

Presenting Research at the Society for Health And Physical Educators (SHAPE) of
America national convention in Tampa, Florida

By

Shelia L. Jackson, Ph.D.

Faculty Development Report
by
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Project Title: Co-presenter of poster presentation: “Comparison of Fitbits and Pedometers in Monitoring Elementary Students’ Activity”
Dr. Shelia Lucyle Jackson, Mrs. Cathryn Bass and Ms. Kaitlin Burgess

Abstract: I co-presented with Cathryn Bass and Kaitlin Burgess the poster presentation, “Comparison of Fitbits and Pedometers in Monitoring Elementary Students’ Activity.” Because I teach several classes in our department that prepare future teachers in health and physical education, it is important for me to stay apprised of the newest information and resources available in order to share that information to my students.

Purpose: The purpose of attending the convention was to present, enhance my professional growth, encourage the development of my students’ professional development, be a role model and support for my students, and gather pertinent information that I can share and disseminate in my classes.

Summary of findings:

Relationship Between Fitbits and Pedometers in Monitoring Elementary Students’ Activity

Thursday, Apr 11, 2019

09:45 AM - 11:15 AM

Location: Convention Exhibit Hall Poster Area 1

Intended Audience:

Background/Purpose: The purpose of this study was to determine if there is a significant ($p \leq .05$) relationship between Fitbit Charge HR and New-Lifestyles (Yamax) Digi-Walker SW-200 activity trackers’ step data worn by elementary students. A secondary purpose was to determine which type of tracker is best for elementary students to use for tracking steps and their administrative feasibility. This study is one of several from the project, Enhancing the **F**itness and **A**cademics of **C**hildren using **T**echnology in the **S**chools (Enhancing the **FACTS**).

Method: Seventy fourth grade students from a rural elementary school whose parent/s or guardian/s gave consent participated in the study. The students wore both activity trackers once a week during the day they had physical education. We met the students at their homeroom at 8:00 a.m. the days that class was scheduled to have physical education to help the students put on the Fitbits and Digi-Walkers and then again during physical education to help them take off the activity trackers. By the second week, the students no longer had to have assistance to put on the Digi-Walkers; however, all but two students had to have assistance to put on the Fitbits throughout the study, and many needed assistance in taking off the Fitbits. Ten Digi-

Walkers were replaced when the plastic backing cracked or broke off. The students were encouraged to look at, compare, and monitor their steps, heart rate, calories, etc. during recess and physical education but warned about doing so during class. Three Fitbits were taken away from students during the first two weeks of the study, but once the "novelty" wore off, the classroom teachers reported no problems. Although asked not to push the Digi-Walker reset button, 168 samples could not be used because students pushed the reset button at some point during the day. Over the course of 12 weeks, we collected 593 paired samples.

Analysis/Results: At the end of 12 weeks, we applied the step data from the 593 paired samples to an Intra Class Correlation and found a significant relationship ($r = .923, p < .001$) between the activity trackers.

Conclusions: There is a very high and significant direct correlation ($r = .923, p < .001$) between steps recorded by the Fitbit Charge HR and New-Lifestyles Digi-Walker SW-200. Even though none of the Fitbits broke during the study and none of the step data gathered by the Fitbits were lost, because the Fitbit Charge HR is six times more expensive than the New-Lifestyles Digi-Walker SW-200 and, for the most part, requires an adult to put it on and off a child, its administrative feasibility in these respects is less than the Digi-Walker. The administrative feasibility of the Fitbit is also lessened by the time and equipment it takes to download and charge the Fitbits. These are most likely some of the reasons Fitbit does not recommend their product for children.

Sub Session Speaker(s):

[Shelia Jackson](#)



[Cathryn Bass](#)



[Kaitlin Burgess](#)

In addition to the poster session in which I presented, I also attended these sessions:

Tennis. No Courts, No Equipment?, No Problem!! – The presenters of this session

gave many practical suggestions on teaching in less than the optimal situation that I can share with my students, since our students are often at schools with little equipment and/or facilities.

Major of the Year Award Ceremony and Reception – Two of our majors, Morgan Vaughan (HPE/TC) and Erin Hathorn (WS) were recipients of this award, and I attended the ceremony to support them.

FITstep Stream Pedometers, 24-hour Surveillance, and Curriculum – Because much of my research involves the use of activity trackers, I wanted to see how this was being conducted.

Closing General Session – Several major and controversial topics were addressed in this session.

Using Digital Observation Tools to Foster Game-Based Teaching – Because I observe interns, I wanted to see what new technology was available and its usefulness.

Inclusive Physical Education in Action! – I teach adapted and want to stay current regarding new practices for including students with disabilities in the physical education setting.

Physical Activity & Health Promotion, Teaching & Learning Poster Session – Going to this poster session allowed me to see a wide variety of research being conducted in many of my areas of interest.

Conclusions: The following study was presented at SHAPE America in Tampa, Florida, Thursday, April 11, 2019:

“Comparison of Fitbits and Pedometers in Monitoring Elementary Students’ Activity”
Dr. Shelia Lucyle Jackson¹, Mrs. Cathryn Bass² and Ms. Kaitlin Burgess¹, (1) Arkansas Tech University, Russellville, AR, (2) Center Valley Elementary School, Russellville, AR

You can find this presentation at the following link:

<https://myschedule.shapeamerica.org/SubSessionDetails.aspx?sessioncode=2507&subsession=1253>