

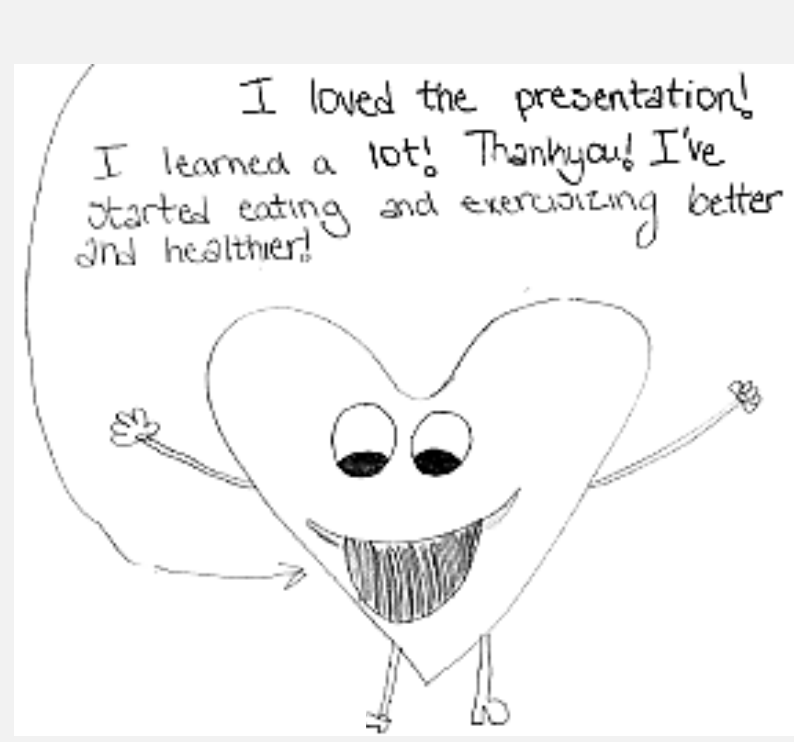
Healthy Hearts Impact Study

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Abstract

Healthy Hearts elementary aged education program is a population based in-school program offered by the Poudre Valley Health System (PVHS). The program is aimed at reducing a child's risk for CVD, through education and empowerment. The purpose of this study was to determine the impact of the HHC program on knowledge and behaviors related to CVD risk in two classrooms over a 6 month period.

Teacher and Student Feedback



"I LOVED the Healthy Hearts program. It is a huge help to me with meeting health standards and science standards. I use it as a kick-off to my lessons on the circulatory and respiratory systems. I also really like the free screenings, especially because our lower income students can't usually afford to get the screenings."

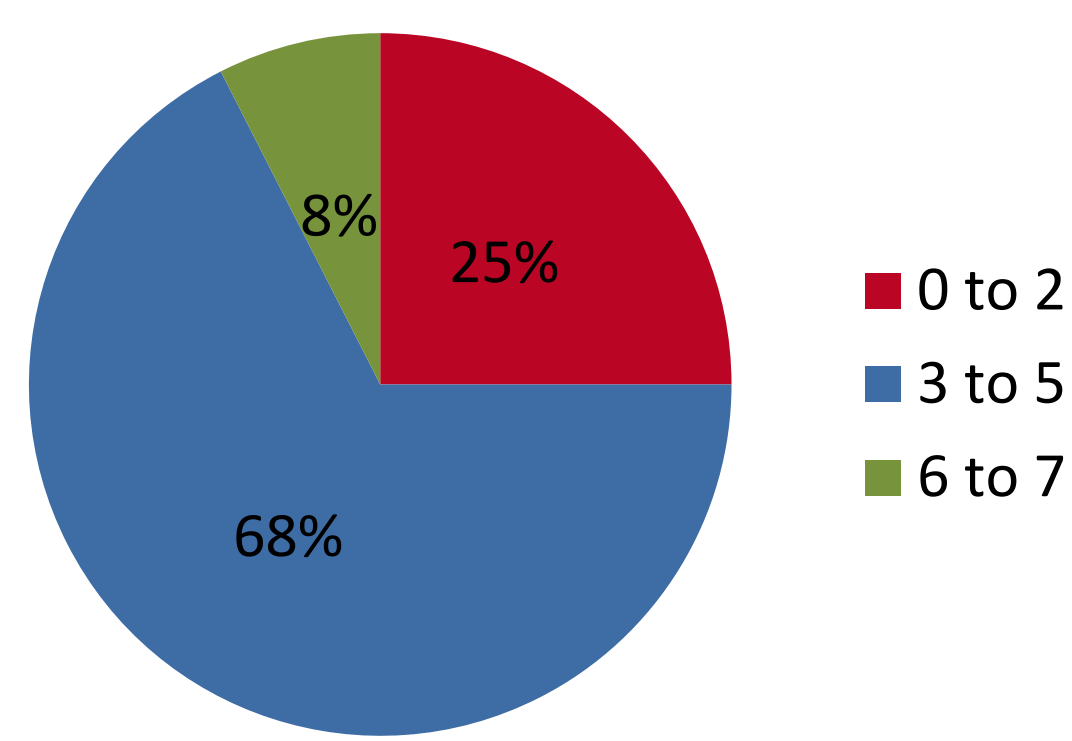
"It is nice to have someone else present to the students as an expert, as the listening does change. It will be fun for this program to see how kids will change over the years."

"The students really enjoyed the program. They learned new things about human bodies, hearts, cholesterol, and stress. They also said they will make healthier choices in the future as a result of the class! Thank you!"

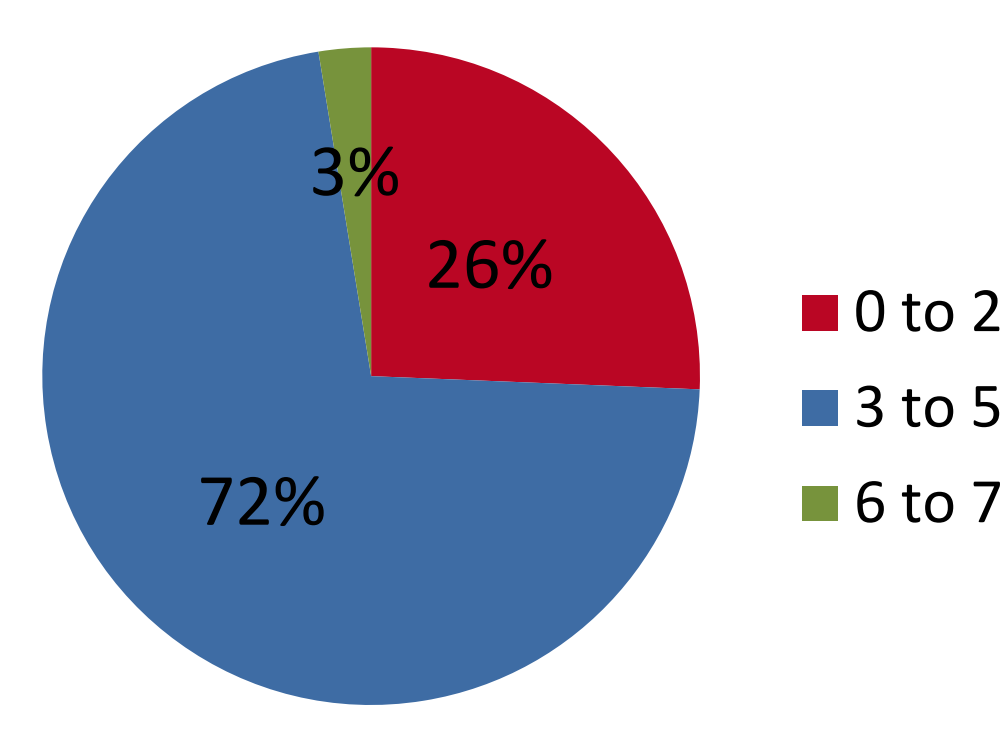
Control School

Intervention School

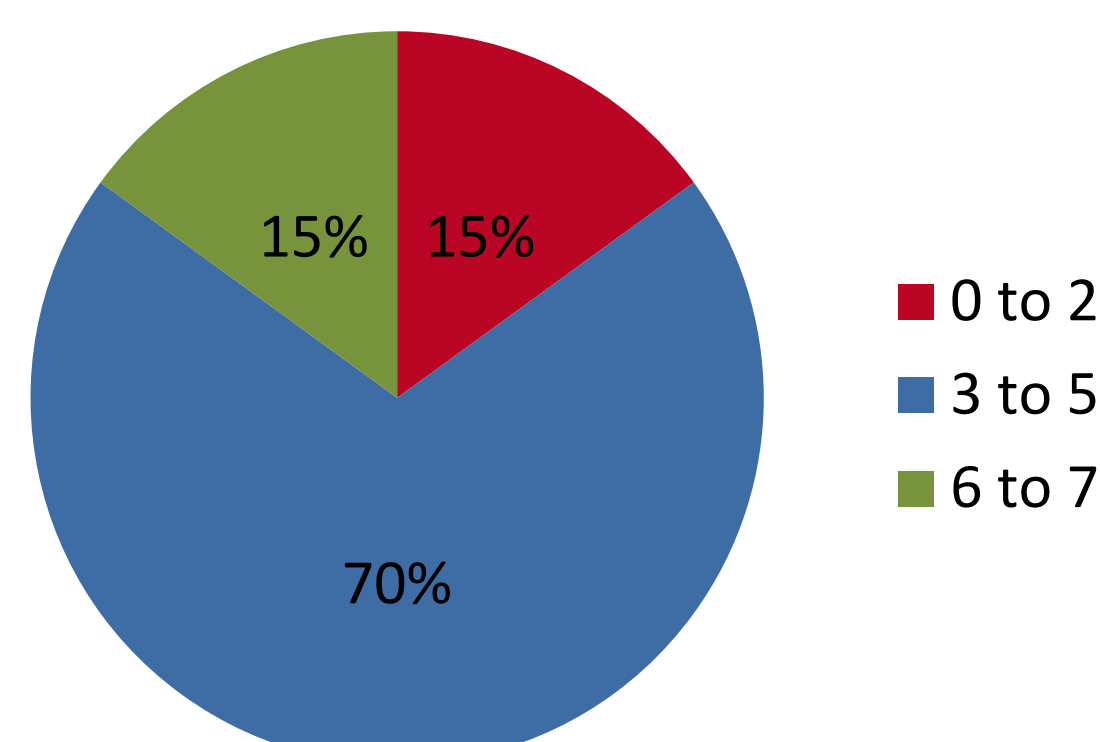
Ideal Health Behaviors Pre Healthy Hearts Education



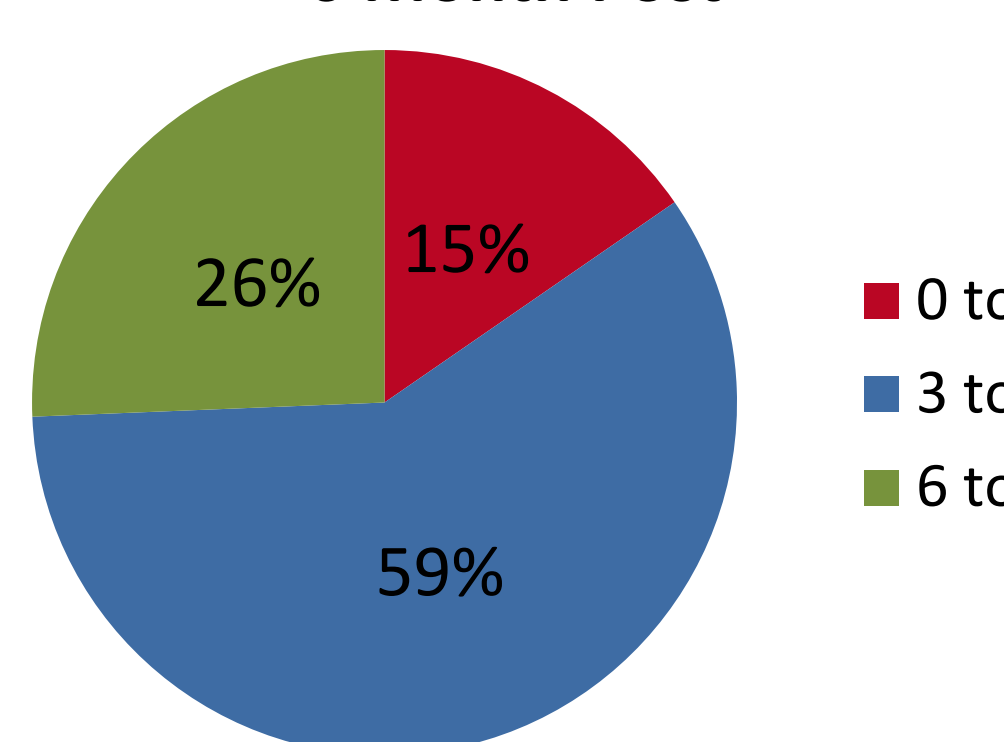
Ideal Health Behaviors Pre Healthy Hearts Education



Ideal Health Behaviors 6 Month Post



Ideal Health Behaviors 6 Month Post



7 Ideal Behaviors Measured

- Sugar-added drinks 3 or less per week
- Sugary foods 2 or less days per week
- 60 min physical activity 6-7 days per week
- 5 servings fruits and vegetables combined 7 days per week
- Breakfast 6-7 days per week
- Fish 1 serving or more per week
- Zero 2nd hand smoke "Be a smoke free zone"

Methods

The HHC is currently offered to 4th and 5th graders in six Northern Colorado school districts. The program includes a three lesson education unit, health behavior survey and objective measures of total cholesterol, high-density lipoprotein cholesterol, blood pressure, height and weight.

Two classrooms (N=39 intervention group; N=40 control; both schools = ~ 80% white, 11% Hispanic) located in two schools in Thompson School District participated in this randomized intervention study. The intervention classroom received the full education program while the control classroom received no intervention. The control and intervention school completed the knowledge test and health behavior survey at baseline, 1 week, 3 and 6 months post-participation. Independent t-tests and a 2 X 4 repeated measures ANOVA were used to analyze the data.



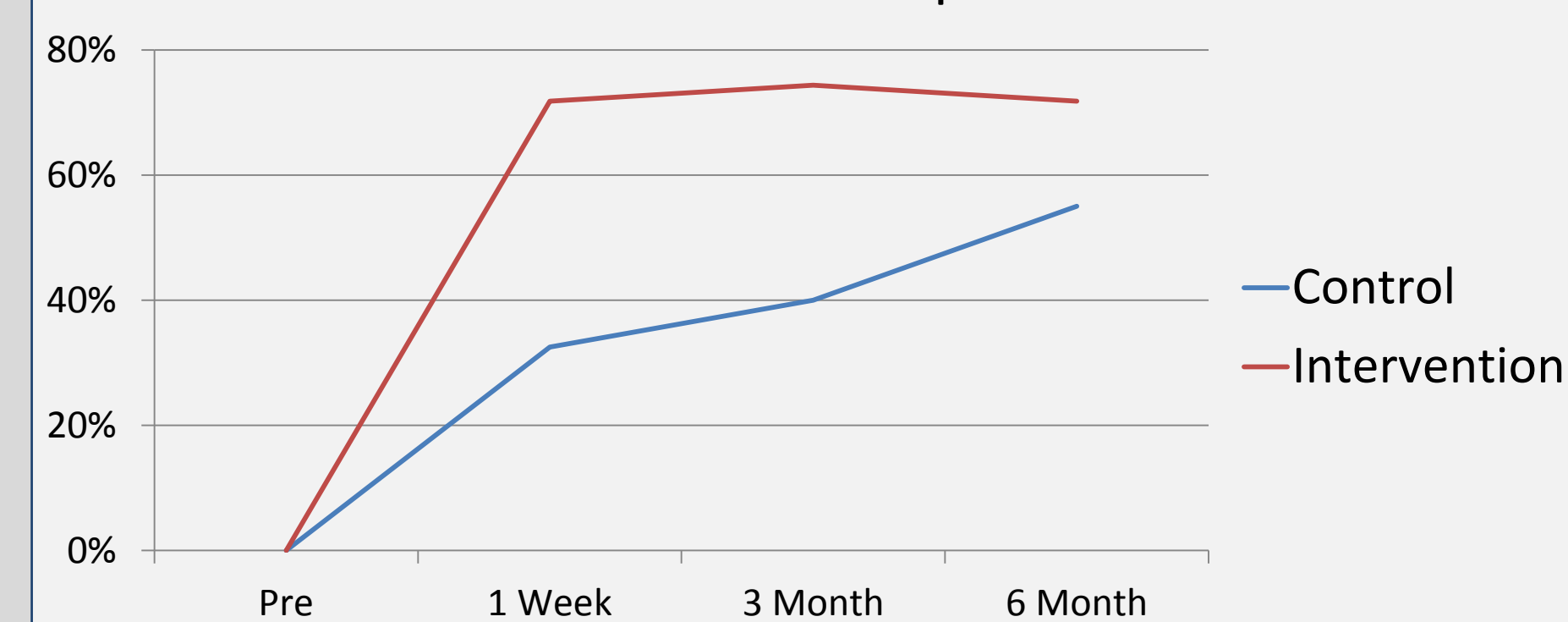
Implications

Northern Colorado children may benefit from implementing the HHC to all 4th and 5th grade classroom as a standard part of their Health and Wellness curriculum.

Future study considerations: 1) Measure impact of program instruction led by the classroom teacher versus health educator; 2) Analyze student's recapture data in 10th grade for sustained impact; 3) Compare students receiving 5th and 10th grade Healthy Hearts education versus those who receive the additional 7th grade time point; 4) Evaluate program effectiveness when delivered as part of a district curriculum versus a district that the program is offered site-based.

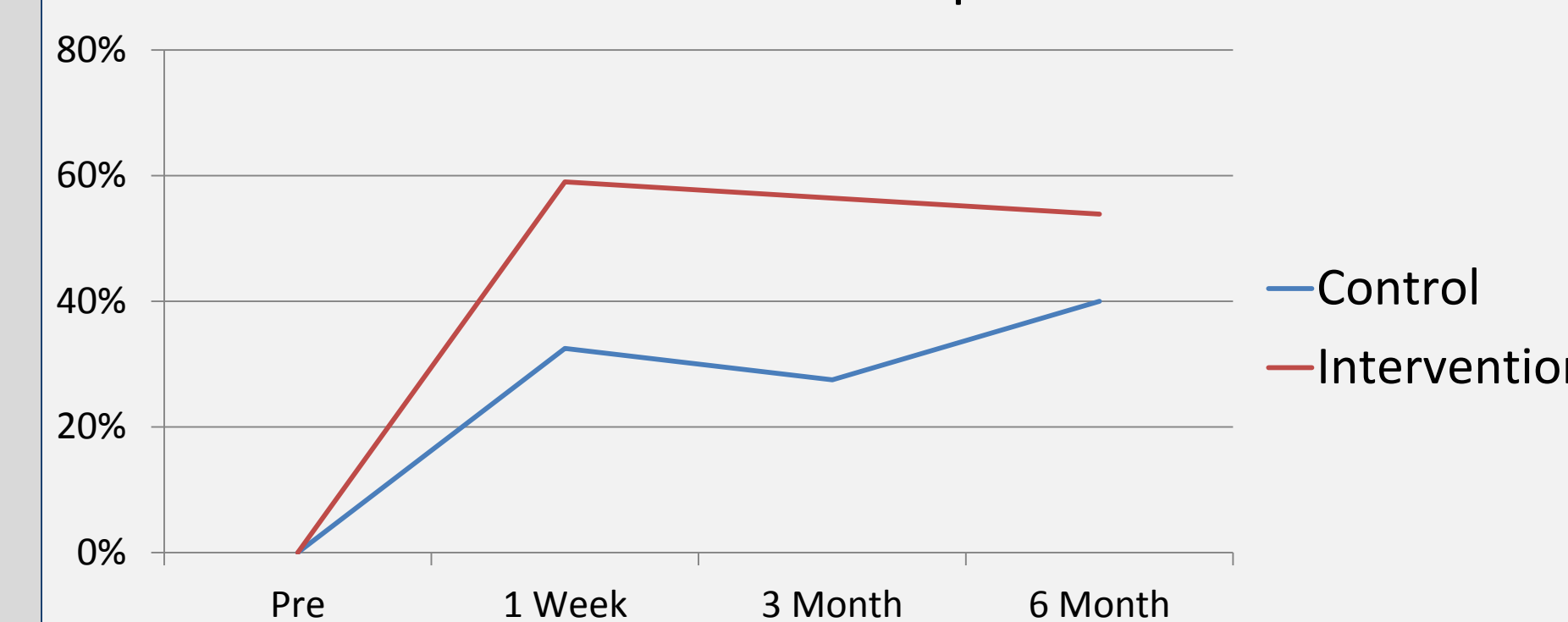
Fruit and Vegetable Consumption

% of students improved



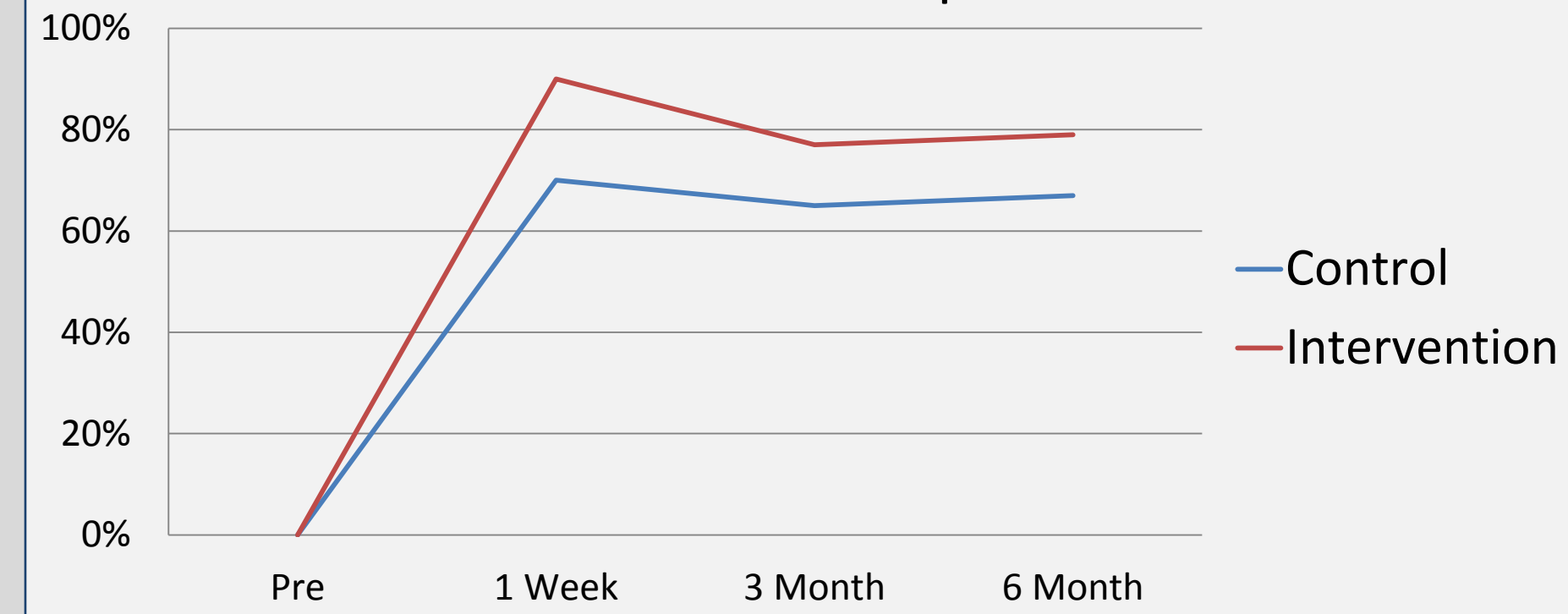
Physical Activity

% of students improved



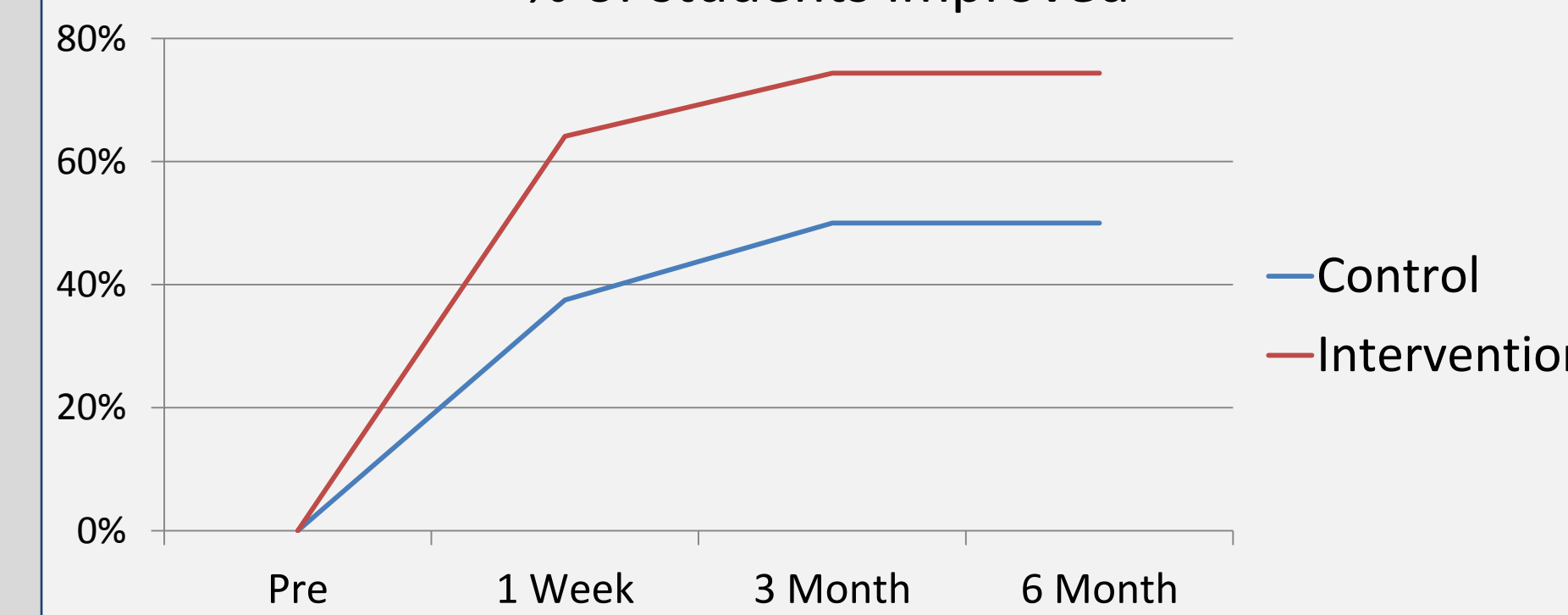
Second Hand Smoke Exposure

% of students improved



Sugary Food Consumption

% of students improved

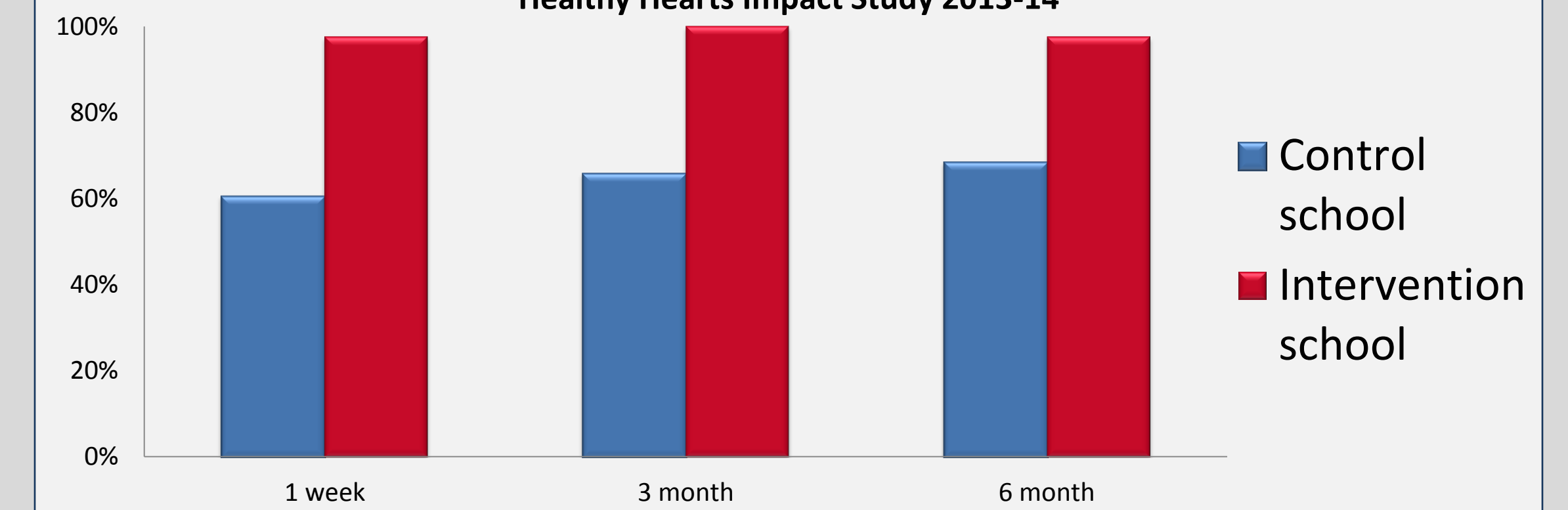


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2. Lloyd-Jones, DM, Hong, Y, Labarthe, D, et al (2010). Defining and setting national goals for cardiovascular health promotion and disease reduction: The American Heart Association's strategic impact goal through 2020 and beyond. *Circulation*, 121(4):586-613.
3. Inman DD, van Bakergem KM, Larosa AC, Garr DR, Evidence-based health promotion programs for schools and communities. *Am J Prev Med*. 2011 Feb; 40(2):207-19.
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Knowledge Gained

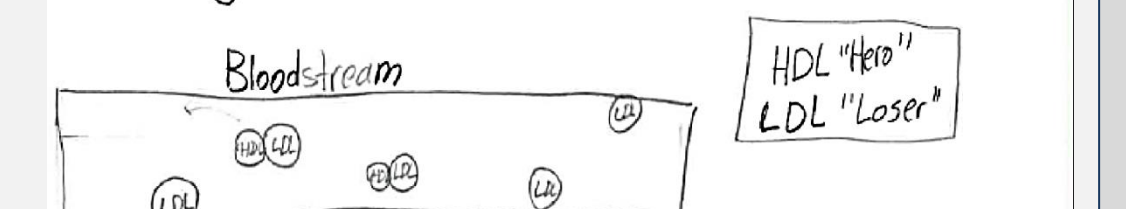
Healthy Hearts Impact Study 2013-14



Education 3-day Presentation

- Cardiovascular anatomy
- Risk factors for heart disease
- Healthy eating
- Physical activity
- Tobacco avoidance
- Stress management
- 5210 Goal setting
- Health screening: Total cholesterol, HDL, ratio, Body Mass Index, and Blood Pressure,

"I learned a lot during the Healthy Hearts program, but I was the most interested in learning about LDL and HDL. Before this, I knew nothing about cholesterol. I enjoyed learning about the healthy foods for HDL. I also loved getting my finger poked. I showed my parents all about this program, and they were excited. If I have any feedback, it is to continue teaching this outstanding program!"



Results

At baseline the two classrooms were similar for gender, number of ideal health behaviors and self-reported health; the control school scored significantly better on the baseline knowledge test. Knowledge significantly improved in the intervention school relative to the control school and this gain remained significantly higher at 1 week, 3 months and 6 months. Number of ideal behaviors obtained also improved over the four time points with more ideal behaviors obtained in the intervention school 1 week and 3 months after the intervention.



Acknowledgments

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