# Standardization of Artistic Gymnastic Skill Test on Back Flip for Sub Junior   Girls

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## ABSTRACT

The purpose of this study was to standardization of artistic gymnastic skill test on back flip 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 groups 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 had 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, balancing beam.

## INTRODUCTION

Gymnastics terms, especially for certain pieces of practice made (some without tools) with special tools and applied to competition among practitioners of these exercises—the excellence of combinations of competition based on difficulty and performance. In most incidents involving the display sequence in modern sports gymnastics, six artistic programs, i.e., horizontal bars, parallel bars, vaulting tables, Roman Rings, Pommel Horse, and floor exercises for men, and four (4) artistic events, i.e., floor exercise, balance beam, uneven or asymmetrical bars, and vaulting table for women, Trampoline and Tumbling, Sports Acrobatics, group gymnastics, and rhythmic gymnastics competitions are also included, but only those events which are italicized were inducted into the Olympic Games and other international competitions. May be the idea that matters the popularity of gymnastics, is not the whole of gymnastics without school physical education today.  Kamlesh M.L (2006).

**Rosch et al. (2000)** developed a standardized test battery to evaluate physical performance in football players. The F-MARC test battery was designed to closely resemble a football player's normal activity and consisted of a functional, structured 2.5-hour training session. It included a grade for the warm-up

procedure as well as tests of flexibility, football skills, power, speed, and endurance. The game concluded with a cool-down period for the players. The F-MARC test battery was administered to 588 football players. Mean scores on each test were presented for groups of varying ages and skill levels. The test battery proved to be a viable tool for evaluating both physical performance and football skills.

**Baskaran (2001)** constructed a volleyball skill test and computed norms for school boys of different age groups in Pondicherry State. As subjects, 1505 male school students aged 13 to 15 were chosen. All of the subjects were chosen from each school's 7th, 8th, 9th, and 10th grades. The investigator chose pass and service skills for the development of new skill tests. The Brumbach forearm (underarm) pass volley test was used as the criterion test, and new skill tests were designed with appropriate court markings for the new service skill test and the underhand skill test. The new skill tests' reliability, validity, and objectivity were established. Following that, norms for the newly constructed tests for each skill and age group were compiled. The Hull scale statistical technique was used to create the norm. The newly constructed service skill tests were found to be good and consistent. According to the qualitative grading in the pass skill, 73 subjects failed; 194 were below average; 554 were average; 483 were above average; 180 were good; and 21 were outstanding. According to the qualitative grading, out of 1505 subjects, 86 were failing, 170 were below average, 543 were average, 522 were above average, 138 were good, and 46 were outstanding.

## Significance of the Study:

Gymnastic is the mother game of the all sports. Indian gymnasts is not achieve a glorious at the Olympic level. So performance of the Indian women Gymnasts is very behind in 2018 Asian games. Their performance were 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 back flip for Sub Junior Girls".

## Objective of the Study:

1. To standardize the artistic Gymnastic skill test on back flip for 10 – 12 year girls
2. To standardize the artistic Gymnastic skill test on back flip for 12-14 year girls.

**Hypotheses of the Study:**

1. It is hypothesized that the newly constructed skill test will be highly reliable for sub junior gymnasts.
2. 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 helps 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 paper 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.

Variable- Back Flip
Purpose- To Measure Back Flip Ability
Equipment's- Balancing Beam, Mats and Powder.

**Procedure:**

In the first step, a performer adopts a balanced sitting posture, as if sitting on a chair, with the body weight on both feet, legs flexed, and the upper body bending slightly forward. (This is done to attain height by transforming horizontal velocity into vertical velocity). During this posture, the arms are in front of the hips, palms facing each other for an exact grasp of the beam, and the knees are together so that the power is exerted upon in only one way. . Now. The performer forcefully pushes off the beam with his toes while swinging his arms upward and rearward and flying in the air, keeping them close by the side of his head. It is important to ensure that the entire body is extended to its utmost. Extend the chest and shoulders and draw them in close to the heels as the body created an arch in the lower back. The cranium was stretched outside the body to observe the beam. Place your arms on the beam, either slightly ahead of the other or side by side, while gripping the outer beam with the remainder of your hands. While gripping, interlock your shoulders and arms. Sharply lower your knees on the bar by

flexing your pelvis. For precise landing, ensure that the legs are kept together and the hips are tight.(Chakorborty S.1998)



Above the Figure Shows the Back Flip 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 Back Flip skill for 10 to12 Years Gymnasts**

| T-scale | Sigma scale | Hull scale |
|---|---|---|
| 5.5 | 4.9 | 5.05 |
| 5.2 | 4.72 | 4.84 |
| 4.9 | 4.54 | 4.63 |
| 4.6 | 4.36 | 4.42 |
| 4.3 | 4.18 | 4.21 |
| 4.0 | 4.0 | 4.0 |
| 2.5 | 3.82 | 2.95 |
| 2.8 | 3.64 | 3.16 |
| 3.1 | 3.46 | 3.37 |
| 3.4 | 3.28 | 3.58 |
| 3.7 | 3.1 | 3.79 |

This table showed that the standard score of the t, sigma, and hull scale of Back Flip skill for 10 To 12 Years Gymnasts. The minimum t, sigma, and hull score of Back Flip skill were 3.7, 3.1 and 3.79, respectively, and the maximum score was 5.5, 4.9 and 5.05. The results show that the minimum and maximum standard scores of t, sigma, and hull-scale of Back Flip skill as per norms score are in the poor and excellent categories.

**Table showed t-scale, hull-scale, and sigma-scale standard score of Back Flip skill for 12 To 14 Years Gymnasts**

| T-scale | Sigma scale | Hull scale |
|---------|-------------|------------|
| 6.3 | 5.5 | 5.7 |
| 5.9 | 5.26 | 5.42 |
| 5.5 | 5.02 | 5.14 |
| 5.1 | 4.78 | 4.86 |
| 4.7 | 4.54 | 4.58 |
| 4.3 | 4.3 | 4.3 |
| 3.9 | 4.06 | 4.02 |
| 3.5 | 3.82 | 3.74 |
| 3.1 | 3.58 | 3.46 |
| 2.7 | 3.34 | 3.18 |
| 2.3 | 3.1 | 2.9 |

This table showed that the standard score of the t, sigma and hull scale, of Back Flip skill for 12 To 14 Years Gymnasts. The minimum score of t, sigma and hull score of Back Flip skill i.e. 2.3, 3.1 and 2.9 and maximum score were found i.e. 6.3, 5.5 and 5.7 respectively. The result show that the minimum and maximum standard scores of t, sigma and hull-scale of Back Flip skill as per norms score, 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 two jump in succession one being a leap ability of the gymnastic players of sub-junior with acceptable face validity, highly reliability and objectivity.

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