Spring 5-16-2014

Student Attitude and Gender in Relation to Student Participation in Physical Activity

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STUDENT ATTITUDE AND GENDER IN RELATION TO
STUDENT PARTICIPATION IN PHYSICAL ACTIVITY

A Capstone Experience/Thesis Project
Presented in Partial Fulfillment of the Requirements for
The Degree Bachelor of Science with
Honors College Graduate Distinction at Western Kentucky University

By
Kayla M. Steber
*****

Western Kentucky University
2014

CE/T Committee:
Dr. Pamela Jukes
Dr. Lisa Murley
Nathan Phelps

Approved by

________________________
Advisor
School of Teacher Education
ABSTRACT

The purpose of this research project was to determine how student gender and attitude toward physical activity correspond to student participation in physical activity in and outside the after-school program setting. Surveys were administered to parents and the lead counselor of five different after-school programs located in the south-central part of the United States. Surveys were used for data collection about student attitude and physical activity. The lead counselor at each site provided information regarding number of students in the program and the percent of students who were physically active at the after-school program. The parent survey gathered information on the student attitude and physical activity outside of the after-school program as well as parental attitude toward physical activity. It was concluded that gender does impact student activity level and the types of activities in which students participate. Males spend more time participating in physical and more vigorous activities than females. However, around fourth grade the percent of activity level begins to decrease for males and females. A link between student attitude and physical activity level could not be determined. Further research could be conducted to determine if the two are related.

Keywords: after-school programs; attitude; gender; participation; physical activity; student
Dedicated to all educators who inspired my pursuit of a career in teaching.
ACKNOWLEDGMENTS

I would like to thank my amazing advisors, Dr. Jukes and Dr. Murley, for guiding me through the research process every step of the way. Without their support, dedication, and critical feedback I would not have been able to produce this paper. Next, I want to thank Community Education for working with me and allowing me to use their after-school programs to collect data. The lead counselors and staff members at the after-school program were welcoming and accommodating. Furthermore, I would like to thank Paul Mooney who provided guidance through the Institutional Review Board process. Without his care and understanding I would not have been able to conduct my research. I want to thank the Honors College for the opportunity to engage in an undergraduate thesis project. The staff members encouraged the completion of a thesis project and helped answer any questions or concerns regarding my project. Lastly, I would like to thank my friends and family who supported me throughout the whole process. They were there to listen about ideas, frustrations, or concerns about this research project. Their thoughtful support allowed me to “keep the end in mind”.
VITA

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Objective:
To obtain an elementary education teaching position

Certification:
Grades K-5 May 2014

Education:
Western Kentucky University – Bowling Green, KY
Bachelor of Science Elementary Education May 2014
– 4.0 GPA
– Honors College Graduate

Experience:
International Student Teacher
Werne, Germany April-May ‘14
– Instructed ESL students in English
– Developed a video presentation about experience
– Attended professional development event

Student Teacher
Dishman-McGinnis Elementary School, Bowling Green, KY Spring 2014
– Completed 6 weeks of teaching: K-2 math class & 3-5 reading class
– Conducted leadership project entailing a possible reward trip for 3rd-5th grades
– Developed collaboration project to improve student behavior
– Implemented technology: class Dojo, math manipulatives, storyline online
– Executed co-teaching techniques to enhance teaching and lessons
– Attended faculty meetings and cluster planning meetings

Classroom Observation/Field Experience 2011-2013
– Completed over 200 field experience hours in Warren County/Bowling Green Schools
– Conducted lessons in science and social studies

Academic Awards:
Scholar Athlete of the Year May 2014
Outstanding Elementary Education Undergraduate Student  May 2014
Scholar of the College Award for School of Teacher Education  April 2014

Honors Thesis:
Student Attitude and Gender in Relation to Student Participation in Physical Activity
– Western Kentucky University REACH Conference  March 2014
– Research Across the Disciplines hosted by CEBS  March 2014

Leadership Experiences:
Kappa Delta Pi Member  2011-present
– President 2013-14, Historian 2012-13
– Planned literacy nights (Alvaton and Lost River Elem.), community service projects, Leader in Me book club, coordinated guest speakers for professional development

Extra-Curricular Experiences:
Assistant Coach for SKY Soccer Club  Present
FIFA certified soccer referee  2004-Present
Western Kentucky University Soccer Camps  June 2011-2013
Student-Athlete: WKU Women’s Soccer Team  2010-2013

Study Abroad:
England – Program on History and Religion  May/June 2013
Ecuador – Program on Development and Sustainability  January 2013
– Visited several elementary schools; Participated in Dental Varnish Project

Volunteer Work:
International Education Week  November 2013
– Participant in International Quiz Bowl
– A guide for the Giant Floor Map of South America
4-H Adult Camp Counselor  2008-2011

Professional Development:
Kappa Delta Pi webinars  2011-Present
Teach Like Your Hair is On Fire by Rafe Esquith  Fall 2012

FIELDS OF STUDY

Major Field: Elementary Education
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<td>13</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

In recent decades the United States experienced a dramatic increase in the number of children who are obese. According to the Centers for Disease Control and Prevention (CDC), more than 9 million children ages 6 to 19 are overweight or in danger of becoming obese, that number has tripled since 1980 (Cook, 2005). There are many factors contributing to this epidemic, including poor eating habits and physical inactivity. Obesity is a major health problem and if not addressed will potentially lead to serious health issues in this generation. Schools have the opportunity to educate students about the importance of exercising as part of a healthy lifestyle. However, in recent years schools have cut or even eliminated student opportunities to engage in physical activity. On average, elementary students currently receive structured physical education once a week in addition to 20-30 minutes of recess time per day. Elementary schools and teachers are focusing more on academic learning, which may be due to an increased emphasis on test scores. With less time devoted during the day for physical activity, one solution to this problem could be for after-school programs to promote physical activity. According to the Educational Broadcasting Corporation (2004), after-school programs are:

Community-driven, expanded learning opportunities that support developmentally appropriate cognitive, social, physical, and emotional outcomes. In addition, these
programs offer a balanced program of academic support, arts and cultural enrichment, recreation, and nutrition. After-school programs can run directly after school, or during evenings, weekends, summer vacations, and holidays (para. 1).

Recent research studies have attempted to calculate the number of minutes students spend being active in after-school programs. Beets, Huberty, and Beighle (2012) found that students spend approximately 26.6 minutes per day in physical activity. Their findings include a need for after-school programs to identify strategies that ensure students are sufficiently active. The National AfterSchool Association (NAA, 2011) suggests after-school programs allow students to obtain 30 minutes of physical activity per day. Based on the study by Beets, Huberty, and Beighle (2012), students are falling short of meeting the time recommended by the NAA. After-school programs have time designated for students to engage in physical activity, so why are students not active? Teachers and adult supervisors can offer students the opportunity to be active, but it is ultimately the student who has to be motivated to participate.

The purpose of this study is to determine how student gender and attitude toward physical activity correspond to student participation in physical activity in and outside the after-school program. This study will attempt to answer the following research questions:

1. How does student attitude toward physical activity impact student activity level?
2. How does gender affect student activity level and the types of activities in which students participate?
CHAPTER 2

METHOD

The researcher began by developing a project to investigate the relationship between student attitudes and gender with their level of physical activity in five elementary after-school programs. A parental survey was developed with questions addressing the child’s physical activity and attitude as well as parental attitude toward physical activity. A second survey was prepared to be administered to the lead counselors at each of the after-school programs. This survey gathered information related to the total number of students in the after-school program by grade and gender, the percentage of students active in the program, and in which activities the students preferred to participate (See Appendices A and B). The researcher contacted the Community Education Department staff, who operates the after-school programs in the targeted school districts, to seek approval for research. Then a research proposal was submitted to the university Human Subjects and Institutional Review Board (IRB). Upon IRB approval, the researcher established dates and times with Community Education to visit five different after-school programs and administer the survey to parents and the lead counselor at each site. At each after-school program the researcher asked each parent to complete the survey as they arrived to pick up their child. The research project was described and documentation was given to each parent explaining the purpose of the project. The parents had the option to not participate in the research. A survey was
completed for each child, so if a parent had more than one child in the after-school program multiple surveys were completed. Out of the 194 surveys distributed, 162 were completed and returned, an 83 percent return rate. The data from the surveys were entered in an Excel spread sheet. Help was sought from a Microsoft Excel expert who converted the data into percentages and comparisons for data analysis.
CHAPTER 3

RESULTS

The results from the data collection are presented below and organized by research question. Tables are used to display the data gathered from the parent and lead counselor surveys. The data provide evidence to support each research question.

Question 1: How does student attitude toward physical activity impact student activity level?

Several questions in the parental survey addressed student attitude toward physical activity. One question asked if the child requested the activities in which he or she participates. The results of this question are displayed in Table 1. Out of the 142 parents who responded to the question, 102 identified their children participating in more than one organized activity outside the after-school program.
As shown in Table 2, 144 out of 159 students requested the activities in which they participate (displayed in Table 1) and 15 students did not. Of the 15 students who did not request the activities there were eight male, six female, and one whose gender was not indicated on the survey. There were more male students who did not request activities. Of the fifteen students who did not request activities, five were second graders and four were kindergarteners. There were four parents who said their child did not request activities because the child did not participate in any activities.

Table 1  
Organized Activities Students Participate in Outside After-School Program

<table>
<thead>
<tr>
<th>Grade&lt;sup&gt;a&lt;/sup&gt;</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Running</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dance</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cheerleading</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Archery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseball/Softball</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Basketball</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Football</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soccer</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>4-H or Scouting</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Martial Arts</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Swimming</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hockey</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Two or more Sports</td>
<td>15</td>
<td>23</td>
<td>20</td>
<td>17</td>
<td>18</td>
<td>9</td>
<td>102</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Grand Total</td>
<td>26</td>
<td>29</td>
<td>32</td>
<td>22</td>
<td>21</td>
<td>12</td>
<td>142</td>
</tr>
</tbody>
</table>

<sup>Note. </sup><sup>a</sup> Grade Level begin with Kindergarten; 1 represents kindergarten.
Table 2
Students Requesting Activities

<table>
<thead>
<tr>
<th>Request Activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>144</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
</tr>
<tr>
<td>Grand Total</td>
<td>159</td>
</tr>
</tbody>
</table>

Table 3 displays the average percentage of students who are active by grade and gender. The lowest percentage of activity of female students was 57.5 in fifth grade; the lowest percentage of active male students was 72 in second grade. The percentage of active males exceeded 80 percent in all grades except second and fifth. The same cannot be said for the females; only three grades were higher than 80 percent. The highest percentage of active females was fourth grade at 87 percent. Overall, the percentage for students active in the after-school programs was an average of 77.71 percent.

Table 3
Lead Counselor data about the Females and Males in the After-School (ASP)

<table>
<thead>
<tr>
<th>Female</th>
<th>Grade</th>
<th># in ASP</th>
<th>Average % Active</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Crafts, Playground, Role Games, Tag</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>36</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>32</td>
<td>82</td>
<td>Crafts, Jump Rope, Role Game, Running, Swings</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>30</td>
<td>62</td>
<td>Hula Hoop, Playground, Running, Soccer</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>30</td>
<td>87</td>
<td>Crafts, Dance, Dodge ball, Playground, Softball</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>21</td>
<td>62</td>
<td>Dance, Dodge ball, Playground, Softball</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>15</td>
<td>57.5</td>
<td>Dance, Kickball, Tag</td>
</tr>
<tr>
<td>Grade&lt;sup&gt;a&lt;/sup&gt;</td>
<td># in ASP&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Average % Active&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Activities</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------</td>
<td>-----------------------------</td>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>28</td>
<td>86</td>
<td>Dodge ball, Gym, Kickball, Role games, Running</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>90</td>
<td>Dodge ball, Gym, Role games, Running</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>72</td>
<td>Baseball, Basketball, Dodge ball, Football, Gym</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>96</td>
<td>Basketball, Dodge ball, Gym, Role games, Running</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>21</td>
<td>81</td>
<td>Basketball, Dodge ball, Football, Gym, Running</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>73</td>
<td>Basketball, Gym, Tag</td>
<td></td>
</tr>
</tbody>
</table>

Note. ASP= After-School Program

<sup>a</sup> Grade Level begin with Kindergarten; 1 represents kindergarten.

<sup>b</sup> The number of students is a total of all five after-school programs.

<sup>c</sup> The percent of students active is an average calculated from all five after-school programs.

On the parental survey, the parents were asked if there was an improvement in their child’s attitude due to participating in physical activity. This question does not directly answer student attitude toward physical activity. However, if student attitude improves because of physical activity, one can assume the student has a positive view of physical activity. Table 4 displays that out of the 162 parent surveys collected, 152 responded that their children’s attitudes improved; ten parents indicated their children’s attitudes did not improve. When examining the ten students whose attitude did not improve, only students did not request the activities in which he/she participates. Gender did not appear to be a factor, as there was an equal number of female and male students whose attitudes did not improve. Out of ten students whose attitude did not improve, five
were in the fourth grade and the remaining five were in either kindergarten, first, or second grade. There is no clear explanation for why those students’ attitudes did not improve. Based on the data collected, there is not a clear correlation between student attitude and gender or grade level.

Table 4
Physical Activity Improving Attitude

<table>
<thead>
<tr>
<th></th>
<th>Improves Attitude</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>152</td>
<td>0.94</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>0.06</td>
</tr>
<tr>
<td>Grand Total</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

**Question 2: How does gender affect student activity level and the types of activities in which they participate?**

Gender does affect the physical activity levels of students. During the after-school programs a higher percent of males participate in physical activity compared to females; on average, 83.6 percent of males are active compared to 72.4 percent of females. When looking at grade level, male students are more active than female students. As noted in Table 3, the percentage of females who participate in physical activity begins to drop off after the fourth grade. The percentage of kindergarten females who participate in physical activity is 84%, while fifth grade it is 57.5% - a significant drop. Male student activity level is higher than female activity level in all grade levels; the lowest percent of activity for male students is second grade with 72 percent.

The data gathered from the counselors correspond to data gathered in the parent survey. Table 5 shows the average physical activity time per week for males and females, and Table 6 depicts the average time students spend participating in physical activity per
week by grade level. On average, males participate 4.6 hours and females participate 4.3 hours per week. The difference in time is 0.3 hours, which confirms that males spend more time participating in physical activity than females in and outside the after-school program.

The average time given for physical activity per week was also examined by grade level. Based on the data in Table 6, one can see that fifth grade students spend the most time participating in physical activity per week, with an average of five hours. The results indicate that students get approximately five hours per week of physical activity. Therefore, these students are receiving more than 30 minutes of physical activity per day, which is the recommended amount according to the National Afterschool Association (NAA, 2011). For example, in fourth grade students are participating in physical activity on average four hours per week. If the four hours were evenly divided throughout the week, students would be active for 35 minutes per day. However, the hours per week are an average; not all students are getting the necessary amount of physical activity needed. Parents made estimates as to how much time their children actually spend per week participating in physical activity, which may or may not be accurate. The data are an estimate of how much time students spend in and outside of the after-school program participating in organized sports and playing outside.
Table 5
Average Time Students Spend Participating in Physical Activity per Week by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Time</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>4.64</td>
<td>86</td>
</tr>
<tr>
<td>Female</td>
<td>4.30</td>
<td>73</td>
</tr>
<tr>
<td>Grand Total</td>
<td>4.48</td>
<td>159</td>
</tr>
</tbody>
</table>

*Note. Time is calculated in hours.*

Table 6
Average Time Students Spend Participating in Physical Activity per Week by Grades

<table>
<thead>
<tr>
<th>Grade</th>
<th>Time</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.00</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>4.61</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>4.74</td>
<td>34</td>
</tr>
<tr>
<td>4</td>
<td>4.85</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>4.00</td>
<td>24</td>
</tr>
<tr>
<td>6</td>
<td>5.00</td>
<td>12</td>
</tr>
<tr>
<td>Grand Total</td>
<td>4.53</td>
<td>160</td>
</tr>
</tbody>
</table>

*Note. Time is calculated in hours.*

\(^{a}\) Grade Level starts at Kindergarten; 1 stands for kindergarten.

Another question the parental survey addressed whether the child preferred physical activity or television. The data gathered led to some interesting findings and conclusions. Table 7 illustrates the number of students who preferred physical activity or television. More males were reported to prefer television over physical activity than females; 73.91 percent of the females preferred physical activity compared to 24.64 percent who preferred television. For the males, 59.30 percent preferred physical activity
and 40.70 percent preferred television. Overall, a total of 65.81 percent preferred physical activity over television, while approximately one-third of the students (33.55 percent) preferred television.

Table 7
Number of Students who Prefer Physical Activity or T.V. Based on Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Physical Activity</th>
<th>%Prefer Activity</th>
<th>Physical T.V.</th>
<th>%Prefer T.V.</th>
<th>Both</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>51</td>
<td>73.91%</td>
<td>17</td>
<td>24.64%</td>
<td>1</td>
<td>69</td>
</tr>
<tr>
<td>Male</td>
<td>51</td>
<td>59.30%</td>
<td>35</td>
<td>40.70%</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>102</td>
<td>65.81%</td>
<td>52</td>
<td>33.55%</td>
<td>1</td>
<td>155</td>
</tr>
</tbody>
</table>

*Note. Data retrieved from 155 surveys*

Table 8 displays that as students get older their preference for physical activity versus television begins to change, especially for males. In the third grade the percent of students who prefer physical activity was 72 percent. In the fourth grade, however, there is a shift; only 45.83 percent of the students prefer physical activity at that grade level.

The same trend is evident when examining the results displayed in Table 7 by gender. In the third grade, 64.29 percent of male students prefer physical activity and 35.71 percent prefer television. By the fourth grade, only 41.18 percent of male students prefer physical activity and 58.82 percent prefer television. By the time they reach fourth grade, more male students would rather watch TV than do some type of physical activity. For females, this shift occurs in the fifth grade. Data show that 25 percent of fifth grade females prefer
physical activity while 75 percent prefer television. Referring back to Table 1, one can see that there are many students who participate in two or more sports outside of the after-school program. Only in the upper grades does one begin to see a decrease in the number of sports in which students participate. There was only one fourth grade student out of 142 who did not participate in any activities. A correlation can be made between the data; as students become older their participation in activities decreases and preference for television increases.

The raw number of students who preferred physical activity or television is also illustrated in Table 8. Students in earlier grades prefer physical activity over television. However, the preference begins to shift around second grade for male students. Up until the second grade there was a clear distinction between the numbers of students who prefer physical activity over television. Then, in the second grade the difference begins to even out. There were eight out of fourteen—57.14 percent—of male students in the second grade who preferred physical activity, and nine out of fourteen—64.29 percent—of third grade male students who preferred physical activity over television. However, in the fourth grade only 7 out of 17 male students preferred physical activity over television.

Table 8
Number of Students who Prefer Physical Activity or T.V. Based on Grade Level

<table>
<thead>
<tr>
<th>Grade</th>
<th>Gender</th>
<th>Physical Activity</th>
<th>% Prefer Physical Activity</th>
<th>T.V.</th>
<th>% Prefer T.V.</th>
<th>Both</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Female</td>
<td>10</td>
<td>79.92%</td>
<td>2</td>
<td>15.38%</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>First</td>
<td>Male</td>
<td>10</td>
<td>66.67%</td>
<td>5</td>
<td>33.33%</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>First Total</strong></td>
<td></td>
<td><strong>20</strong></td>
<td><strong>71.43%</strong></td>
<td><strong>7</strong></td>
<td><strong>25.00%</strong></td>
<td><strong>1</strong></td>
<td><strong>28</strong></td>
</tr>
<tr>
<td>Second</td>
<td>Female</td>
<td>14</td>
<td>93.33%</td>
<td>1</td>
<td>6.67%</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>Male</td>
<td>13</td>
<td>76.47%</td>
<td>4</td>
<td>23.53%</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>
As noted in Table 6, the average amount of time devoted to physical activity per week increases from four hours in kindergarten to 4.85 hours in third grade, and then suddenly drops off to four hours in fourth grade. Table 6 data are consistent with the data from Table 8, which states more students preferring television in the fourth grade. These data do not align with the average number of hours students participate in physical activity students per week; however, the number of hours increases to five for fifth grade students which does not correlate to student preference. If students prefer spending time in front of the television instead of being active, then the number of hours would be lower. The fourth grade data are consistent in showing that as students become older and their preferences change so does the amount of physical activity.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second</td>
<td>13</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Third Female</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Third Total</td>
<td>21</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Fourth</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Fourth Male</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Fourth Total</td>
<td>18</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>Fifth Female</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Fifth Male</td>
<td>7</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Fifth Total</td>
<td>11</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>Sixth Female</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Sixth Male</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Sixth Total</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>

Note. * Grade Level begin with Kindergarten; 1 represents kindergarten.
The data gathered from the counselor survey at each after-school program correspond to student preference. As seen in Table 1, the percentage of female students participating in physical activity consistently decreases starting in the third grade, from 87 percent in the third grade to 57.5 percent in the fifth grade. The data reveal a similar occurrence for males. In the third grade 96 percent are active; and by the fifth grade that number drops to 73 percent. The number of active students begins to decrease around the fourth grade. This is consistent with students preferring television over physical activity in the upper grades; a connection could be made between the two.

The lead counselors made note of which activities students participated during the after-school program. The types of activities in which students participate somewhat depend on gender, although there were activities in which both males and females participated. As noted in Table 3, females participate in a wider variety of activities compared to males. Activities selected by females include dance, swinging, playing on the playground, jump rope, hula hoop, kickball and softball. Male students primarily play baseball, basketball, football, dodge ball, running, and free play in the gym. Both male and female students participate in vigorous activities. For example, male and female students in the after-school programs play tag and running games. According to the World Health Organization (2013, p.1), vigorous activity can be defined as an activity that “…requires a large amount of effort and causes rapid breathing and a substantial increase in heart rate.” Activities such as football, basketball, and running are examples of vigorous physical activity. The other category is moderate physical activity, which “requires a moderate amount of effort and noticeably accelerates the heart rate” (World Health, 2013, p.1). Female students participate in more moderate activities such as
dance, swinging, and hula hoop. This information correlates to the percentage of students active in the after-school program. The males participate in more vigorous activity and are more active overall than females.
CHAPTER 4

DISCUSSION

Results for research question one, “How does student attitude toward physical activity impact student activity level?” were inconclusive. With the data collected, a clear link between student attitude and physical activity level could not be determined. Further research would need to be conducted. However, there were several other conclusions one could infer from the data regarding attitude. When students are given the choice of what type of physical activity in which to participate their attitudes improve. For example, a child is given the opportunity to choose between playing basketball or football. The child chooses basketball. His attitude is more likely to improve because that is the activity in which he wanted to participate. Students in the younger grades did not request the activities in which they were involved. These students are still at an age where sometimes they do not have a choice in what activities they participate or know what activities in which they want to participate. The parents placed children in these activities for a variety of reasons and to give them an opportunity to be active. This could discourage the student away from forming a positive attitude toward physical activity. Being forced to do something could have negative consequences. Even at a young age students can make choices about activities in which they participate and have input into selecting those activities. Having an initial liking for an activity can mean the student is more willing to participate in the activity, which leads to a positive attitude and a possible increase in the
amount of physical activity. In the after-school programs, students are given a choice of physical activities in which they participate. In this study it was concluded that a high percentage of the students were active in the after-school programs. It can be concluded that when students are given the choice of the physical activity in which they participate their participation level will be higher. This is due to the students enjoying the activities in which they participate. Participation in physical activity may lead to an improved attitude, but attitude may not determine the amount and level of physical activity in which a student participates.

The second research question, “How does gender affect student activity level and the types of activities in which students participate?” was answered. The data collected from the surveys revealed a higher percentage of males participate in physical activity than females. Although the difference is small, males spend more time per week participating in physical activity compared to females. However, more males prefer watching television than physical activity starting around the fourth grade. The data gathered in the counselor and parent survey showed a decrease in the amount of physical activity in which males participated at that age. The after-school programs do not allow the students to watch television or play video games, which promotes physical activity. Only when television is an option do older males choose that over physical activity. According to an article from The Henry J. Kaiser Family Foundation (2009), “Forty-four percent of boys report playing video games compared to 17 percent of girls. Between ages eight through 13, boy game playing peaks at 47 minutes a day, on average” (para. 8). Males play video games more often than females; however, this does not mean that females are participating in more physical activity. As students become older, they begin
to determine their interests and what areas they are successful. This leads to a decrease in the number of organized sports students participate in and, in some cases, physical activity altogether. The types of activities in which males and females participate varies. Based on the information from the counselors and parents, males participate in more vigorous activities. However, females tend to participate in a wider variety than males. There were some activities that overlapped.

One can conclude that gender does affect the activity level of students and the types of activities in which they participate. After-school programs provide students with time to participate in physical activity. To increase student participation, the after-school programs should provide a variety of activities and allow the students to have the freedom to choose the type of physical activity in which to participate. Females participate in a wider variety and would benefit from having multiple activities from which to choose. Student choice correlates to student attitude and choice of the type of physical activity may lead to an improvement in student attitude.
CHAPTER 5

LIMITATIONS

Administering a survey to parents and the lead counselor limits the information one can gather about student attitude. Without interaction and direct answers from the students, it is difficult to gage whether or not attitude toward physical activity impacts activity level. There is an element of subjectivity in surveys which may have impacted the validity of the survey. The researcher was not able to make observations about the students during physical activity. An insignificant amount of data were gathered from sixth grade students, therefore, the results from this age level could not be used. Surveys were only gathered from five after-school programs in two school systems in the same geographic area; which limited the amount of data gathered as well as the population size.
CHAPTER 6

FURTHER RESEARCH

Further research would need to be conducted to determine if attitude affects the physical activity level of students. This could be accomplished by designing longitudinal study where the researcher interacts with a group of students over a period of time to determine their views on physical activity and how that correlates to their physical activity. Additional longitudinal studies could be conducted to track targeted students’ physical activity throughout the entire time they are in elementary school. Observations and other data could be gathered to determine how student attitude affects physical activity level. Further research could be conducted to examine why male students participate in more vigorous activities than female students.

Research could be conducted to assess how parent attitude toward physical activity affect the child’s views about physical activity. The researcher could interview family members to discover their attitudes toward physical activity. Specific demographic information could be gathered, such as parents’ job, household income, the number of parents in the house, to investigate how it affects the child’s amount and level of physical activity. The information on these topics was gathered from the survey but did not pertain to the research questions being studied. This demographic information may affect the child’s attitude towards physical activity.
REFERENCES


http://www.who.int/dietphysicalactivity/physical_activity_intensity/en/
APPENDIX A

Parent Survey (one per child)

School
- School A
- School B
- School C
- School D
- School E

1. What is your gender of your child?
- Male
- Female

2. What is the current grade level of your child?
- Kindergarten
- 1st
- 2nd
- 3rd
- 4th
- 5th
- 6th

3. What is the highest level of education completed in the home?
- some high school
- high school graduate
- some college
- trade/technical/vocational training
- college graduate
- some postgraduate work
- post graduate degree
4. What is the household level of income per year?
- up to $20,000
- $20,000 – 30,000
- $30,000 – 40,000
- $40,000 – 50,000
- $60,000 – 80,000
- $80,000 – 100,000
- $100,000 - more

5. How many adults are in the home?
- 1
- 2
- 3 or more

6. Which (if any) does your child participate in organized activities or clubs?
- Track, Cross Country, Running
- Dance
- Cheerleading
- Archery
- Baseball/Softball
- Basketball
- Football
- Soccer
- Tennis
- 4-H or Scouting
- Martial Arts
- Swimming
- Hockey
- Volleyball
- Gymnastics
- Cycling
- Something else (please specify)
7. How much time is dedicated per week to your child’s physical activity?
   - 1 hour
   - 2 hours
   - 3 hours
   - 4 hours
   - 5 hours
   - 6 or more hours

8. Does your child request this/these activities?
   - Yes
   - No

9. Does this meet your desired target for your child’s physical activity?
   - Yes
   - No

10. Does your child’s health show improvement with increased physical activity?
    - Yes
    - No

11. Does your child’s attitude improve with physical activity?
    - Yes
    - No

12. Which does your child prefer?
    - Physical activity
    - Time in front of the TV or with electronics

13. Does your child’s physical activity level interfere or improve grades?
    - Interfere
    - Improve
14. How much time is dedicated per week to parent physical activity?
- 1 hour
- 2 hours
- 3 hours
- 4 hours
- 5 hours
- 6 or more hours

15. Does this meet your desired target for your physical activity?
- Yes
- No
APPENDIX B

Survey (lead counselor)

School
☐ School A
☐ School B
☐ School C
☐ School D
☐ School E

1. How many students are in each grade level in this school’s after-school program?

☐ Kindergarten ______ Male ______ Female
☐ 1st ______ Male ______ Female
☐ 2nd ______ Male ______ Female
☐ 3rd ______ Male ______ Female
☐ 4th ______ Male ______ Female
☐ 5th ______ Male ______ Female
☐ 6th ______ Male ______ Female

2. How many of those students (by percentage) in each grade level are active in this school’s after-school program?

☐ Kindergarten ______% Male ______% Female
☐ 1st ______% Male ______% Female
☐ 2nd ______% Male ______% Female
☐ 3rd ______% Male ______% Female
☐ 4th ______% Male ______% Female
☐ 5th ______% Male ______% Female
☐ 6th ______% Male ______% Female
3. (By grade) What activities are preferred in this school’s after-school program?

<table>
<thead>
<tr>
<th>Grade</th>
<th>Preferred Activities</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>