VALIDATION OF 2 MINUTE, 4 MINUTE, 6 MINUTE AND 8 MINUTE RUN/WALK TESTS FOR THE ASSESSMENT OF MALE CARDIO RESPIRATORY ENDURANCE OF MALE PHYSICAL EDUCATION STUDENTS

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Abstract
The study was designed to investigate the Validation of 2 minute, 4 minute, 6 minute and 8 minute Run\Walk Tests for Physical Education Students . For this study 120 Male students were selected randomly as subjects from different Physical Education colleges of Trivhuvan University, Nepal. The age of the subjects ranged from 18 – 25 years. The data were collected by administering 2 minutes, 4 minutes, 6 minutes, 8 minutes and 12 minutes Run/Walk tests. Test– retest method was employed to establish the reliability of the data. To establish the relationship between the well-established test of cardiovascular endurance and the proposed four tests Pearson's products moment Co-relation statistical technique was employed. Findings showed significant relationship in between cooper's 12 minute Run/Walk and 2 minutes Run/Walk (r = 0.47) 4 minute Run/Walk (r = 0.68), 6 minute Run/Walk (r = 0.75), and 8 minute Run/Walk(r = 0.78).
Key Words: Validation, 2 – 4 - 6 m Run /Walk, Tests, Cardio Respiratory, and Endurance
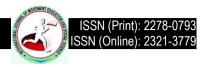
Enjoyment of good health should be considerable as a perfectly natural phenomenon, to be shared by all who possess normal constitution. Mental and Physical fitness can be enjoyed without a prolonged course of Physical training in the long history of physical education. Circulatory respiratory tests have been developed and utilized by physical concerned with exercise as applied to prevention and by physical educator the principal users of such tests in physical fitness programmers, several attempts have been made over the years and some are still being mode to prepare tests for cardiovascular fitness. The "Pock Test" was developed in the early 1940 for testing American Military personnel. Harvard step Test became very popular. The main aim of the both the tests were to get the heart rate up.

Methodology
The main purpose of the study was to assess the validity of 2 minutes, 4 minutes, 6 minutes and 8 minutes Run/Walk Test to measure the Cardio-vascular fitness of male physical education students.

Introduction

Hypothesis

Based on the review of related literatures, discussion with experts and own understanding it was hypothesized that 2 minutes, 4 minutes, 6 minutes and 8 minutes Run/Walk Tests would be valid to measure cardio vascular fitness of professional students of physical education.

Selection of the Subjects

One hundred and twenty (120) male students were selected for this study randomly as subjects from different Health and Physical Education Colleges of Trivhuvan University, Nepal and age of the students was ranged from 18 – 25 years.

Selection of test and Criterion Measures

The Criterion measures selected for the study was Cooper's 12 minutes Run/Walk Test and the score was recorded in Kilometers.

Selection of other Duration of Tests

The researcher has selected 2 minutes, 4 minutes, 6 minutes and 8 minutes Run/Walk Test for this study.

Collection of Data

The data pertaining to the study were collected on the selected subjects by administering the aforesaid tests. Before collection of data the researcher explained the purpose of the study to the subjects so as to they could put their best. The test was conducted at the 400 meter cinder track.

Findings and Results

To establish the reliability Test–Retest method was employed and the data were subjected to statistical treatment of Pearson's product moment correlation statistic computed between the proposed tests of cardiovascular endurance and the criterion test. (Cooper' 12 Minutes Run/Walk test).Hypothesis was tested at 0.05 level of significance. Co-efficient of correlation was computed for the two sets of score in each test, the coefficients are presented in Table No. 1.

TABLE NO. 1
COEFFICIENTS OF RELIABILITY OF TESTS

Test	"r"
Cooper's 12 minutes Run/Walk Test	0.96
8 minute Run/Walk Test	0.96
6 minute Run/Walk Test	0.89
4 Minute Run/Walk Test	0.95
2 minute Run/Walk Test	0.94

The findings of Table-1 revealed that all most all the test scores are reliable as the obtained r-values of 0.96, 0.96, 0.89, 0.95 and 0.94 are quite higher than the table value.

TABLE NO. 2
COEFFICIENT OF CORRELATION OF COOPER'S 12 – MINUTE RUN / WALK TEST WITH 2 – MINUTE, 4 – MINUTE, 6 – MINUTE AND 8 – MINUTE RUN / WALK TESTS

Variable Correlated	"r"
8 minute Run/Walk Test and 12 min. run/walk Test	0.75*
6 minute Run/Walk Test and 12 min. run/walk Test	0.70*
4 Minute Run/Walk Test and 12 min. run/walk Test	0.66*
2 minute Run/Walk Test and 12 min. run/walk Test	0.50*

*Significant at 0.05 level of significance

The findings of statistical analysis of Table – 2 revealed that, 2 minute Run/Walk (r = 0.50), 4 minute Run/Walk (r = 0.66), 6 minute Run/Walk (r = 0.70), 8 minute Run/Walk (r = 0.75) are significantly related

to scores with 12 minute Run/Walk test. But, score of 8 minute Run/Walk test showed the highest correlation with 12 minute Run/Walk Test score.

The coefficient of reliability presented in Table – 1, revealed that the 8 minute Run/Walk Test had the highest reliability under Test – Retest conditions and the remaining tests reliability are in descending order of merit viz. 6 minute, 4 minute and 2 minute Run/Walk Tests.

In spite of statistical significance of the correlation with the criterion test, the 2 minute and 4 minute Run/Walk Tests showed doubtful concurrent validity, whereas the 6 minute and 8 minute Run / Walk Tests, concurrent validity may be assumed to be acceptable.

Conclusions

Within the limitations and on the basis of statistical findings the following conclusions seem to emerge:-

Six and 8 minute Run/Walk Tests can be used as substitute for the 12 minute Run/Walk Test for measuring cardiovascular endurance of professional men students of physical education.

The 2 minute Run/Walk Test is not a suitable substitute for the 12 minute Run/Walk Test.

All the proposed tests for the measurement of cardiorespiratory endurance are statistically reliable but only 6 minutes and 8 minutes run/walk tests are valid.

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