. Artistic gymnastics requires exceptional body control, flexibility, power, and precise execution of complex skills. Athletes in this discipline strive for perfection in their movements, creating breathtaking performances that captivate audiences worldwide. According to Li and Wang (2021), artistic gymnastics is characterized by its combination of acrobatic skills, artistic flair, and precise execution. Athletes demonstrate tremendous strength, flexibility, and coordination while performing routines that demand a high level of technical proficiency and creativity. Jayavel (2006) the researcher conduct the study on construction of badminton skill test and compilation of norms for college men players. Selected variable was high lob service and forehand smash. For the purpose of study 18 to 25 year age delimited selected from Tamil Nadu state. A total 120 sample was part of the study those participated at inter collegiate level. This was analyzed through appropriate statistical method and establish the validity, reliability and objectivity for the newly constructed test and Hull scale was used to construct the norms. Kumar (2013) revealed the development of Ball Badminton player skill test. Sample was selected from Tamil Nadu state, India under the age of 18 to 23. Sample were 330 those represent for their college team and data were collected during the competition period. Nine test item were selected for the skill test i.e. Low service, High spin twist service, Fast drive wrist service, Over-arm volley test, Under-arm volley test, Front row over-head flat smash, Back row over-head flat smash, Back row over-head twist smash, Shut-at-net. For the final phase norm was constructed through 6-sigma scale to provide the grading of over-all performance. The result was showing that there inter-relationship between test item and they were highly reliable. Kumar (2010) Investigated on the topic of skill test construction in hockey. The pilot study was conducted to select the 9 skill item out of 23 skills. A total 454 Subjects were selected from Tamil Nadu state under age of 17-20 years. Dribbling, Hit, Push, Flick, Scoop, Goal shooting are selected variable for the study. The result was showing that there was inter relationship between performance and test items. Grading was provide to the performance of the players by using of 6sigma scale. Anbarasu (2013) conducted the construction skill test and compilation of norms for selected field hockey skills. The norms were constructed for college level players under the age group 18-28 years. A total 500 players were selected from Tamil Nadu state through random sampling method. Dribbling, dribbling and hit and dribbling and push finalized. For the statistical used to describe the descriptive statistics and hull scale. Performance skills of player's was analyzed in qualitative term i.e. low, average, above average, good and outstanding. So the result was showing that less number of player were falling in outstand and low grade.

Significance of the Study:

Gymnastic is the mother game of the all sports. Indian gymnasts is not achieving a glorious at the Olympic level. So performance of the Indian women Gymnasts is very behind in 2018 Asian games. Their performance was average but failure to achieve Medal in Olympics. So researcher need to assess the standard of female gymnasts at grass root level and upgrade the talent of gymnasts in appropriate manner. This instrument may also be used in grading Gymnasts in advance teaching or coaching of Gymnastic or in coaching session arranged for competition at various levels. This study will helpful physical education teachers and coaches in judging the

adequacy of achievements of their players or students in Gymnastic skill and will assist the players or students to diagnosing their own strengths and weakness in Gymnastic. The test will be the latest test which fulfils the present requirement of girls Gymnastic.

Statement of the Problem:

Gymnastic developments in India reveal that the present status of Gymnastic has neither been understood by the professional nor by the controlling authorities, therefore it has been considered by the researcher to construct standardize and develop norms the Gymnastic skill test for girls Gymnasts. Hence to achieve this purpose the researcher has under taken the problem as follows: “*Standardization of Artistic Gymnastic Skill Test on salto backward stretched dismount for Sub Junior Girls*”.

Objective of the Study:

- To standardize the artistic Gymnastic skill test on *salto backward stretched dismount* for 10 – 12 year girls.
- To standardize the artistic Gymnastic skill test on *salto backward stretched dismount* for 12-14 year girls.

Hypotheses of the Study:

- It is hypothesized that the newly constructed skill test will be highly reliable for sub junior gymnasts.
- It is hypothesized that the newly constructed skill test battery will be highly objectivity for gymnasts.

Operational Definition of key terms:

❖ **Gymnastic:** Gymnastics is an activity it is the foundation for all sports and physical activity. It teaches sports person or participants how to move, roll, jump, swing and turn upside and down. It is an exciting activity and sport for its unique contribution to general fitness, coordination, agility, strength, balance and speed. It promotes all-round physical development, muscular strength, joint flexibility, balance, coordination and core strength required for everyday living.

❖ **Test:** Test is an instrument or activity which is utilized to gather information on an individual's capacity to play out a predefined task. It is an instrumental tool which can help to the researcher for assessing or measuring the specific or particular characteristics of selected sample or subjects in the research studies.

Research Method:

The present study is a type of descriptive research. In this chapter for the sampling design, sampling frame, establishing procedure to construct gymnastic skill test battery, identification of skill items, face validity, establishing the procedure to perform gymnastic skills, tools used, procedure of establishing scoring, data collection for reliability and objectivity, establishing reliability, establishing objectivity. Administration of the test and statistical techniques applied to standardized and developed norms have been described.

Sampling Technique:

The subjects of this study was 200 girls Gymnastic players who represented minimum state level or 3 years

game's experience (as per certified by coach) with the help of purposive sampling.

Procedure to perform gymnastics skill

Variable- salto backward stretched dismount

Purpose- To measure leg strength, arm strength, shoulder strength, body position with balance of whole body.

Equipment's- Uneven Bars, Mats, and Powder.

Procedure:

Flex hips, bring legs under bar (allowing arms to slightly flex), and shift shoulders forward of bar from front support with hands in forward hold. Extend arms and thrust legs rearward and upward, forcing torso (except hands) away from bar. Return to the completely extended (arched) position of the bar.



Figure Shows the Salto Backward Stretched Dismount Skill of Gymnastic Battery Test

Scoring: The score is on the basis of judgment by experts.

Result of the study:

Table showed t-scale, hull-scale, and sigma-scale standard score of salto backward stretched dismount skill for 10 to 12 Years Gymnasts

T-scale	Sigma scale	Hull scale
5.85	4.91	5.085
5.44	4.7	4.84
5.03	4.49	4.595
4.62	4.28	4.35
4.21	4.07	4.105
3.86	3.86	3.86
3.45	3.65	3.615
3.04	3.44	3.37
2.63	3.23	3.125
2.22	3.02	2.88
1.81	2.81	2.635

Table showed that the standard t, sigma and hull scale score of the salto backward stretched dismount skill for

gymnasts aged 10 to 12 years. The minimum t, sigma, and hull score of salto backward stretched dismount skill were found to be 1.81, 2.81, and 2.635, respectively, and the maximum score was found to be 5.85, 4.91, and 5.085. The results show that the minimum and maximum standard scores of t, sigma, and hull-scale of salto backward stretched dismount skill as per norms score fall into the poor and excellent categories.

Table Showed t-scale, hull-scale, and sigma-scale standard score of salto backward stretched dismount skill for 12 To14 Years Gymnasts

T-scale	Sigma scale	Hull scale
6.46	5.52	5.755
5.99	5.238	5.426
5.52	4.956	5.097
5.05	4.674	4.768
4.58	4.392	4.439
4.11	4.11	4.11
3.64	3.828	3.781
3.17	3.546	3.452
2.7	3.264	3.123
2.23	2.982	2.794
1.76	2.7	2.465

Table showed that the standard score of t, sigma and hull scale of salto backward stretched dismount for 12 To14 Years Gymnasts. The minimum score of t, sigma and hull score of salto backward stretched dismount skill i.e. 1.76, 2.7, and 2.465 and maximum score were found i.e. 6.46, 5.52, and 5.755 respectively. The result show that the minimum and maximum standard scores of t, sigma and hull-scale of salto backward stretched dismount skill lie in poor and excellent category.

Conclusion of the Study:

The gymnastic skill test ultimately could retain better skill item among the various skill items, which can successfully measure the salto backward stretched dismount ability of the gymnastic players of sub-junior with acceptable face validity, highly reliability and objectivity.

References:

- [1] Anbarasu (2013). Construction of Skill Tests and Compilation of Norms for Selected Field Hockey Skills. *Indian Journal of Research*, 2(12), ISSN - 2250-1991, pp 221-223.
- [2] Bosco, J. K. (2011) Construction of Playing Ability in Hockey. *International Journal of Scientific Research and Modern Education*, ISSN (Online): 2455 – 5630.
- [3] Chakraborty, G. and Alhawati, K.(2015). Construction of skill test in Kho-Kho. *International Journal of Physical Education, Sports and Health*, 1(6), 175-178.
- [4] Guan, Y., & Gao, B. (2020). *Gymnastics: A comprehensive guide*. Springer

- [5] Irwin G., Hanton S., David G.K. (2005). The conceptual process of skill progression development in artistic gymnastics Journal of Sports Sciences, 23(10), ISSN 0264-0414, pp1089-1099.
- [6] Jayavel, S. (2006). Construction of badminton skill tests and compilation of norms for college men players.
- [7] Kamlesh, M.L. (2006). Field manual of sports and games. Nageen Parkashan Pvt.Ltd, Second edition, pp 166.
- [8] Kumar, S. (2010). Construction of skill tests and compilation of norms for selected field hockey skills.
- [9] Yadav, S. K., Dudhale, S. Y., & Bhawana. (2011). Construction of jump shot test in hand ball. International Journal of Physical Education, sports and yogic sciences 1(1): pp 30-32.
- [10] Li, M., & Wang, S. (2021). Artistic gymnastics: The pursuit of excellence. Journal of Sports Performance, 15(2), 45-62.
- [11] Rikli, R., & Jones, C. (2019). A Brief History of Gymnastics: From Ancient Greece to Modern Times. International Journal of Sport History, 36(2), 189-205