

The COPE Healthy Lifestyles TEEN Randomized
Controlled Trial: Immediate and Six Month
Effects on High School Adolescents' BMI, Psychosocial
Outcomes and Academic Performance

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Overview of the Symposium

- The purpose of this symposium is to describe the immediate and six month post-intervention findings from a randomized controlled trial that tested the efficacy of the COPE (Creating Opportunities for Parent Empowerment) Healthy Lifestyles TEEN (Thinking, Emotions, Exercise, Nutrition) Program, versus an attention control program (i.e., Healthy Teens), on the healthy lifestyle behaviors, psychosocial outcomes and academic performance of 779 fourteen to 16 year old high school adolescents who are predominantly Hispanic in the Southwest Region of the United States.

Overview of the Symposium

- The first paper will describe differences between the COPE and attention control teens on immediate and 6 month post-intervention outcomes will be presented.
- The second paper will describe intervention fidelity by the teachers who were delivering the COPE program and lessons learned to improve fidelity in future studies.
- The third paper will describe themes in the adolescents and parents' evaluation feedback of the program.
- Implications for practice and future research will be highlighted throughout the presentations.

Significance of the Problem

- Currently, 32% of adolescents are overweight (gender and age specific BMI at or above the 85th %) or obese (BMI at or above the 95th %); and the prevalence is higher in Hispanic teens



One in 3
people will
have
diabetes
by 2050

Significance of the Problem

- One in 4 adolescents has a mental health problem and less than 25% receive any treatment
- Hispanic and White teens are more likely to report depression and feelings of worthlessness
- There is a higher incidence of mental health disorders in overweight/obese teens
- Our research has shown that the higher level of depressive and anxiety symptoms and the lower self-esteem, the less teens believe they can engage in healthy behaviors



Significance of the Problem

- Of those intervention studies conducted, most combine nutrition education, activity and behavior modification without a mental health component, which have not tended to produce long-term positive outcomes
- Major flaws exist in prior intervention studies
- *Knowledge alone usually does not change behaviors!*

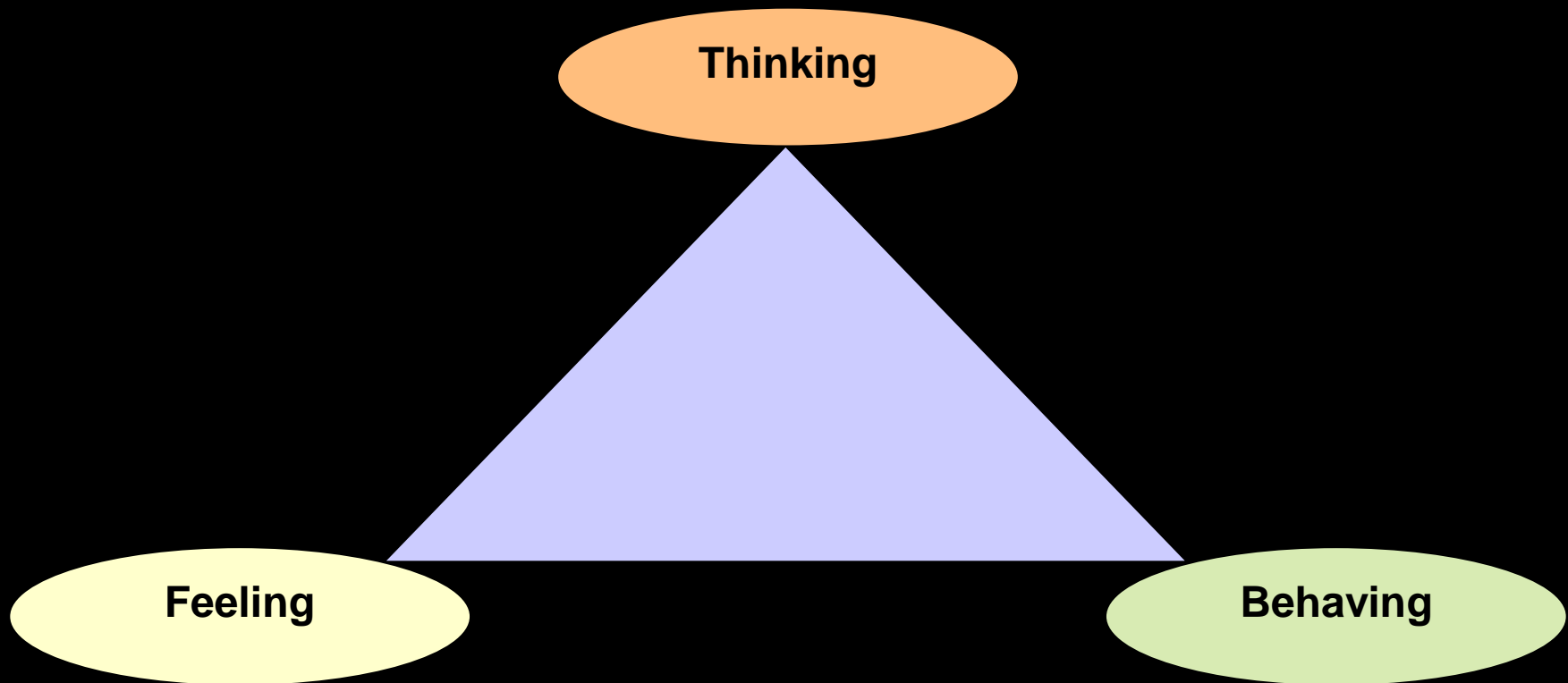


The COPE Healthy Lifestyles TEEN Program

- A 15 session cognitive-behavioral skills building program that includes physical activity in each session
- All sessions are manualized and interactive, with an emphasis on the practice of cognitive-behavioral skills building activities and role playing
- Includes many case-based examples

Cognitive Theory Guides COPE, which Emphasizes Cognitive Restructuring, Problem Solving and Behavior Change

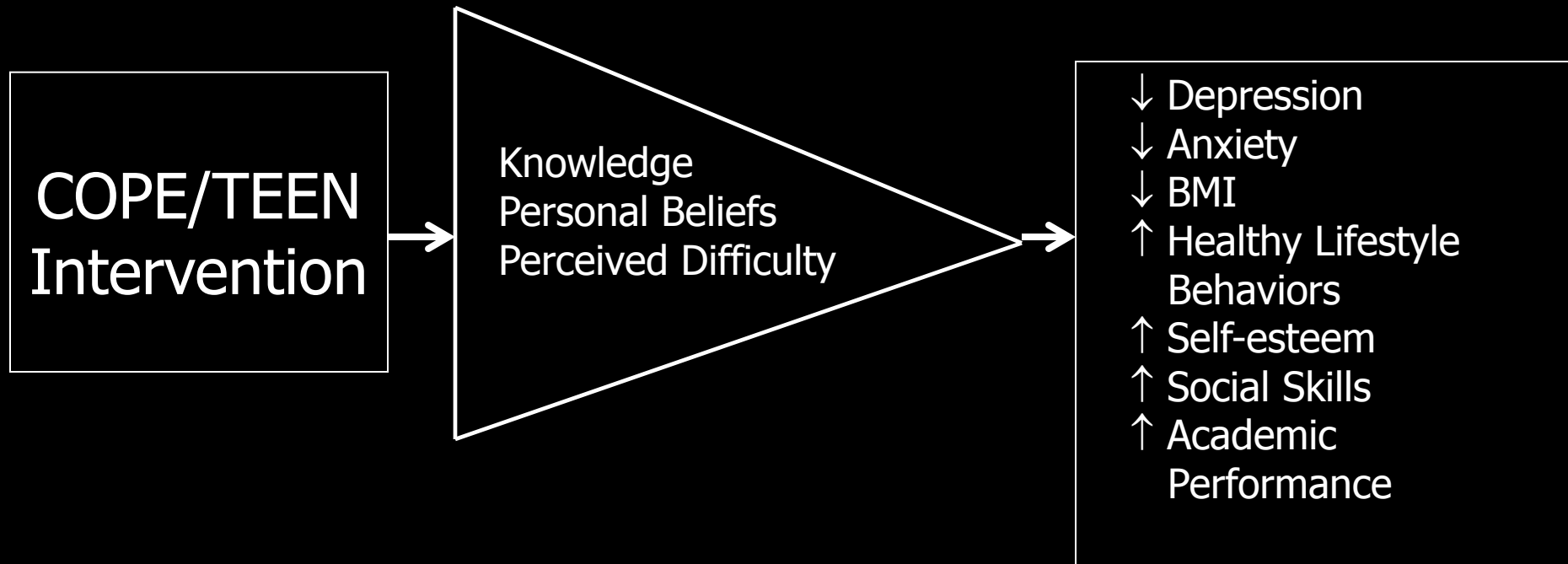
The thinking/feeling/behaving triangle



Key Components of Cognitive-Behavioral Therapy

- Teens learn the *ABCs* in CBT
 - Activator event: A friend made fun of me
 - *Belief*: I'm an idiot
 - Consequence of the belief: Feelings of depression and worthlessness; difficulty functioning
- Positive reappraisal, positive self talk and homework are all important pieces of CBT

COPE Conceptual Model



Components of the 15-Session COPE Healthy Lifestyles TEEN Program

- 7 Sessions of cognitive-behavioral skills building
- 8 Sessions of nutrition and physical activity education
- 20 minutes of physical activity in each session



The COPE Healthy Lifestyles TEEN Program

Session #	Session Content
1	Introduction & goals of the program; Healthy Lifestyles: The thinking, feeling, behaving triangle
2	Self-esteem; Positive thinking/self-talk
3	Goal setting; Problem-solving
4	Stress and coping
5	Emotional/behavioral regulation

The COPE Healthy Lifestyles TEEN Program

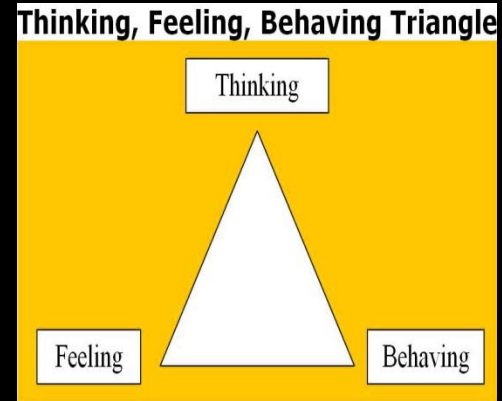
Session #	Session Content
6	Effective communication
7	Physical Activity
8	Heart rate; Stretching
9	Food groups and a healthy body; Stoplight diet; Red, yellow & green
10	Reading labels; Effects of the media on food choices

The COPE Healthy Lifestyles TEEN Program

Session #	Session Content
11	Portion sizes; Influence of feelings on eating
12	Social eating; Strategies for eating during parties, holidays, vacations
13	Snacks; Eating out
14	Integration of knowledge and skills to develop a healthy lifestyle plan
15	Pulling it all together; Review of course content

Session 1

Thinking, Feeling, and Behaving: What is the connection?



When you think positively, you will be happier and have less stress. How you think affects how you feel and how you behave.

EXAMPLE



15 year old Sara has poor self-esteem.

One of her classmates called her “chubbo.” Sara believes that she is fat, ugly and that no one likes her (negative thinking).

As a result, she feels depressed (negative emotion) and isolates herself, never attending any social events with her peers (negative behavior). The trigger event here was that one of her friends called Sara “chubbo.”

COPE

Goal Setting & Self-Monitoring Log

Goal: Write Two Positive Self-Statements

Goal for Number of times per day to say the positive self statements _____

Number of Times You Said Your Positive Self-Statements

Day #1__ Day #2__ Day #3__ Day #4__ Day #5__ Day#6__ Day #7__

Emotions (How have you felt this week?)

Rate your emotions on a scale from 0 “not at all” to 10 “a lot”

Worried _____

Stressed _____

Happy _____

Sad _____

Session 1

Homework Example

Name three situations in the past few days of how thinking negatively affected how you felt and how you behaved. Then, write down how you could have changed your thinking to feel better and act differently



Session 3

Stress and Coping

- *What is stress?*



Stress is when you do not have the ability or skills to deal with things that you see as frightening or unpleasant (like taking a test that you didn't study for or missing your curfew)

Emotional Signs of Stress

- Feeling anxious
- Feeling nervous
- Feeling down or depressed
- Feeling hopeless
- Feeling angry or irritable
- Feeling overwhelmed or “burned out”



Positive Ways to Deal with Stress

- Talking about how you feel
- Exercise
- Seeking out family and friends for support
- Writing your thoughts and feelings in a journal
- Turning a negative thought in response to a stressor into a positive one
- Taking one bite of the elephant at a time when you start something new





STRESSOR (Antecedent event)



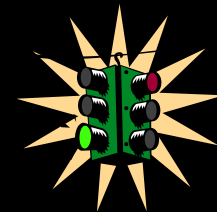
NEGATIVE THOUGHT TO STOP (*Belief*)



**REPLACE THE NEGATIVE WITH A POSITIVE
THOUGHT**



**POSITIVE EMOTION &
BEHAVIOR (*Consequence*)**



Session 3

Managing Stress Homework

- **What are some stressful situations you have had this week?**
- **What things did you do to decrease your stress?**



Parent Newsletters

- Four times during the course of the program, teens are provided with a newsletter to review with their parents that covers the content in the program

Positive Outcomes of 3 Pilot Studies with the COPE TEEN Program

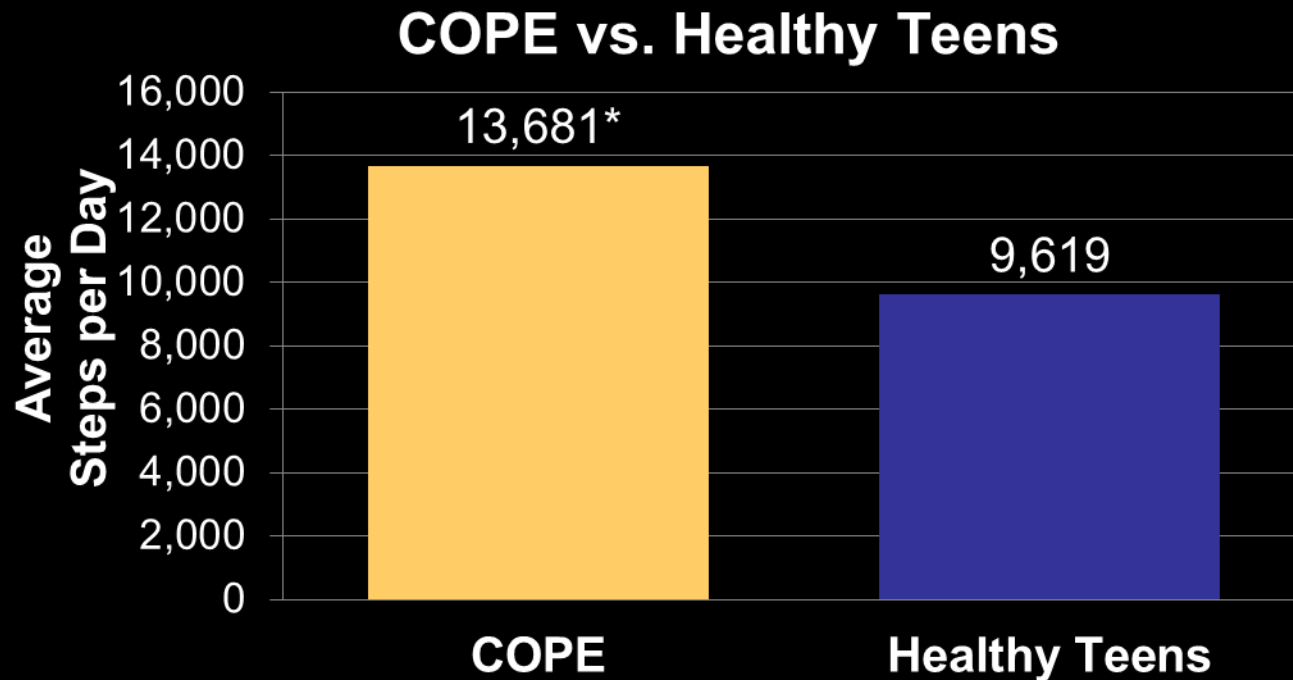
- Increase in nutrition and activity knowledge
- Increase in healthy lifestyle beliefs
- Decrease in perceived difficulty
- Increase in healthy lifestyle choices and behaviors
- Increase in self-esteem
- Decrease in weight and BMI
- Increase in HDLs
- Decrease in LDLs
- Decrease in depressive and anxiety symptoms

Methods for the COPE Clinical Trial

- 11 Schools were randomly assigned to COPE or the Attention Control *Healthy Teens* Program
- Teachers attended a day of training on their intervention program and were supplied with all manualized materials, including power points, teen handbooks, and instructor manual
- Teachers integrated their intervention program into their health course curriculum once a week for 50 minute sessions over 15 weeks
- Observers rated the teachers on intervention fidelity four times during the course of the semester

Physical Activity Behavior Outcome

Teens who received the COPE curriculum had significantly greater steps per day than the teens who received the Healthy Teens curriculum

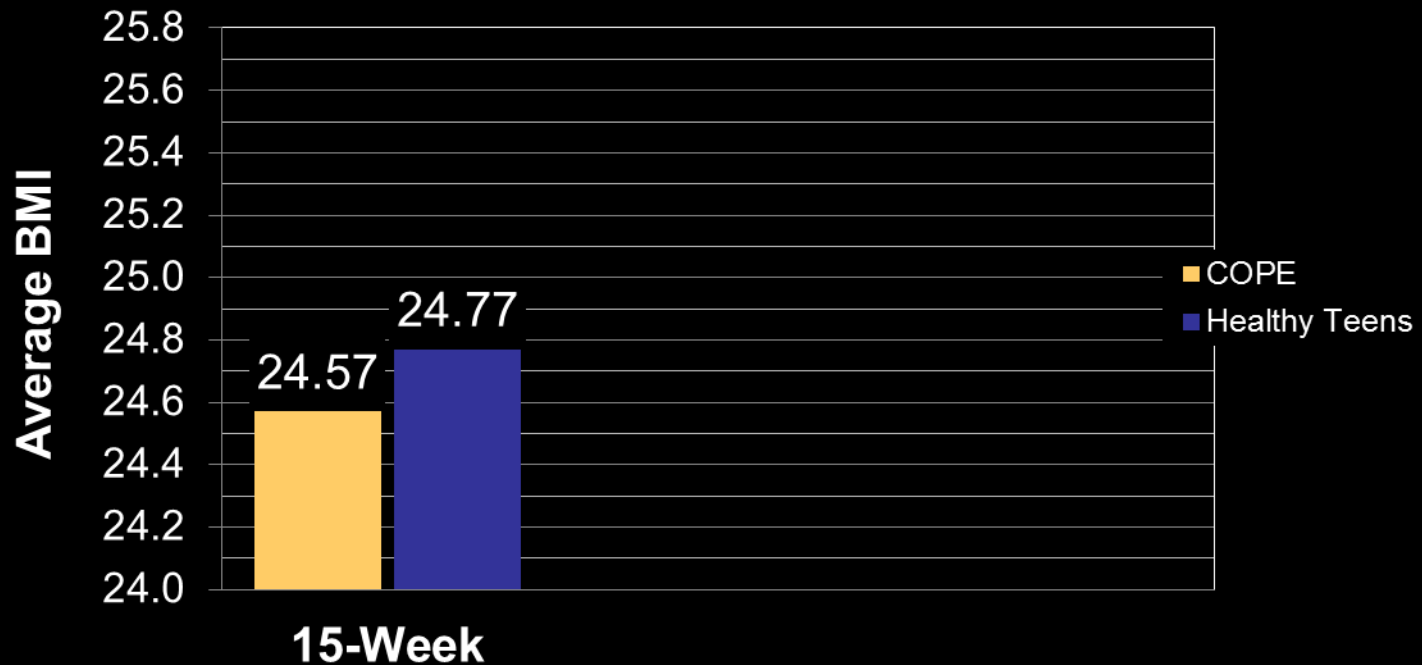


* Statistically significant

BMI Immediately Post-Intervention

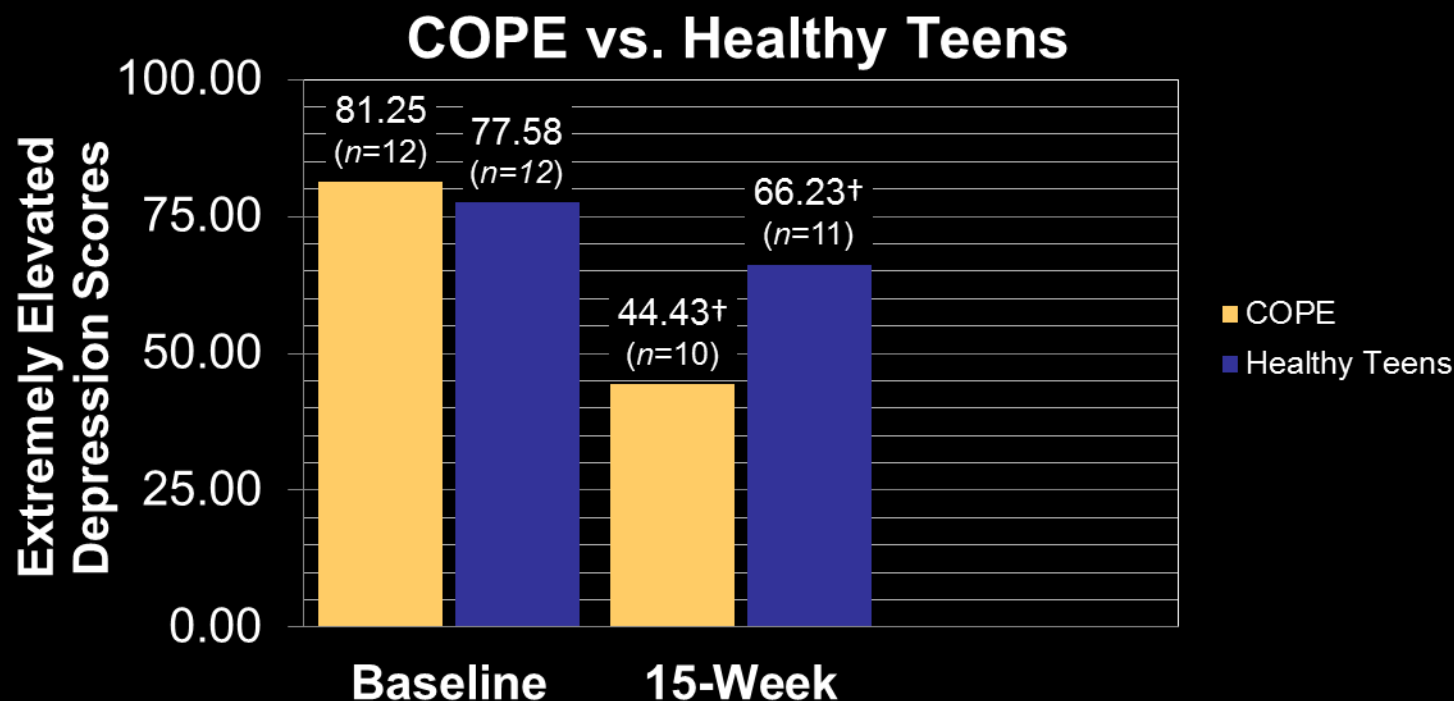
COPE participants had a lower average BMI than the Healthy Teens participants even though their BMI was higher at baseline

COPE vs. Healthy Teens



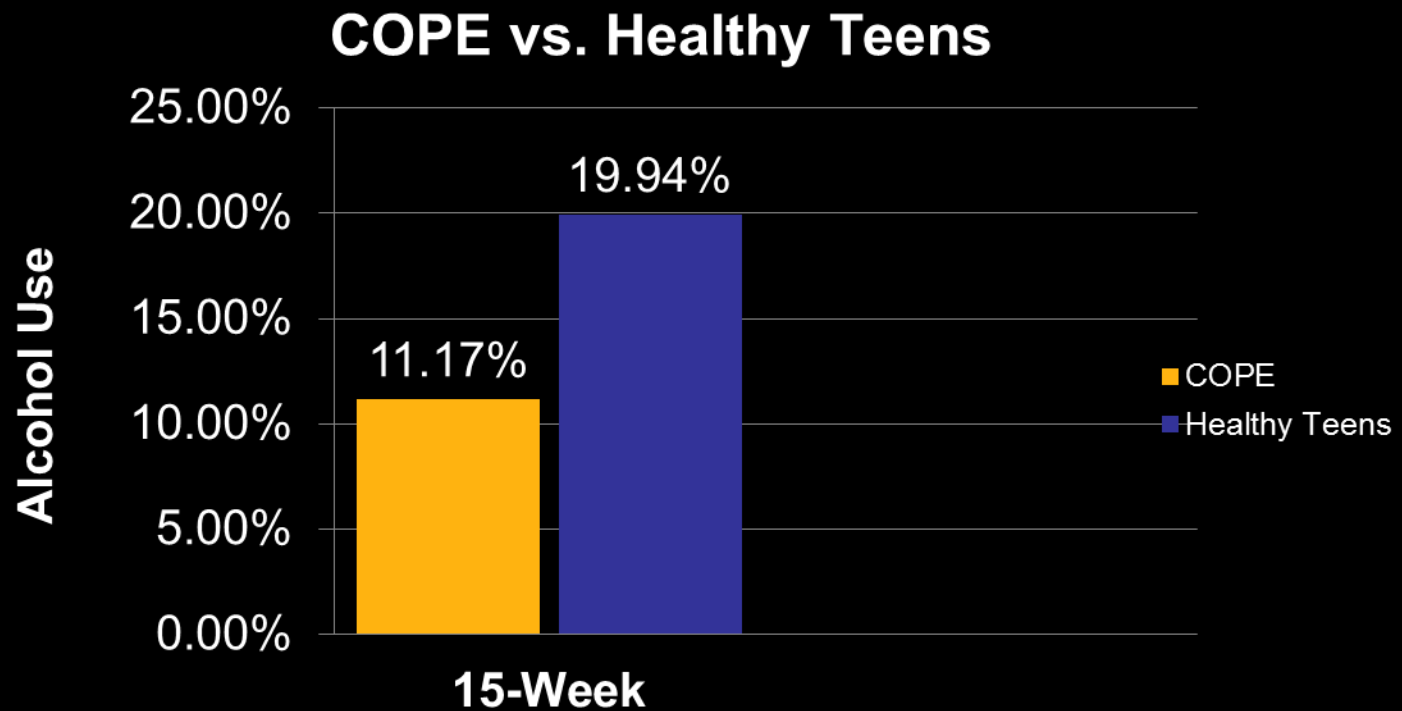
Depression Post-Intervention

Among teens with extremely elevated depression scores at baseline, those that received the COPE curriculum had on average, a lower depression score than those that received the Healthy Teens curriculum at the 15-Week follow-up



Alcohol Use Post-Intervention

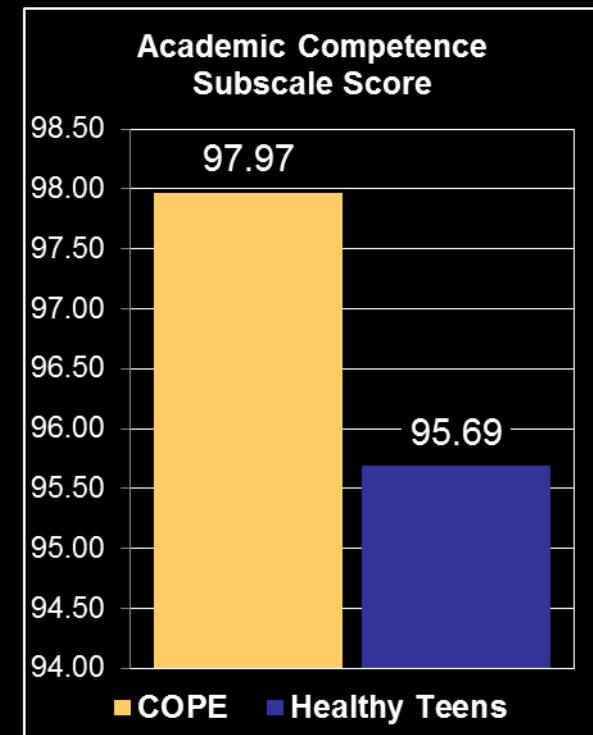
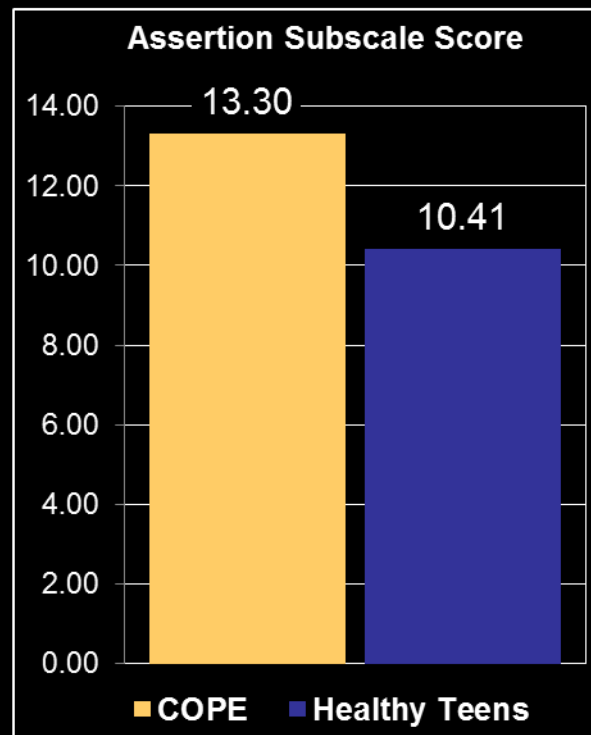
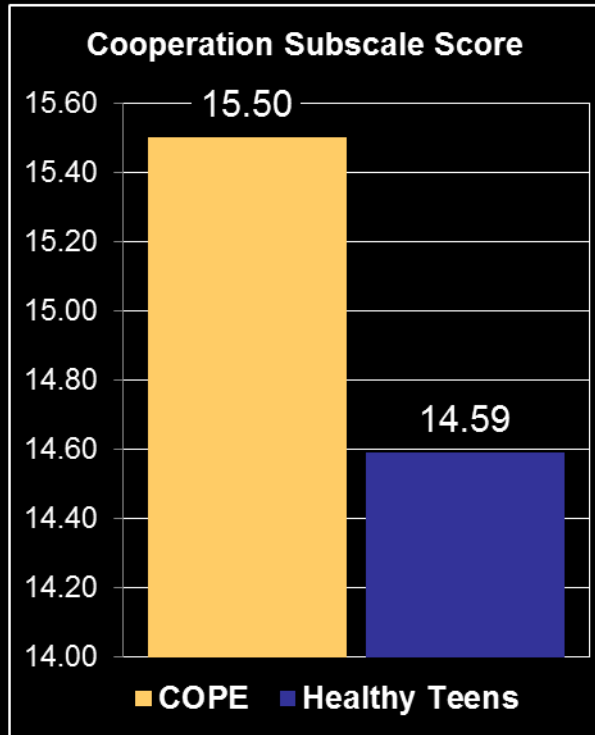
Alcohol use was significantly less in the COPE group than in the Healthy Teens group at the 15-week follow-up



*Data collected from Teen Questionnaires

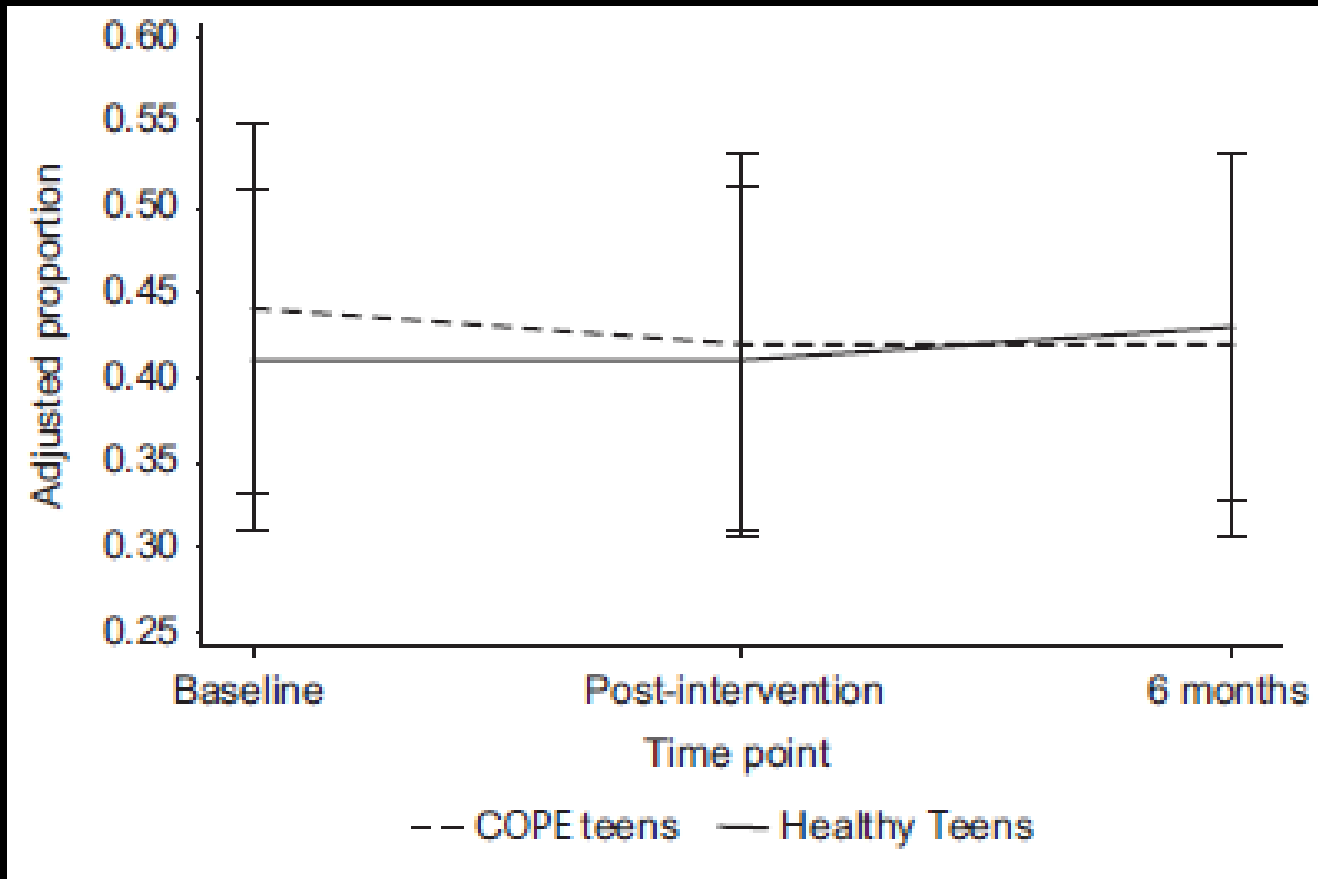
Social/Academic Outcomes

The Social Skills Rating System showed that the COPE group had higher average scores on the Cooperation, Assertion, and Academic Competence subscales



* Teen Social Skills Rating System was completed by teacher at the end of the intervention (T1).

Percentage of overweight for the COPE and Healthy Teens groups across time COPE (COPE Healthy Lifestyles TEEN Program), Creating Opportunities for Personal Empowerment Healthy Lifestyles Thinking, Emotions, Exercise, Nutrition Program



Other 6 Month Post-Intervention Findings

- For the COPE teens in the healthy weight category at baseline, 143 (97.3%) remained in the healthy weight category at 6 months; and four (2.7%) moved to the overweight category. For those in Healthy Teens, 187 (91.2%) remained in the healthy weight category at 6 months; 15 (7.3%) progressed to the overweight category; and three (1.5%) moved to the obese category.
- 11.9% of COPE teens reported alcohol use versus 17.1% in the attention control group ($p=.06$).

Teen and Parent Feedback

- Seventy-eight percent of the COPE teens reported the program was helpful on the post-intervention evaluation questionnaire with hundreds of comments regarding specifically how COPE helped them
- Students reported the most helpful program elements in COPE were content on stress and coping, nutrition and exercise
- Ninety-two percent of the parents indicated the program was helpful for their teens and 94% of parents reported that they would recommend the program to family or friends

Specific Teen Feedback

- Exercising when you are sad or angry helps you not get so stressed
- I learned how to control yourself when you're mad
- COPE helped me feel a little better about myself
- Exercise is fun and should be a part of everyday life
- I've actually started walking more and taking longer routes to increase my steps
- I look at food labels
- My motivation has drastically increased
- I learned how to set goals to be more active

Specific Teen Feedback

Many teens reported their families changed something as a result of COPE, including:

- They exercise with me
- We go for a walk at least 40 minutes a day after dinner
- We changed our cooking style, not as much frying
- We eat less portions of food and don't buy as much soda
- We have more dinners together and spend time talking to each other

Specific Parent Feedback

- She learned a lot about how to handle stressful situations
- The program has made my teenager more aware of the need for physical activity to safeguard her health
- It helped me take better care of myself
- It assisted in overall communication with my child
- It helps me to prevent diabetes and overweight
- It has helped me choose better foods for my family and motivate them to exercise regularly

Implications

- COPE can be used as either a preventive or management intervention program for overweight/obesity in adolescents
- The program is manualized and designed to be delivered in individual, group or school-based/clinic settings
- Work is now ongoing to adapt the program for school-age children and college-age youth as well as children and teens in Appalachia

Contact Information

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