12-2013

Validation of the Simple Activity Measurement Instrument (SAM) Using Heart Rate and Pedometry; Simple Activity Measurement Instrument (SAM) for Measuring MVPA in Physical Education
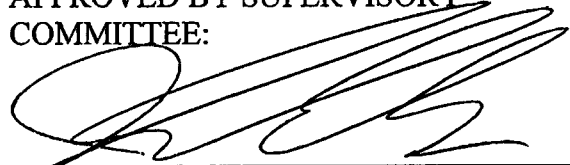
Joseph P. Anaya

Validation of the Simple Activity Measurement Instrument (SAM)
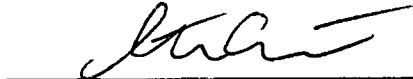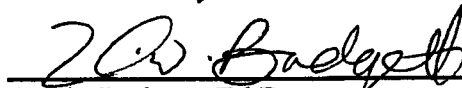## Using Heart Rate and Pedometry

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Validation of the Simple Activity Measurement Instrument (SAM)
Using Heart Rate and Pedometry

Simple Activity Measurement Instrument (SAM)
for Measuring MVPA in
Physical Education

By

Joseph P. Anaya, B.S.

PROJECT

Presented to the Graduate Faculty of Kinesiology

University of Texas of the Permian Basin

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Abstract

In order to battle obesity in our schools, Physical Education standards are working to become more and more in accordance with the Physical Activity Guidelines set by the U.S. Department of Health and Human Services, and the American College of Sports Medicine. Physical Education teachers would benefit from a tool that measures the amount and type of activity that students are involved in while they are in Physical Education. Many of the instruments that teachers use to assess students' physical activity are too expensive, too difficult and can be time consuming. The purpose of the current study was to test the reliability of a tool developed by Surapiboonchai, Furney, Reardon, Eldridge and Murray known as the Simple Activity Measurement (SAM) instrument. The instrument was used to assess MVPA during Physical Education classes. 40 students, both male and female, were randomly selected to represent the population (grades 9-12) at Moriarty High School. The students that were observed for MPVA wore a Pyle PHRM34 Heart Rate Monitor along with an Omron HJ-112 Premium Pedometer. The intensity of their activity was recorded on scale from 0-10. The SAM instrument was proven to be valid measurement of physical activity and a high predictor of Heart Rate ($r = 0.838$, $r^2 = 0.702$, $p < 0.05$) as well as a valid predictor of accelerator use ($r = 0.591$, $r^2 = 0.349$). The results of the study show that SAM is an economical and easy instrument to use to assess MVPA in Physical Education classes in grades 9-12.