Validity of Alternative Fitnessgram® Upper Body Tests Among Adolescent Students

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INTRODUCTION

Physical Education Assessment Environment
- Lifestyle of physical fitness/healthy eating habits
- Activities inside and outside the physical education setting

To determine if there is a difference between the different muscular strength and endurance tests.

METHODS

Participants
- Sample of 120 adolescents
- Gender (50% males) (50% females)
- Inclusion criteria: between the ages of 12-14 years

Instrumentation
- FITNESSGRAM® assessment of muscular strength and endurance assessment
- Criterion reference standards
- Test item relates to that of the “gold standard” (Sherman & Barfield, 2006).

RESULTS

Compliance reference standards: FITNESSGRAM Healthy Fitness Zone Standard:
- 1.8-4.0 pull-ups

Analysis

Validity of Upper Body Tests
- Correlation of upper body strength
- 50% strength and 50% endurance
- Male: female

DISCUSSION AND CONCLUSION

This study investigated the validity of the 90° PSU and alternative tests (MPU and FAH) among middle school adolescents. While some reliability estimates within the study revealed levels of statistical acceptability, deficiencies also were identified for the FAH test item. Further studies need to continue the ongoing development of established healthy fitness zone classifications, particularly those of upper body strength and endurance. Future editions of the FITNESSGRAM® should consider the effectiveness of the FAH test item. If the PSU test is the recommended test item in terms of muscular strength and endurance classifications, consistency needs to continue to improve within the FITNESSGRAM®. The adaptation of criterion-referenced standards to suit current day society and increase the level of acceptability of the FITNESSGRAM® among physical educators and other practitioners. It is not to say that the current FITNESSGRAM® test items are not valid measures of upper body strength and endurance. Future research related to the validity of the different test items is needed to determine a stronger understanding of the FITNESSGRAM® effectiveness among society in the future.