INTRODUCTION

Effective dissemination and implementation of (D&I) tools evaluating research to practice for community based obesity prevention interventions are needed to bridge the current research to application gap. Ripple Effect Mapping (REM) using the Community Capitals Framework (CCF) is a community impact evaluation tool that is hypothesized to positively capture how the research intervention affected multiple levels within communities.

To our knowledge, there is no comprehensive, stepwise process of a REM evaluation tool that uses content analysis and word frequencies to determine and compare participant perceptions. This research study details the exploration of using REM in a detailed stepwise form to evaluate and understand youth and adult participant perceptions on how the iCook 4-H program impacted the individual, family and community. Directed content analysis was used to create homogeneity among REM evaluations for future use and as a sustainable measure for the implementation and dissemination of programs.

METHODS

Seventy day(Adult, 10-19 years old) participants (N=35, 35,1) participated across five states (MI, NE, SC, TN, WV) in in REM sessions, 3 months post iCook 4-H intervention. The three core themes of the iCook 4-H program were assessed: cooking, eating and playing together. Dyads responded to open ended questions by leader facilitated group-dialectic regarding how the program affected the individual, family and community. Three main questions were asked:
1) what are people doing differently as a result of the program
2) who has benefited from the program
3) how are there changes in the way community groups and institutions do things as a result of the program?

Questions and dialogue were recorded by trained note-takers using a template, which was followed up with directed data content analysis to determine individual, family and community impact.

The primary coding process of directed content analysis:

1. Primary researcher studied line by line, the data report templates
2. General field notes and initial codes were created
3. Coded words were merged and summarized creating categories and subcategories for each
4. Two additional researchers reviewed each data report template
5. Discussion of theme, categories, subcategories and supporting subcategories took place
6. Two additional subcategories were created during expert researcher meetings
7. Two video sessions were reviewed to ensure accuracy

RESULTS

Data analysis indicated the main, overarching theme of participant perceptions of iCook 4-H was: Learning new skills together through trying new things (cooking, eating, & playing together) leads to positive individual, family and community change.

Within the all-encompassing, major theme, 7 categories with 8 subcategories, and 41 supporting subcategories were identified.

Categories, Subcategories & Support Subcategories

1. Improved Health
   - 8 Supporting Subcategories
      • 1a. Playing with peers & family through exercise leads to better health
      • 1b. Better disease management

2. Increased Community Involvement
   - 8 Supporting Subcategories
      • 2a. Community involvement with friends & peer groups
      • 2b. Community involvement through organizational groups

3. Increased Knowledge
   - 8 Supporting Subcategories
      • 3a. Increased knowledge by trying new things
      • 3b. Increased knowledge through education & experience

4. Increased Communication
   - 8 Supporting Subcategories
      • 4a. Increased communication during meal times
      • 4b. Increased communication amongst friends & family

5. Changed Motivation
   - 8 Supporting Subcategories

6. Financial Mindfulness
   - 8 Supporting Subcategories

7. Increased Appreciation for Family members leads to better understanding of one another

To confirm accuracy of participant perceptions within the qualitative content analysis, word frequencies were created from the data templates for comparison. The prevalence of words found fit well with both data report templates and participant perceptions (Found as apple word cloud).

Each facilitator was interviewed following REM sessions to consider areas for improvement for future dissemination. Areas for improvement included:

• Time allotment for each session; more time was needed to complete the feedback portion of the discussion.
• Word usage such as community capitals and REM could be modified or simplified for youth participants and participant perceptions (Found as apple word cloud).

Capturing the REM sessions could take place prior to the 24-month post intervention time point to decrease any leading done by the facilitator to remind participants of all program activities.

CONCLUSIONS

Detailed processes of impact evaluation tools that can be used with preexisting frameworks in dissemination and implementation science for community based programing are currently lacking. REM using CCF is an impact evaluation tool that has been found to effectively capture outcomes of this community-based research iCook 4-H program. Additionally, findings show youth obesity prevention programs such as the iCook 4-H program have the potential to positively affect one’s self, family and community.

STUDY OBJECTIVES

Primary: To determine REM’s effectiveness in defining positive outcomes as an impact evaluation tool.

Secondary: To determine participant’s (youth/adult dyads) perceptions of the ripple effect of a 24 month, iCook 4-H multisate intervention program on self, family and community.

cciCook 4-H Breakdown

Natural
resources
such as parks, trails, trees, etc.
Financial
resources
such as money, time, investments, etc.
Social
capital
refers to relationships, networks, support, etc.
Cultural
capital
refers to traditions, ways of thinking, family customs, etc.
Human
capital
includes knowledge, skills, and abilities of people.
Political
capital
includes power such as school boards, student government, etc.

West Virginia University, The University of Tennessee Knoxville, South Dakota State University, University of Nebraska Lincoln, The University of Maine

Funding provided by Agriculture and Food Research Initiative Grant no. 2021-68001-19605 from the USDA National Institute of Food and Agriculture; Childhood Obesity Prevention: Integrated Research, Education, and Extension to Prevent Childhood Obesity, 2101 and state experiment stations.