Improving Healthy Lifestyle Behaviors, Mental Health and Academic Outcomes in Adolescents with COPE TEEN

Bernadette Mazurek Melnyk, PhD, RN, CPNP/PMHNP, FAAN
Life in a Small Coal Mining Town in Republic, Pennsylvania
Significance of the Problem

Currently, 32% of youth are overweight or obese
The prevalence is higher in minority populations
Depression and anxiety are higher in overweight youth

One in 3 people will have diabetes by 2050
Physical Inactivity

Lack of physical activity is a major factor in the rapid rise in obesity.

Obesity reduces length of life by 5-to-20 years.

This is the first time in our history that children are predicted to have a shorter life-span than their parents.
One in 4 children and teens has a mental health problem, yet less than 25% get treatment.

Suicide is the third leading cause of death in 14 to 24 year olds.
Health Disparities are Prevalent

- Inequalities exist between youth from lower socioeconomic versus higher SES environments
- Increased exposure to violence/stress
- Neighborhood chaos
- Suicide rates are higher
The COPE Healthy Lifestyles TEEN (Thinking, Emotions, Exercise and Nutrition) 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
• Includes many case-based examples
Cognitive Behavior Theory Guides
COPE
The thinking/feeling/behaving triangle
COPE/TEEN Intervention

Knowledge
Personal Beliefs
Perceived Difficulty

↓ Depression
↓ Anxiety
↓ BMI
↑ Healthy Lifestyle Behaviors
↑ Self-esteem
↑ Social Skills
↑ Academic Performance
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
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<tr>
<th>Session #</th>
<th>Session Content</th>
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<tr>
<td>1</td>
<td>Introduction &amp; goals of the program; Healthy Lifestyles: The thinking, feeling, behaving triangle</td>
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<td>2</td>
<td>Self-esteem; Positive thinking/self-talk</td>
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<td>3</td>
<td>Goal setting; Problem-solving</td>
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<td>Stress and coping</td>
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<td>5</td>
<td>Emotional/behavioral regulation</td>
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The COPE Healthy Lifestyles
TEEN Program

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<th>Session #</th>
<th>Session Content</th>
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<td>6</td>
<td>Effective communication</td>
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<td>7</td>
<td>Physical Activity</td>
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<td>Heart rate; Stretching</td>
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<td>9</td>
<td>Food groups and a healthy body; Stoplight diet; Red, yellow &amp; green</td>
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<td>10</td>
<td>Reading labels; Effects of the media on food choices</td>
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<td>Session Content</td>
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<td>11</td>
<td>Portion sizes; Influence of feelings on eating</td>
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<td>12</td>
<td>Social eating; Strategies for eating during parties, holidays, vacations</td>
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<td>13</td>
<td>Snacks; Eating out</td>
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<td>14</td>
<td>Integration of knowledge and skills to develop a healthy lifestyle plan</td>
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<tr>
<td>15</td>
<td>Pulling it all together; Review of course content</td>
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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.
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 Teaches the ABCs

STRESSOR (Activator or trigger) ↓
NEGATIVE THOUGHT TO STOP (negative Belief) ↓
REPLACE THE NEGATIVE WITH A POSITIVE THOUGHT ↓
POSITIVE EMOTION & BEHAVIOR (Consequence)

COPE Creating Opportunities for Personal Empowerment
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

**Thinking**  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  ______
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.
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
The COPE Clinical Trial with 779 High School Teens

• 11 Schools were randomly assigned to COPE or the Attention Control *Healthy Teens* Program
• Teachers integrated their intervention program into their health course curriculum once a week for 50 minute sessions over 15 weeks

*Funding Support*
NIH/The National Institute of Nursing Research
R01NR012171
Physical Activity

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

* Statistically significant
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 was significantly less in the COPE group than in the Healthy Teens group at the 15-week follow-up.

*Data collected from Teen Questionnaires*
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 Control Groups Across Time

Figure 1. Proportion of overweight adolescents through 12 months post-intervention.
### Depression 12 months Post-Intervention

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Post-Intervention</th>
<th>6-Month Follow-up</th>
<th>12-Month Follow-up</th>
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<tbody>
<tr>
<td><strong>COPE</strong> (n=12)</td>
<td>81.25</td>
<td>77.58</td>
<td>66.23</td>
<td>62.87</td>
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<tr>
<td><strong>Healthy Teen</strong> (n=10)</td>
<td>44.43</td>
<td>48.98</td>
<td>42.39</td>
<td>57.90</td>
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<tr>
<td><strong>Healthy Teen</strong> (n=11)</td>
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**Extremely Elevated Depression Scores**

- Extremely Elevated Depression Scores for COPE and Healthy Teens are shown for Baseline, Post-Intervention, 6-Month Follow-up, and 12-Month Follow-up.
- COPE has significantly higher depression scores compared to Healthy Teens at all time points.

**COPE vs. Healthy Teens**

- COPE: Yellow bars indicating higher depression scores.
- Healthy Teens: Blue bars indicating lower depression scores.

**COPE** Creating Opportunities for Personal Empowerment
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 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
COPE is Now Recognized by the National Cancer Institute as a Research-Tested Intervention Program for Obesity Control

COPE (Creating Opportunities for Personal Empowerment) Healthy Lifestyles TEEN (Thinking, Emotions, Exercise, and Nutrition) Program

Program Title: COPE (Creating Opportunities for Personal Empowerment) Healthy Lifestyles TEEN (Thinking, Emotions, Exercise, and Nutrition) Program

Purpose: Designed to promote healthy dietary habits and physical activity to reduce obesity (2013)

Program Focus: Awareness building, Behavior Modification and Self-efficacy

Population Focus: School Children

Race/Ethnicity: American Indian, Asian, Hispanic or Latino, White, not of Hispanic or Latino origin

Setting: School-based

Origin: United States

Funded by: NINR (Grant number(s): 1R01NR012171)

RTIPs Scores

- Research Integrity: 4.5
- Intervention Impact for Obesity: 2.7
- Intervention Impact for Physical Activity: 2.5
- Dissemination Capability: 5.0

RE-AIM Scores

- Reach: 80.0%
- Effectiveness: 100.0%
- Adoption: 80.0%
- Implementation: 71.4%

This program has been rated by external peer reviewers. Learn more about RTIPs program review ratings.

This program has been evaluated on criteria from the RE-AIM @ framework, which helps translate research into action.

Bernadette Mazurek Mezuk, PhD, RN, CPNP/PMHNP

Dr. Mazurek has consulted with hundreds of healthcare systems and colleges throughout the nation and globe on how to improve the quality of care and patient outcomes through implementing and sustaining evidence-based practice. Her research includes over 10 million dollars of sponsored funding from federal agencies as principal investigator and over 250 publications. Dr. Mezuk is currently the author of four books, including "Anchored in Evidence: Practice in Nursing & Healthcare: A Guide to Best Practice", "Implementing EBP: Real World Success Stories, A Practical Guide to Child and Adolescent Mental Health Screening, Early Intervention, and Health Promotion (2nd Ed)", and "Implementation Research: Designing, Conducting, and Analyzing a RCT, An American Journal of Nursing Book of the Year Award winner. Dr. Mezuk is an esteemed fellow of the National Academy of Medicine, the American Academy of Nursing, the National Academies of Practice, and the American Association of Nurse Practitioners. She served a ten-year term on the United States Preventive Services Task Force and currently serves as a member of the National Quality Forum (NQF) Behavioral Health Standing Committee and the National Institutes of Health's National Advisory Council for Nursing Research.

Dr. Mezuk also serves as the editor of the journal, *NurseOutlook on Evidence-based Nursing*, and is a board member of U.S. Well, the National Nursing Outcomes Clearinghouse and the National Quality Outcomes Clearinghouse (NQOC). Dr. Mezuk has received numerous national and international awards, including the Virginia Henderson Award, Mary Tomek Wright Excellence in Leadership Award, Research and Practice with Young Adults Award from Sigma Theta Tau International, the Jesse Scott Award from the American Nurses Association for the improvement of healthcare quality through the integration of research, education, and practice, the 2012 Midwest Nursing Research Society Senior Scientist Award, the NIH/National Institute of Nursing Research's inaugural director's travel award, and the National Organization of Nurse Practitioner Excellence Lifetime Achievement Award.

Dr. Mezuk is also the founder of COPETWeek, a company that disseminates the COPET program.
COPE tested with Pre-Adolescent 6\textsuperscript{th} Graders in an Inner City Middle School and 8\textsuperscript{th} Graders in an Appalachian Middle School

Major Findings with 54 Youth:

• Increase in Healthy Lifestyle Beliefs
• Increase in Physical Activity
• Increase in Self-Esteem
• Decrease in Anxiety and Depression
• Decrease in Disruptive Behaviors
• Decrease in Suicidal Risk
COPE Activities with the 6th Graders

Results Aim 1

Student drawing of the COPE model

Student drawing of their “happy place”
The Dream!

- Every child and teen in the United States learns the skills taught in the COPE Healthy Lifestyles TEEN program
- A world for children and teens that is free from overweight/obesity and mental health disorders
- A world in which every child succeeds academically and in life
Contact Information

Bernadette Mazurek Melnyk
cope.melnyk@gmail.com