Exploring Community Resources and Readiness in Relation to Childhood Obesity Prevention in Rural Western America

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Background:
The mission of Generating Rural Options for Weight Healthy Kids and Communities (GROW HKC) is to prevent childhood obesity in the Western United States. Rural environments create community barriers to living a healthy lifestyle due to the increased likelihood of being under-resourced. The goal of GROW HKC is to address community environment factors to encourage healthier lifestyles among rural youth. Addressing childhood obesity now will impact future adult obesity rates.

Aims:
1) Collect and examine community-based participatory research on the obesogenic environment in rural communities in six Western U.S. states.
2) Plan, implement, and evaluate a multi-level intervention to improve the BMI of rural elementary school-age children, by targeting home, school, and community behavioral settings to promote healthful eating and increased physical activity.

Objectives:
1) Create a resident-informed profile of rural community environments and contribute to eXtension COP to inform, educate, and support obesity prevention efforts.
2) Evaluate the effects of the multi-level intervention on food and physical activity environments in rural communities and weight-healthy habits of K-5th graders.

Methods:
GROW HKC relies on participatory action research to map and discuss community environments in terms of supports and barriers for eating healthy and being physically active. Community members are trained to use the HEAL MAPPS™ tool. Data collected, including photos, route journals, route maps, and community conversations, are entered into NVivo10. Data are coded and qualitatively analyzed by coding for specific community readiness dimensions.

HEAL MAPPS™
Created by GROW HKC researchers to help community members effectively collect data on qualities of local resources and readiness. Communities receive a Results Report once data has been analyzed by two independent GROW HKC evaluators.

Community Readiness Model (CRM)
Determine the stage where a community is ready to implement programs that encourage healthy eating and increased physical activity. This is done by evaluating qualitative data based on six dimensions of community readiness:
- Available Resources (people, money, time, space, etc.)
- Community Efforts (supports/barrriers)
- Community Knowledge of the Efforts (effective/accessible)
- Community Knowledge of the Issue (environment and obesity)
- Leadership (appointed leaders and influential members)
- Community Climate (prevailing attitudes of community)

Target Community:
Preston, Franklin County, Idaho
- Preston Population: approximately 5,000 residents
- 33.2% of population are under the age of 18 years old
- 10.6% of 10-17 year olds are obese
- 10% of population are under 5 years old
- 11.5% of kids entering kindergarten are obese

Results:
During the focus group, community members identified photographed supports and barriers for weight healthy lifestyles in their community.

Existing Supports:
- Hospital
- Schools/School Board
- LDS Church/Gym Access
- New Community Garden
- Well-stocked Grocery Store
- Parks and Recreation/Natural Environment
- Events focused on being active and/eating healthy

Existing Barriers:
- Lack of maintained sidewalks
- Lack of bike lanes
- Lack of traffic calming features
- Lack of healthy food options nearby
- Lack of physical activity supports nearby
- Lack of effective information sharing

Community members recognized that supports for physical activity and healthy eating are present in Preston. However, the lack of communication to residents about these supports has been a large barrier for awareness and prevention of childhood obesity. Due to this, Preston scored between stage 3 (vague awareness) and stage 4 (pre-planning) on the CRM (see Figure 1).

Conclusion:
A HEAL MAPPS™ Results Report, discussing the findings and CRM scoring, will be provided to the Preston community. The report explains, based on community input, where future efforts should be focused. For example, Preston must work on increasing community awareness of existing efforts and evaluate new and existing efforts for effectiveness in addressing childhood obesity concerns in order to progress in community readiness to tackle environmental hazards contributing to rural obesity risk.

Personal Development:
As a GROW HKC URAP Apprentice, I have gained experience in evaluating qualitative data from real world communities using NVivo10 software. This experience allowed me to apply the combined knowledge I have gained through the pursuit of degrees in Nutrition, Sustainability, Sociology, and Business with new knowledge gained through my apprenticeship with GROW HKC.

Acknowledgement:
Thank you to Dr. Deborah John and Tammy Winfield for providing me the opportunity to gain hands on experience with qualitative data analysis. With their assistance, I have gained the confidence to evaluate obesogenic environments in rural U.S. communities and understand the importance of having multiple evaluators to analyze qualitative data rigorously and objectively. The GROW HKC website, available at http://extension.oregonstate.edu/growhkc/, provided additional information and visuals regarding the program and the tools used to evaluate rural communities. Images specific to Preston, ID were pulled from the community conversation and the HEAL MAPPS™ Community Results Report.