



The Effects of Physical Education Credit Producing Activities on High School Students



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Introduction

The original intent for this project was to see what summative information could be drawn using the FITNESSGRAM. Researchers wanted to relate the FITNESSGRAM to variables like academic performance, amount of physical education, and the student's general idea of physical education. Over the past few years, researchers have found that students with a higher score on the FITNESSGRAM have a higher academic score on the T.A.K.S., better attendance, and less behavioral problems. Also, researchers were interested in determining if a participant's satisfaction level of the physical education experience had any impact on the FITNESSGRAM variables. This descriptive research was designed to better understand why these variables seem to correlate and if future interventions can be initiated to improve performance both physically and academically and possibly identify best practices in physical education.

Methods

Assessment tool: The researchers modified a questionnaire that addressed the enjoyment and satisfaction of their physical education experience and constructed additional self-reported questions to assess their performance on standardized state assessments as well as the FITNESSGRAM. Additionally, demographic information was collected to assure the sample was representative of the intended population and to identify any differences in response when grouped based on demographic data.

Participants: The sample of high school students ($n = 299$) were drawn from a local high school systematically. The questionnaire was distributed to randomly selected homeroom classes. Once classes were selected research assistants distributed parental passive consent forms to the students one week before the survey. No parents refused to allow their child to participate. All classes received the survey and had to complete them in the classroom under the supervision of the homeroom teacher. After all the surveys were completed, the homeroom teacher collected them and turned them into the office. I then followed up with random students in both observation and personal interviews.

Variables:

- Satisfaction of Physical Education Experience
- Enjoyment of Physical Education Class
- Academic Achievement on TAKS
- FITNESSGRAM Results

Statistical Analysis:

- Pearson's Product Moment Correlation was used to assess the various relationships of the variables.
- T-Test were performed to determine differences between groups based on demographic variables of age, grade, and sex.

Results

Results of the independent samples T-Test revealed no significant differences ($p < .05$) on the variables of interest based on demographic groupings with the exception that females reported significantly less enjoyment of physical education classes than males $t(297) = -3.74, p < .001$. Although significant, this result may not be meaningful as the mean scores on the five-point scale were 3.02 for females and 3.63 for males.

The results of the correlational analysis can be seen in the table below. Significant ($p < .05$) moderate to strong pair-wise correlations were found between reported FITNESSGRAM results and TAKS scores, and between enjoyment and satisfaction of physical education classes. Although significant, correlations between the enjoyment and satisfaction of physical education classes and the variables of fitness and academic achievement were weak. Please see the table below.

Interviews showed strong relationship between athletics and academics. Those students in physical education received a higher at risk score than those in athletics or another organization. One specific individual stated, "If it wasn't for athletics I would have already dropped out." This became a commonly shared view point among those at risk.

		Correlations							Average Satisfaction Score
		Reading	Writing	Math	Sci	SS	fitnessgram	Enjoy	
Reading	Pearson Correlation	1	.891**	.907**	.836**	.832**	.674**	.193**	.164**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.001	.005
	N	299	299	299	299	299	298	299	299
Writing	Pearson Correlation	.891**	1	.867**	.816**	.815**	.651**	.216**	.158**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.006
	N	299	299	299	299	299	298	299	299
Math	Pearson Correlation	.907**	.867**	1	.892**	.874**	.717**	.203**	.162**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.005
	N	299	299	299	299	299	298	299	299
Sci	Pearson Correlation	.836**	.816**	.892**	1	.931**	.753**	.210**	.132**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.022
	N	299	299	299	299	299	298	299	299
SS	Pearson Correlation	.832**	.815**	.874**	.931**	1	.768**	.171**	.065
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.003	.262
	N	299	299	299	299	299	298	299	299
fitnessgram	Pearson Correlation	.674**	.651**	.717**	.753**	.768**	1	.155**	.059
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.007	.306
	N	298	298	298	298	298	298	298	298
Enjoy	Pearson Correlation	.193**	.216**	.203**	.210**	.171**	.155**	1	.633**
	Sig. (2-tailed)	.001	.000	.000	.000	.003	.007		.000
	N	299	299	299	299	299	298	299	299
Average Satisfaction Score	Pearson Correlation	.164**	.158**	.162**	.132**	.065	.059	.633**	1
	Sig. (2-tailed)	.005	.006	.005	.022	.262	.306	.000	
	N	299	299	299	299	299	298	299	299

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Discussion

Upon completion of the collective data, interviews, and observations the researcher found that students who were "at risk" and participating in athletics reported that they "wanted to stay and pass." These students seem more likely to work harder in class to ensure they don't get kicked off the team. The researcher interviewed many students participating in physical education classes (not athletics) and learned that these students didn't see the point in passing or focusing on goals after high school. This does tie into Piaget's stages of development. A future study needs to be conducted to see if the at risk students are focusing on passing to play athletics; which is a short-term goal that collectively adds up to passing, long-term goal. This study could be used to explain the differences found in students that participated in physical education classes and other groups. One limitation of this study is that it relies heavily on self-reported data. A future study needs to target assessment data obtained from official records.