Saugus Union School District has H.E.A.R.T.

Carol M. White Physical Education Program (PEP) Evaluation

Final Report

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WestEd

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Executive Summary

Saugus Union Elementary School District is an elementary district serving 10,242 students in fourteen K-6 schools. The district is located in Los Angeles County, California. The student population is multicultural, and the district has three Title I schools. District administrators identified the need for a consistent, district-wide Physical Education program, as well as, constructive activities for large groups at recess as the impetus for the H.E.A.R.T. physical education project. All fourteen schools were included in the grant. The program was developed to: (1) initiate a consistent physical education program for grades K-6; (2) obtain the necessary equipment; (3) incorporate educational nutrition programs in the curriculum; (4) address positive social and cooperative skills; and (5) provide staff development. Project H.E.A.R.T. relied on four programs to ensure students had access to and teachers had the skills to deliver a comprehensive physical education program that extended beyond the classroom.

Key Findings

- The average number of steps taken by students between October 2004 and May 2005 increased by 7,638 (48.6%)
- There was a sharp decrease (8 percentage points) in self-reported bullying among fifth graders (42% to 34%, respectively)
- There was a forty-four percent (44.3%) increase in the percent of students scoring above 40 on the Clark Motor Skills Inventory (58.7% and 84.7% at weeks 1to 16)
- Body composition among 5th grade students increased by nearly 32% between 2004 and 2005 (16.9% and 22.4%, respectively, falling outside the Healthy Fitness Zone (HFZ)

Comments

The aim of the H.E.A.R.T. program at Saugus Union School District was to provide an environment in which students could keep physically active. The program was offered to all schools in the District and was embraced with varying degrees of acceptance. The principal at each school selected a coordinator who received a stipend to act as a liaison between the school and district office and to be responsible for data entry on

student surveys, Clark Motor Skills Inventory scores, and the We Count Pedometer program. Although the program was offered to all teachers and PE specialists, it was not mandatory for staff to participate in trainings or other program components. The PE specialists were paraprofessionals, hired separately from the teachers and some lacked classroom management skills. They were the most resistant to the programs. Alternatively, primary teachers quickly saw that the program filed a hole in their physical education program and incorporated the activities into their daily lessons.

There are several limitations to the findings. One, implementations varied in dosage across schools. Two, due to the weather, one of the primary components, the playground markings, were only completed at one site. Three, although eventually all of the required equipment was delivered to schools, it was late in the year and did not allow for maximum exposure to the program components and activities. And four, the data were entered by school staff into a database created by a consultant and then provide to the evaluator as an Access database. There was no ongoing monitoring of the quality of the data collection or of response rates with the exception of the data collected using the California Healthy Kids Survey. The evaluator was only involved in secondary analyses, thus allowing for gaps in process and outcome data interpretation.

That being said, the school environment issues such as bullying and feelings of safety, seemed to improve over the course of the grant, and the students for which there was more consistent implementation, improved as assessed by the Clark Motor Skills Inventory and the We Count pedometer program. There were benefits that reached students in spite of the inconsistencies in implementation that may not have been obtained without the opportunity to participate in the program.

Saugus Union School District has H.E.A.R.T.

Carol M. White Physical Education Program (PEP) Evaluation

Final Evaluation

Background

Saugus Union Elementary School District is an elementary district serving 10,242 students in fourteen K-6 schools. The district is located in Los Angeles County, California. The student population is multicultural, and the district has three Title I schools. District administrators identified the need for a consistent, district-wide Physical Education program, as well as, constructive activities for large groups at recess as the impetus for the H.E.A.R.T. physical education project. All fourteen schools were included in the grant. The program was developed to: (1) initiate a consistent physical education program for grades K-6; (2) obtain the necessary equipment; (3) incorporate educational nutrition programs in the curriculum; (4) address positive social and cooperative skills; and (5) provide staff development. Project H.E.A.R.T. relied on four programs to ensure students had access to and teachers had the skills to deliver a comprehensive physical education program that extends into recess, lunch, and after school opportunities. There was a high level of district support. School administrators attended trainings and received the message about the importance of systematizing physical education and movement into the daily school routine.

The programs and the targeted grade levels are shown in **Table 1**.

Table 1. Programs by grade level

Program	Grade
Perceptual Motor Development Program (PMD)	K-2
Dynamic Physical Education Program (DPE)	3-6
Peaceful Playgrounds Program	K-6
Play Hard, Eat Smart Team Nutrition Program	K-6 After school

The evaluation was conducted to assess the impact of the program and is organized by Program Activities, Performance Measures, and Performance Outcomes in this report. Data collection instruments and tables depicting results are found in the Appendix.

Program Activities

The Perceptual Motor Development Program follows the guidelines of developing the fundamental movement skills. This program was implemented with K-2 students due to the emphasis on fundamental motor skill development and the need for a district wide curriculum and training program.

The *Dynamic PE Program* was selected to provide a comprehensive curriculum, which emphasizes fitness and healthy lifestyles, as was needed to fill the curriculum gap identified in the needs assessment data relating to multiple curricula and students out of healthy fitness zones as measured by the California Fitnessgram. The program was implemented with 3rd through 6th grade students at each school.

The *Peaceful Playground Program* extends the Fundamental Movement Program into recess and after school activities through the use of activity guides, which list developmentally appropriate games, each with a specific motor development skill identified and categorized for students (K, K-3, 3rd —6th), grass games, and activities. It was selected because program elements include instruction in and assessment of children's physical fitness through the use of pedometers to monitor their activity levels pre and post implementation of adding designs to PE and playground areas. It is best known for providing a safe environment for children to learn pro-social skills while engaged in physical activity. In addition to receiving instruction in cooperative play, problem solving strategies, and conflict resolution options, students learn to play appropriately during physical education, recess, the classroom, home, and community. The program was selected to achieve both the increased physical activity objectives.

The students received instruction in a wide variety of developmentally appropriate games and activities that are cooperative, competitive, and cognitive. The program provides for visual patterning to reinforce and enhance instruction in fundamental movement through the use of skipping tracks, galloping tracks, hopping and jumping grids, etc. Additional perceptual motor skills are enhanced through the use of the scattered circles in which students are instructed in body and space concepts.

Bean Bag Toss, Alphabet Grids and other markings provide opportunities for hand-eye coordination activities. The addition of permanent playground markings is one of the latest trends in physical education and one of the most respected strategies for increasing children's physical activity.

The *Play Hard, Eat Smart Team Nutrition Program* was proposed to offer guides for teachers to offer developmentally appropriate skills; introduce students to new, challenging, and enjoyable activities and nutrition information; involve school food services personnel in providing information in the cafeteria that supports the classroom lessons; and provide at "at home" component to parents to reinforce school-based activities.

Data Collection

Procedure and Instruments

The PEP Site Coordinators at each of the 14 sites were responsible for data collection and data entry. The district contracted with an outside company to create an online data collection system the streamline the data collection/entry process and provide consistence. WestEd was responsible for analyzing the data.

The *Clark Motor Development Scale* was administered by PE specialists in one Kindergarten, one first, and one second grade class at each school at baseline and at the end of the school year. This scale measures perceptual-motor skills in young children and is designed for administered by a teacher or PE specialist. Thirteen items comprise seven performance scales: balance, large coordination, space, flexibility, space, and relaxation. Some of the items require assessment on both the right and left sides of the body. Students are scored points for accurate total performance on each of the thirteen items. The total possible score is fifty-six points.

The *Student Recess Feedback Form* was completed by students from two classrooms in each of the 14 schools: a fifth grade class and one other (the grade level taught by the coordinator). It was administered at baseline, in mid-spring, and at the end of the school year by the teachers. This is a nine-item survey asking students various questions about their recess experiences on a given day. They are asked if they enjoyed recess, which equipment they used, who they played with, and problems they experience with other children (bullying) or problems they observed such as breaking recess rules.

The *Physical Activity Survey* was completed by the same classes who completed the Recess Survey at baseline and at the end of the school year. This survey is comprised of ten items assessing behaviors, attitudes, and intentions around physical activity.

The *"We Count" Weekly Step Record* was used by one fifth grade class at each site. Students were provided with pedometers to use during the school day. Students recorded their daily step record for sixteen weeks. The data were entered by the PEP Coordinator for all measures.

The *California Healthy Kids Survey (CHKS)* is required every other year in all California schools. The survey was administered to all fifth grade students with active parent permission to participate. It assesses a variety of health and risk behaviors, attitudes and beliefs. Seven items were selected from the CHKS to assess perceptions of safety, body image, and activity level.

The *California Fitnessgram* is administered with fifth, seventh, and ninth grade students each year in California schools by PE teachers. The Fitnessgram assesses six physical fitness tasks (aerobic capacity, body composition, abdominal strength, trunk extension, upper body strength, and flexibility) and indicates the percent of students achieving all to none of the standards by grade level. The Fitnessgram was used to track fitness results for fifth grade student in years 2003-04 and 2004-05.

Performance Measures and Outcomes

Table 2.1 Performance measure #1

Performance Measure	Performance Outcome
The percentage of students actively participating in PE activities will increase.	**1.1.** Increase by 5% the number of students who meet or exceed 6 fitness standards for their grade. **1.2.** Increase by 10% the steps taken by students in physical activity including PE, recess, and after school activity. **1.3.** Increase motor skills markings and playground activity markings by 15% by December 2004. **1.4.** Decrease by 2% the number of students who fall outside of the recommended BMI score. **1.5.** Decrease the percentage of students being bullied at recess by 7%.

Table 2.2 Performance measure #2

Performance Measure	Performance Outcome
Provide professional development and curriculum materials so that teachers receive training to instruct students in meeting state standards in PE.	**2.1.** Increase pre-and post-test score by 25% indicating gain in student knowledge of nutrition and healthy eating benefits, of regular physical activity. **2.2.** Increase pre-and post-test score by 25% indicating teachers' knowledge and confidence in teaching concepts of nutrition and fitness and their ability to implement effective physical education practices to instruct students to State Standards. **2.3.** Recommended amount of specific equipment distributed to each school site to insure activity and instructional materials available. **2.4.** Seventy percent of students will acquire skills toward State Standard I in PE as demonstrated by students scoring in the 40-52 ranges on the Clark Motor Skills Inventory. **2.5.** Eighty percent of PE specialists, teachers, and yard aides will participate in 15 hours of professional development activities.

Results

Performance Measure #1: The percentage of students actively participating in PE activities will increase.

Objective 1.1. Increase by 5% the number of student who meet or exceed 6 fitness standards for their grade.

Results from the District Fitnessgram conducted on 5th grade students in May 2003 and 2005 provide the data for this performance measure. A comparison of the 2004 and 2005 outcomes is provided in **Table 3**. To achieve a 5% increase is students meeting or exceeding 6 fitness standards the 2004-05 results should have increased from 36.2% to 38.1%. However, the 2004-05 results show that a smaller proportion of 5th grade students (33.2%) achieved 6 of 6 fitness standards compared to 36.2% in 2003-04.

Objective 1.2. Increase by 10% the steps taken by students in physical activity including PE, recess, and after school activity.

The *We Count Pedometer Program* was used to monitor activity levels among fifth grade students. One, fifth grade class at each school site participated in a sixteen-week step counting program (n=357). Each class was provided with a set of pedometers for students to use during the regular school day and record their daily step record. This strategy provided students with an opportunity to self assess their activity level, and literature suggests that goal-setting activities provide children with motivation to increase their activity levels.

The average number of steps taken by students across a sixteen week period between October 2004 and May 2005 **increased by 7,638 (48.6%). This exceeds the goal of a 10% increase by four times**. **Figures 1 and 2** depict the changes across time for the pedometer readings. The number of students for whom there was pedometer data dropped dramatically after Week 8 ranges from approximately 280 students at Week 1 to 66 at Week 16. The mean number of students across the sixteen-week period was 204. **Using data for only students with complete data, the average number of steps increased from 12,180 to 56,684, an increase of 44,604 (78.7%).** Clearly those who continued to monitor were more active when compared to the average across students, which supports the hypothesis that goal setting and self-assessment of behavior improves the target behavior.

Objective 1.3. Increase motor skills markings and playground activity markings by 15% by December 2004.

One school, Cedar Creek, was the model for the playground markings. While all of the schools were scheduled to have the paintings completed during the school year, the heavy rains prevented this from happening at all schools. Ultimately all schools will be painted, but only one was completed during the program implementation timeframe. Therefore any results, except those at Cedar Creek can be attributed to this strategy.

Objective 1.4. Decrease by 2% the number of students who fall outside of the recommended BMI score.

Results for BMI (body composition) are provided in **Table 3** as one of the six components of the California Fitnessgram Health Fitness Zones (HFZ). Body composition among 5th grade students increased by nearly 32% between 2004 and 2005 (16.9% and 22.4%, respectively, falling outside the Healthy Fitness Zone (HFZ).

Objective 1.5. Decrease the percentage of students being bullied at recess by 7%.

Two surveys were used to assess changes in perceived bullying by students. The *Recess Survey* was a nine-item survey administered pre and post intervention to two classrooms per site (one 5th grade and one at the grade level taught by the PEP grant site coordinator). Five hundred eighty-seven (587) students completed the *Recess Survey*, and the PEP Coordinator entered the data. The *California Healthy Kids Survey* (CHKS) was administered to all fifth grade students in the Fall 2003 and Spring 2005. Results for the items asking about bullying from both surveys are shown in **Table 5**. **Data from the Recess Survey suggests a reduction in perceived bullying on the day of the survey.** There was no difference between pre and post when asked about being bullied in the "past week". However, data from the 2003-04 and 2004-05 CHKS show a **sharp decrease (8 percentage points) in self-reported bullying among fifth graders (42% to 34%, respectively)**.

Performance Measure #2: Provide professional development and curriculum materials so that teachers receive training to instruct students in meeting state standards in PE.

Objective 2.1. Increase pre-and post-test score by 25% indicating gain in student knowledge of nutrition and healthy eating, benefits, of regular physical activity.

Unfortunately, the District did not receive the *Play Hard, Eat Smart* resource kit until late in the spring semester during administration of the standardized testing schedule. There were no opportunities to train teachers and implement the materials for any length of time before summer vacation. However, the materials were distributed to sites and ongoing technical assistance was available for teachers needing assistance implementing the materials. The *Physical Activity Survey* asked questions about physical activity behaviors, attitudes and beliefs. Students (n=572) completed the survey at the same time as the *Recess Survey*. Results from this survey are presented in **Tables 8.1-8.10** and **suggest that students are exercising for longer periods of time with 47.6 percent reporting that when they exercise they do it for 60 minutes or more at pre test compared to 53.9 percent at post.** When asked how many times they performed the activity **33.9 percent responded "more than six times per week" at pre compared to 45.7 percent at post**. Knowledge about the benefits of regular physical activity improved slightly between with 74.3 percent responding that regular

exercise helped prevent all three diseases (cardiovascular disease, diabetes, and obesity) at pre compared to 78.2 percent at post. Responses to the other questions were mixed.

Objective 2.2. Increase pre-and post-test score by 25% indicating teachers' knowledge and confidence in teaching concepts of nutrition and fitness and their ability to implement effective physical education practices to instruct students to State Standards.

A District-developed survey entitled *Developmentally Appropriate Physical Education Quiz* was administered to teachers at the first session of trainings before the HEART program was implemented in the District. The program coordinator collected the quiz at the end of trainings. Forty-five teachers completed the pre-survey and twenty-four completed the post survey. There is complete data (pre/post) for six of the fourteen schools. Four schools did not complete either pre- or post- surveys, and four completed pre but not post surveys. The staff administering the surveys noted that although participants were provided with instructions on how to complete it, there was disparity in compliance with the instructions. Many teachers completed the survey in groups, which provided biased responses to the questions. It was recommended that the data for this survey be dropped from the evaluation.

Objective 2.3. Recommended amount of specific equipment distributed to each school site to insure activity and instructional materials available.

The appropriate equipment was provided to each school as recommended for the program (bean bags, CDs, balls). Equipment was ordered and delivered prior to the beginning of trainings in late February.

Objective 2.4. Seventy percent of students will acquire skills toward State Standard I in PE as demonstrated by students scoring in the 40-52 range on the Clark Motor Skills Inventory.

The *Clark Motor Skills (CMS) Inventory* was used in Grades K-2 to assess students' perceptual-motor skills development gains during the program. It was completed for one class per grade level (K-2) at each site during Week 1 and Week 16 (n=678 students). Teachers attended two half-day trainings on perceptual-motor development including training on how to use the *Clark Motor Skills Inventory* with their students. There was in increase in the percent of students scoring above 40 on a scale of 1-52 on the CMS between pre and post. **Fifty-eight percent (58.7%) of students**

scored above 40 at baseline (Week 1) with 84.7 percent scoring above 40 at Week 16, a 44 percent increase. These scores suggest that the teacher training and implementation of the Perceptual Motor Development Program were successful in improving perceptual-motor skills among these students.

Objective 2.5. Eighty percent of PE specialists, teachers, and yard aides will participate in 15 hours of professional development activities.

The numbers of certificated and classified staff attending trainings varied by schools. Twenty-five principals and/or assistant principals attended the overview meeting offered to all administrators. Two thirds of the yard aids, teachers, and PE specialists attended the training for Fundamental and Dynamic PE meeting the objective for PE specialists, teachers, and yard aides to participate in 15 hours of professional development activities. Four different trainings were offered targeting grade 3-6 teachers, grade K-2 teachers, all grade level teachers, yard aides, administrators, and parents. There was a great deal of staff overturn during the grant period. Staff attending the first training were offered opportunities to return to training after experimenting with strategies offered at the trainings so that they could ask questions. Primary teachers were more likely to ask for help.

Discussion

The aim of the H.E.A.R.T. program at Saugus Union School District was to provide an environment in which students could keep physically active. The program was offered to all schools in the District and was embraced with varying degrees of acceptance. The principal at each school selected a coordinator who received a stipend to act as a liaison between the school and district office and to be responsible for data entry on student surveys, Clark Motor Skills Inventory scores, and the We Count Pedometer program. Although the program was offered to all teachers and PE specialists, it was not mandatory for staff to participate in trainings or other program components. The PE specialists were paraprofessionals, hired separately from the teachers and some lacked classroom management skills. They were the most resistant to the programs. Alternatively, primary teachers quickly saw that the program filed a hole in their physical education program and incorporated the activities into their daily lessons.

There are several limitations to the findings. One, implementations varied in dosage across schools. Two, due to the weather, one of the primary components, the playground markings, were only completed at one site. Three, although eventually all of

the required equipment was delivered to schools, it was late in the year and did not allow for maximum exposure to the program components and activities. And four, the data were entered by school staff into a database created by a consultant and then provide to the evaluator as an Access database. There was no ongoing monitoring of the quality of the data collection or of response rates with the exception of the data collected using the California Healthy Kids Survey and the State website Fitnessgram data. The evaluator was only involved in secondary analyses, thus allowing for gaps in process and outcome data interpretation.

That being said, the school environment issues such as bullying and feelings of safety, seemed to improve over the course of the grant, and the students for which there was more consistent implementation, improved as assessed by the Clark Motor Skills Inventory and the We Count pedometer program. There were benefits that reached students in spite of the inconsistencies in implementation that may not have been obtained without the opportunity to participate in the program.

Appendix

Table 3. Percentage of students outside the Healthy Fitness Zone (HFZ) 2004 & 2005

	Fitness Event					
Grade 5 Combined	**Aerobic Capacity**	**Body Composition**	**Abdominal Strength**	**Trunk Extension Strength**	**Upper Body Strength**	**Flexibility**
2003-04 (n=1481)	28.4%	16.9%	14.7%	18.7%	16.9%	24.0%
2004-05 (n=1553)	23.2%	22.3%	17.2%	20.4%	19.9%	30.7%
	Number of Fitness Standards Achieved					
	6 of 6	**5 of 6**	**4 of 6**	**3 of 6**	**2 of 6**	**1 of 6**
2003-04 (n=1481)	36.2	32.1	17.5	8.8	2.4	1.5
2004-05 (n=1553)	33.2	30.1	18.5	10.2	4.6	2.6

Table 4. Number of participants at pre and post measures

Measure	Pre (N)	Post(N)
Clark Motor Development Scale (CMS)	678	671
Student Recess Feedback Form	587	436
Physical Activity Survey	572	499
"We Count" Step Record	357	357
CHKS (pre 2003-04; post 2004-05)		777

Table 5. Percent of students reporting that they were bullied

	Pre	
Question		**Post**
Bullied today*	4.1%	1.6%
Bullied in the past week*	10.2%	10.1%
Hit or pushed at school by kids not playing around**	42.0%	34.0%

***Recess Survey: Response options "yes" or "no"**

****CHKS 2003-04 and 2004-05: Response options "yes" at least some of the time to all of the time**

Table 6. CHKS Results 2003-04 and 2004-05

Item	Percent 2003-04	Percent 2004-05
Did you participate in the pedometer "We Count" program?	**NA**	**Yes**
		34.8%
Do other kids hit or push you at school when they are not just playing around?	**Yes**	**Yes**
	41.8%	30.4%
No, never	58.2%	69.6%
Yes, some of the time	34.3%	26.6%
Yes, most of the time	4.5%	3.0%
Yes, all of the time	3.0%	0.8%
Do you feel safe at school?	**Yes**	**Yes**
	96.0%	96.6%
No, never	4.0%	3.4%
Yes, some of the time	8.5%	8.4%
Yes, most of the time	21.1%	33.5%
Yes, all of the time	60.5%	54.6%
Do you think you are too skinny, about right, or too fat?		
Too skinny	7.0%	7.4%
About right	81.6%	79.1%
Too fat	11.3%	13.5%
Are you doing anything to try to lose weight?	**Yes**	**Yes**
	31.1%	38.5%
Have other kids at school ever teased you about what your body looks like?	**Yes** 24.4%	**Yes** 25.1%
Yesterday, how much time did you spend watching TV or playing video games?		
None, I didn't watch TV yesterday	19.0%	18.4%
Less than 1 hour	32.4%	33.1%
About 1 hour	21.7%	24.4%
About 2 hours	13.9%	13.9%
3 or more hours	13.0%	10.3%
How many days each week do you exercise, dance, or play sports?		
0 days	4.2%	2.4%
1 day	3.7%	1.5%
2 days	9.1%	5.7%
3 days	14.7%	10.6%
4 days	13.5%	11.7%
5 days	15.4%	14.5%
6 or 7 days	39.4%	53.6%

Table 7.1 Results from Recess Survey - How did you enjoy recess today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Positive	477	340	81.3	78.0
Neutral	90	83	15.3	19.0
Negative	20	13	3.4	3.0
Total	587	436	100.0	100.0

Table 7.2 Results from Recess Survey - Did you check out any play equipment today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	219	169	37.3	38.8
No	368	267	62.7	61.2
Total	587	436	100.0	100.0

Table 7.3 Results from Recess Survey - Did you play in a game today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	447	332	76.1	76.1
No	140	104	23.9	23.9
Total	587	436	100.0	100.0

Table 7.4 Results from Recess Survey - If Yes, did you mostly play:

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Alone	10	8	2.2	2.4
With one other person	86	51	19.2	15.4
With a group	351	273	78.5	82.2
Total	447	332	100.0	100.0

Table 7.5 Results from Recess Survey - If with one or more others, how often did the others you played with follow the game's rules?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
All the time	205	156	46.4	47.4
Most of the time	170	128	38.5	38.9
Some of the time	67	45	15.2	13.7
Total	442	329	100.0	100.0

Table 7.6 Results from Recess Survey - Did you use any painted areas on the blacktop during recess today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	290	170	49.4	39.0
No	297	266	50.6	61.0
Total	587	436	100.0	100.0

Table 7.7 Results from Recess Survey - Did you use any climbing equipment during recess today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	104	75	17.7	17.2
No	483	361	82.3	82.8
Total	587	436	100.0	100.0

Table 7.8 Results from Recess Survey - Did you have problems with other children during recess today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	115	54	19.6	12.4
No	472	382	80.4	87.6
Total	587	436	100.0	100.0

Table 7.9 Results from Recess Survey - Walk away

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	32	15	27.8	27.8
No	83	39	72.2	72.2
Total	115	54	100.0	100.0

Table 7.10 Results from Recess Survey - Talk through it

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	62	31	53.9	57.4
No	53	23	46.1	42.6
Total	115	54	100.0	100.0

Table 7.11 Results from Recess Survey - Use "Rocks, Paper, Scissors"

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	15	10	13.0	18.5
No	100	44	87.0	81.5
Total	115	54	100.0	100.0

Table 7.12 Results from Recess Survey - Did you see other children break recess rules today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	224	152	38.2	34.9
No	363	284	61.8	65.1
Total	587	436	100.0	100.0

Table 7.13 Results from Recess Survey - Were you bullied at recess today?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	24	7	4.1	1.6
No	563	429	95.9	98.4
Total	587	436	100.0	100.0

Table 7.14 Results from Recess Survey - Have you been bullied at recess during the last week?

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	60	44	10.2	10.1
No	527	392	89.8	89.9
Total	587	436	100.0	100.0

Table 8.1 Results of Physical Activity Survey - This is how much physical activity I perform each day.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
None	7	10	1.2	2.0
At least 20 minutes	112	69	19.6	13.8
At least 40 minutes	181	151	31.6	30.3
At least 60 minutes	272	269	47.6	53.9
Total	572	499	100.0	100.0

Table 8.2 Results of Physical Activity Survey - I perform this much activity (your answer from question 1) this many times per week.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
None, I'm not active	6	8	1.0	1.6
1-2 times per week	84	53	14.7	10.6
3-5 times per week	288	210	50.3	42.1
6+ times per week	194	228	33.9	45.7
Total	572	499	100.0	100.0

Table 8.3 Results of Physical Activity Survey - Exercise is fun.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	524	462	91.6	92.6
No	48	37	8.4	7.4
Total	572	499	100.0	100.0

Table 8.4 Results of Physical Activity Survey - I would rather watch TV or play video games than play a game such as basketball, soccer, football or any other exercise-related activity.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	135	103	23.6	20.6
No	437	396	76.4	79.4
Total	572	499	100.0	100.0

Table 8.5 Results of Physical Activity Survey - I like to exercise because it makes me look good and feel good.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	481	421	84.1	84.4
No	91	78	15.9	15.6
Total	572	499	100.0	100.0

Table 8.6 Results of Physical Activity Survey - I'm going to look at my exercise habits and see how I can improve them.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	308	254	53.8	50.9
Maybe	235	207	41.1	41.5
No	29	38	5.1	7.6
Total	572	499	100.0	100.00

Table 8.7 Results of Physical Activity Survey - I'm going to make time for exercise in my life.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	441	381	77.1	76.4
Maybe	115	99	20.1	19.8
No	16	19	2.8	3.8
Total	572	499	100.0	100.0

Table 8.8 Results of Physical Activity Survey - I'm going to try to exercise regularly all my life so I can be healthy.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Yes	467	413	81.6	82.8
Maybe	95	80	16.6	16.0
No	10	6	1.7	1.2
Total	572	499	100.0	100.0

Table 8.9 Results of Physical Activity Survey - This is how many steps are recommended that I take every day.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
5000-9000	183	136	32.0	27.3
9001-11000	162	133	28.3	26.7
11001-13000	135	136	23.6	27.3
13001-15000	92	94	16.1	18.8
Total	572	499	100.0	100.0

Table 8.10 Results of Physical Activity Survey - Physical activity helps prevent.

	Frequency		Percent	
	Pre	**Post**	**Pre**	**Post**
Cardiovascular disease	48	24	8.4	4.8
Diabetes	37	24	6.5	4.8
Obesity	62	61	10.8	12.2
All of the above	425	390	74.3	78.2
Total	572	499	100.0	100.0

Figure 1. Average steps per week

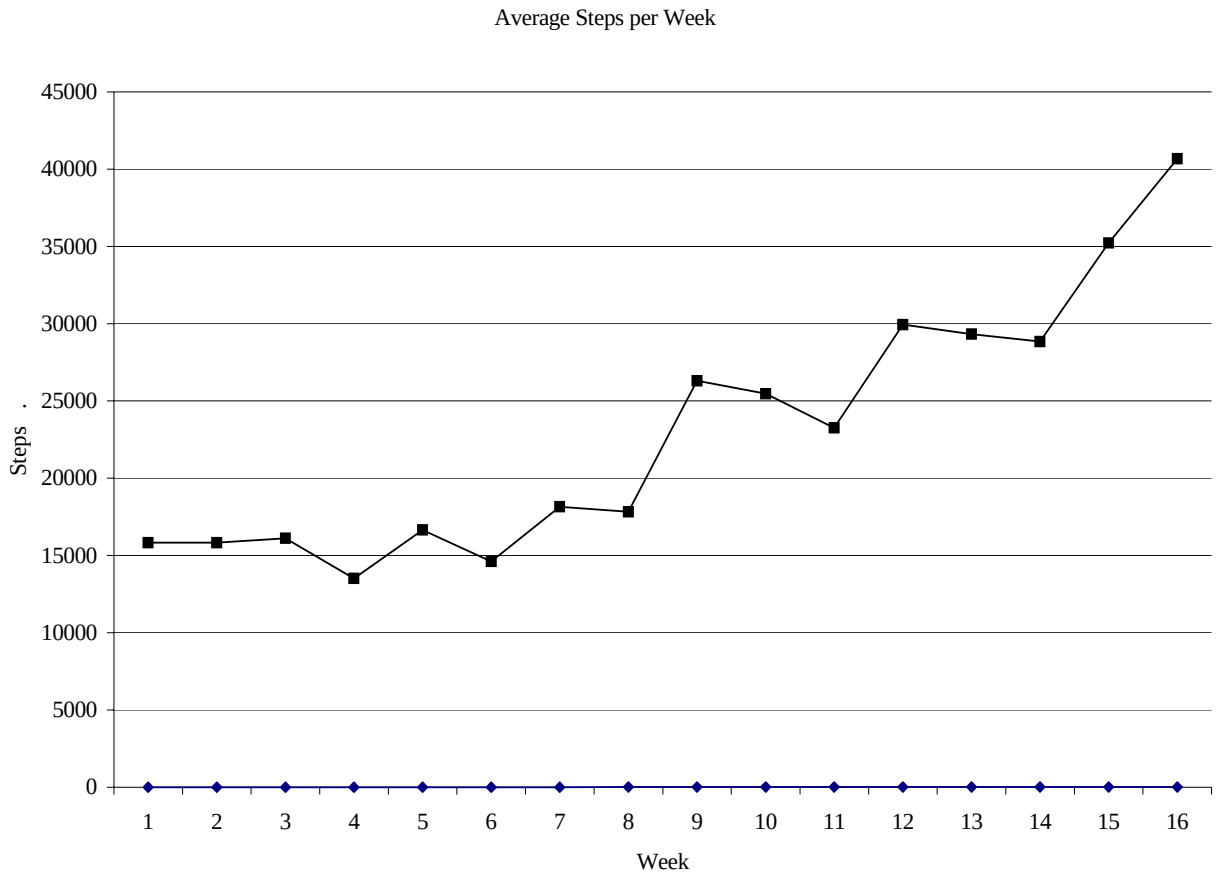

Figure 2. Average steps per week (students with complete data)