

Periodic Research

A Study on Objectivity of Judo Skill Evaluation Scale

Abstract

The objective of the study was to determine the objectivity of judo skill evaluation scale. Fifty three (N=53) male judoka age ranging from 17 to 30 years were selected from Delhi. Judoka's were asked to perform their best five major techniques. To determine the objectivity coefficients of combined score of five techniques as well as the independent technique as adopted by the subjects as their technique number, one, two, three, four and five accordingly in order, the product moment correlation were computed at 0.05 level of significance. It is concluded that the scale is highly objective but tester must undergo one week training before using the scale

Keywords: Judo Skill, Scoring, Instruments

Introduction

The objectivity of tests means that a test when applied by different testes users should give almost the same results. The objectivity may be defined as "the process of evaluating the degree of agreement in the results obtained by different testers by using the same tests or instruments". For instance, if a test or instrument is found to give the same score when two or more testers use it on a common subject, the test or instrument is termed completely objective. For example, counting of 20 children by as many testers as possible will always end up at 20 and measuring of a six inch long stick with a common scale used, will invariably give a result of 6 inches when measured by two or more testers. Hence, the arithmetic counting and a measuring scale are said to be completely objective testing tools. In short, objectivity is similar to reliability except that here the consistency of agreement among testers is measured whereas in case of reliability, the consistency of agreement among tests repeated by the same tester is measured.

Objectivity is a type of reliability that concerns the administration of tests. Giving directions, scoring, and behaviour of the administrator can affect the reliability of a test. If a test is administered and scored independently by two instructors, the resulting scores should be similar. The only differing condition of the two testing procedures is who administered the test¹.

When tests have a high degree of subjectivity, such as the judging of diving or the form of a golf swing, objectivity coefficients are typically lower. This is caused by a difference in interpretation or bias, usually unintentional, on the part of the judges. To increase the objectivity of the judging, a criterion measure is used, which is based on detailed specifics of the skill to be performed and how it should be judged. When a teacher is evaluating form of a sport skill in a class, the evaluation should be based on a criterion list to improve the objectivity of the analysis. Objectivity is also dependent on the clarity of the directions. The test administrator must understand how to properly administer the test, and the students must understand how the test is performed and how it will be scored. A trial test is often appropriate to ensure that testing and scoring procedures are clear. By carefully planning the test and conscientiously following the protocol for test administration and scoring, objectivity of the test can be improved. Results of a test that are biased by a lack of objectivity waste the time and efforts of both the students and the teacher and are of little value in accurately evaluating students. The objective of the study was to determine the objectivity coefficients of combined score of five techniques as well as the independent technique as adopted by the subjects as their technique number, one, two, three, four and five accordingly to proficiency order (By inter-expert coefficient of correlation).

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Methodology

The Judo players of National Capital territory, Government of Delhi political jurisdiction were selected. 53 male samples age ranging from 17 to 30 years were selected. Keeping in mind the literature pertaining to Judo skill evaluation scale, devices of the experts, feasibility as well as purpose of the study following variables were selected: Kumikata, Kujushi, Tsukuri, Kake, Control, Rhythm, Coupling, Flow, Amplitude, Precision, Velocity, Power and Largely on back. Each Judo player (subject) were asked to perform his/her best five major techniques in order, namely T₁ (first best), T₂ (second best), T₃ (third best), T₄ (fourth best) and T₅ (fifth best). The sum total of the scores award to each independent variables were the score of each technique (JSES of that technique). The sum total of the score of five techniques was the judo skill evaluation score for combined JSES. Reliability and validity of Judo Skill Evaluation Scale was already established. Criterion validity co-efficient was above 0.90 and test retest reliability coefficient were ranged from 0.81 to 0.94.

Findings

The correlational statistics are computed to determine the objectivity co-efficient of the T₁, T₂, T₃, T₄ and T₅ and collectively the score of five techniques (of Judo skill evaluation scale) the product correlation were computed, the analysis pertaining to the same have been presented in table 1, 2, 3, 4, 5, and 6 respectively.

Table 1

Objectivity Coefficient of Judo Skill Evaluation Scale (JSES) of T₁ (Inter Expert objectivity on JSES)

Variable	e1t1	e2t1	e3t1	e4t1	e5t1
e1t1	1.00				
e2t1	0.47	1.00			
e3t1	0.47	0.40	1.00		
e4t1	0.11	0.14	0.10	1.00	
e5t1	0.59	0.70	0.46	0.18	1.00

Note: Critical value (1 Tail, 0.5) = +/- 0.26406
 Critical value (2-tail, 0.05) = +/- 0.31157
 N = 40

t1 = technique number one,
 e1 = expert number one,
 e2 = expert number two
 e3 = expert number three
 e4 = expert number four
 e5 = expert number five

The objectivity coefficient in regard to best technique (t₁) among the experts I, II, III and V are significantly correlated and contradicting the expert-IV only. Hence, it is concluded that the required training for JSES is mandatory to achieve acceptable JSES objectivity for evaluation of best technique / skill.

Table 2

Objectivity Coefficient of Judo Skill Evaluation Scale (JSES) of T₂ (Inter Expert Objectivity on Jses)

Variable	e1t2	e2t2	e3t2	e4t2	e5t2
e1t2	1.00				
e2t2	0.44	1.00			
e3t2	0.45	0.46	1.00		
e4t2	0.02	-0.02	0.37	1.00	
e5t2	0.54	0.48	0.51	0.19	1.00

Note: Critical value (1 Tail, 0.5) = +/- 0.26406

Critical value (2-tail, 0.05) = +/- 0.31157
 N = 40
 t2 = technique number two,
 e1 = expert number one,
 e2 = expert number two
 e3 = expert number three
 e4 = expert number four
 e5 = expert number five

The objectivity coefficient in regard to second best technique (t₂) among the experts I, II, III and V are significantly correlated and contradicting the expert-IV. Hence, it is concluded that the required training for JSES is mandatory to achieve acceptable JSES objectivity for evaluation of second best technique / skill.

Table 3

Objectivity Coefficient of Judo Skill Evaluation Scale (JSES) of T₃ (Inter Expert Objectivity on JSES)

Variable	e1t3	e2t3	e3t3	e4t3	e5t3
e1t3	1.00				
e2t3	0.40	1.00			
e3t3	0.46	0.54	1.00		
e4t3	0.15	0.11	0.34	1.00	
e5t3	0.69	0.47	0.45	0.29	1.00

Note: Critical value (1 Tail, 0.5) = +/- 0.26406
 Critical value (2-tail, 0.05) = +/- 0.31157
 N = 40
 t3 = technique number three,
 e1 = expert number one,
 e2 = expert number two
 e3 = expert number three
 e4 = expert number four
 e5 = expert number five

The objectivity coefficient in regard to third best technique (t₃) among the experts I, II, III and V are significantly correlated and contradicting the expert-IV. Hence, it is concluded that the required training for JSES is mandatory to achieve acceptable JSES objectivity for evaluation of third best technique / skill.

Table 4

Objectivity Coefficient of Judo Skill Evaluation Scale (JSES) of T₄ (Inter Expert objectivity on JSES)

Variable	e1t4	e2t4	e3t4	e4t4	e5t4
e1t4	1.00				
e2t4	0.47	1.00			
e3t4	0.42	0.40	1.00		
e4t4	0.13	0.13	0.28	1.00	
e5t4	0.41	0.47	0.49	0.18	1.00

Note: Critical value (1 Tail, 0.5) = +/- 0.26406
 Critical value (2-tail, 0.05) = +/- 0.31157
 N = 40
 t4 = technique number four,
 e1 = expert number one,
 e2 = expert number two
 e3 = expert number three
 e4 = expert number four
 e5 = expert number five

The objectivity coefficient in regard to fourth best technique (t₄) among the experts I, II, III and V are significantly correlated and contradicting the expert-IV. Hence, it is concluded that the required training for JSES is mandatory to achieve acceptable JSES objectivity for evaluation of fourth best technique / skill.

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Table 5
Objectivity Coefficient of Judo Skill Evaluation Scale (JSES) of T5 (Inter Expert Objectivity on JSES)

Variable	e1t5	e2t5	e3t5	e4t5	e5t5
e1t5	1.00				
e2t5	0.49	1.00			
e3t5	0.44	0.43	1.00		
e4t5	0.26	0.02	0.36	1.00	
e5t5	0.69	0.40	0.43	0.06	1.00

Note : Critical value (1 Tail, 0.5) = +/- 0.26406

Critical value (2-tail, 0.05) = +/- 0.31157

N = 40

t5 = technique number five,

e1 = expert number one,

e2 = expert number two

e3 = expert number three

e4 = expert number four

e5 = expert number five

The objectivity coefficient in regard to fifth best technique (t₅) among the experts I, II, III and V are significantly correlated and contradicting the expert-IV. Hence, it is concluded that the required training for JSES is mandatory to achieve acceptable JSES objectivity for evaluation of fifth best technique / skill.

Table 6

Objectivity Coefficient of Judo Skill Evaluation Scale (JSES) of Total Score of Five Techniques (Inter Expert Objectivity On JSES)

Variable	e1t	e2t	e3t	e4t	e5t
e1t	1.00				
e2t	0.60	1.00			
e3t	0.40	0.50	1.00		
e4t	0.14	0.14	0.48	1.00	
e5t	0.86	0.63	0.56	0.19	1.00

Note : Critical value (1 Tail, 0.5) = +/- 0.26406

Critical value (2-tail, 0.05) = +/- 0.31157

N = 40

t = Sum of five Judo Skill evaluation score

e1 = expert number one,

e2 = expert number two

e3 = expert number three

e4 = expert number four

e5 = expert number five

The objectivity coefficient of t of judo skill evaluation scale sum total of five techniques ranged from 0.14 to 0.86.

Discussion and Conclusion

The objectivity coefficient in regard to best technique (t₁) among the experts I, II, III and V are significantly correlated and contradicting the expert-IV. Hence, it is concluded that the required training for JSES is mandatory to achieve acceptable JSES objectivity for evaluation of best technique / skill.

The objectivity coefficient as documented and interpreted in the tables, 1, 2, 3, 4, 5 and 6 have accepted the drawn research hypothesis at 0.5 level of significance. Except the evaluation of expert (iv), it may be attributed non-training for one week before acting as an expert for Judo Skill evaluation scale (JSES) for the purpose of present study. Hence, it is recommended that at least one week training for conducting Judo skill evaluation scale (JSES) is mandatory for desired objectivity of Judo skill evaluation scale (JSES).

References

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