Published in final edited form as:

J Health Care Poor Underserved. 2013 ; 24(2 Suppl): 25–33. doi:10.1353/hpu.2013.0096.

Evaluation of a Childhood Obesity Awareness Campaign Targeting Head Start Families: Designed by Parents for Parents

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Abstract

The Communities for Healthy Living program used a community-based participatory research (CBPR) approach to empower Head Start parents in designing and pilot testing a multi-component family-centered obesity prevention program. One program component was a childhood obesity awareness campaign addressing common parental misconceptions about obesity. The campaign was designed by a community advisory board of parents to target specific issues identified within their own community. Results from pre-post intervention surveys (N=108) showed that campaign exposure was high; 92% of responding parents reported noticing the campaign. Parents also demonstrated significant increases in awareness of childhood obesity, along with decreases in obesity-related misconceptions. Findings, supported by growing literature on CBPR, suggest a CBPR approach to campaign development is an effective strategy to promote parent awareness of childhood obesity.

Keywords

Community-based participatory research; family health; child health; obesity; parents

Childhood obesity is disproportionately characteristic of low-income children.¹ Lifestyle behaviors linked with obesity develop at a young age in the context of the family.² Research indicates that parents' and caregivers' (herein referred to as *parents*) attitudes, knowledge, and behavior influence children's dietary, physical activity, and screen-based behavioral

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factors associated with childhood obesity.^{3,4} Yet, despite recommendations that childhood obesity research focus on parents and children together,^{5,6} few interventions engage families as a whole⁷ and address factors beyond diet⁸ and physical activity.⁹

The ability to engage parents in obesity interventions is hindered when parents do not recognize or acknowledge if their child is overweight.^{10,11} Studies have shown that the majority of parents do not accurately perceive their child's weight status.¹² Interventions targeting parents' knowledge and awareness of childhood obesity and its risk factors are needed. Parents can serve not only as intervention targets, but also as content experts during intervention development. Engaging parents in program design helps ensure intervention relevance and increases parent receptivity, thereby improving the chances of success.¹³

In response to the role of parents in childhood obesity, and recognizing the need to increase awareness of this public health problem, the Communities for Healthy Living (CHL) partnership was developed, consisting of researchers, parents, a community organization and community representatives. Communities for Healthy Living employed a community-based participatory research (CBPR) approach to develop, implement, and evaluate a multicomponent childhood obesity prevention intervention targeting Head Start families living in Rensselaer County, N.Y. Rensselaer County, in Upstate New York is home to one small city and extensive rural areas. Throughout the county, 33% of residents with children under age five live below the poverty level.¹⁴ Five county census tracts have poverty rates close to or exceeding 30%, two tracts are classified as Medically Underserved Areas, and seven tracts are home to Medically Underserved Populations.¹⁵ While poverty nationally is disproportionately experienced by ethnic minority children, rates of poverty among ethnic minority children in Rensselaer County far exceed even national figures. Nationally in the year 2010, 27.1% of Black non-Hispanic children lived below the poverty line, while in Rensselaer County, 38.7% of Black, non-Hispanic children lived below poverty.¹⁴ Health disparities in small cities and rural areas such as Rensselaer County differ from larger metropolitan areas in part because these counties have less political leverage and therefore lack the resources to serve vulnerable populations.

Head Start parents were engaged throughout the entire research process as equal partners and as the majority stakeholder on a community advisory board (CAB), which was the decision-making body.¹⁶ This parent-centered CBPR approach ensured active parent participation throughout the research process. The CAB met bimonthly during the development phase and monthly thereafter. Parents were integral members of research team meetings, contributing to intervention development and data interpretation, serving in leadership roles during intervention implementation, and presenting on the project at academic conferences.

The CHL intervention developed by CAB members consisted of four intervention components. The intervention included (1) a six-week peer led program for parents (promoting access to community resources and increases in parent social networks, media literacy, conflict resolution, advocacy skills, and parenting practices linked with healthy lifestyles), (2) revisions to letters sent home to parents reporting the results of children's height and weight measurements, (3) nutrition counseling sessions integrated into family

engagement activities, and (4) a health communication campaign. The intervention and results from its primary evaluation are summarized elsewhere.¹⁷

The current study focuses on the health communication campaign and its evaluation. The campaign aimed to address parents' misconceptions related to child weight and obesity risk factors by increasing awareness and improving knowledge. While several childhood obesity awareness campaigns targeting parents have been implemented in recent years, few have published their evaluations. Furthermore, many childhood obesity prevention campaigns in the literature target the attitudes and behaviors of children, rather than parents. One major study in Chicago targeted parents using a school based health promotion campaign designed by a large community coalition as part of a multi-component childhood obesity intervention. Parents who were exposed to the campaign through their child's school were found more likely to engage in health promoting behaviors, however they were not the primary designers of the campaign.¹⁸ Another study targeting parents took place in Virginia through the Women Infants and Children (WIC) program. As part of a larger intervention, a series of six messages were developed to target childhood obesity based on focus groups conducted with low-income parents.¹⁹ However, this study did not employ CBPR nor were the campaign messages specifically evaluated.

To our knowledge, this is the first study to evaluate the outcomes of a childhood obesity awareness campaign specifically designed by and targeting parents. This paper presents 1) the participatory process for developing the childhood obesity awareness campaign, 2) the description of the campaign products and implementation process, and 3) the results of the campaign evaluation.

Methods

The campaign was developed using findings from a participatory, mixed methods community assessment which took place between March and May of 2010. The community assessment explored childhood obesity in the context of family and community realities among Head Start parents in Rensselaer County, N.Y. and included focus groups, Photovoice,²⁰ key informant interviews, windshield surveys, and traditional surveys.

Community assessment findings

As part of a larger community assessment,²¹ focus groups were held with Head Start parents to discover key issues related to childhood obesity among the target population. Three one-hour focus groups were held with a total of 27 parents participating in groups of five to 12 people. The discussions were centered on challenges parents faced as part of their everyday realities, particularly related to childhood health and obesity. Participants received \$20 gift cards in compensation for their time. Transcripts were analyzed collaboratively by CAB members and researchers, and several commonly held misconceptions were found. These were frequently occurring concepts identified by the CAB as preventing parents from recognizing their child's weight status and potential risk factors within their family. A major goal of the childhood obesity awareness campaign was to bring these misconceptions to light and provide parents with the information to re-evaluate their beliefs about childhood obesity.

One misconception was that obesity was not a problem for young children. Toddlers and preschoolers were perceived as having extra weight that they will grow out of. One parent highlighted this by saying, “He’s not overweight, he’s a big boy. He’ll outgrow that though.” Other parents demonstrated the belief that a young child’s size was a result of factors beyond their control, by saying things such as “His father has another son who’s just the same way, he’s just big. Maybe he just makes big boys.” When confronted with medical professionals’ comments on their child’s weight status, parents again confirmed the idea that obesity is not a problem that can be addressed in young children by saying “When he was a baby, they was like he’s slightly obese. And I was like, well he’s a baby and he eats what he wants.”

Other misconceptions that were discovered through analysis of focus group data included the idea that beverages such as fruit juice do not contribute to a child’s weight status, children who are physically energetic cannot have weight problems, and that time spent watching television does not affect weight status. The themes discovered through these focus groups have been found among low income mothers in other settings as well.²²

Campaign development

Community advisory board parents worked in partnership with researchers and a graphic designer to create messages tailored to these specific misconceptions and the viewpoints of their peers with children in the Head Start program. Data from the focus groups were discussed by CAB parents, who decided on key misconceptions to address. The messages were presented as “myths” and “facts,” a format suggested by parents following review of several other existing childhood obesity campaigns. Myth statements were displayed prominently to call attention to familiar misconceptions that may often go unexamined. Terminology was an important issue, as some parents were offended by the word “obese” and preferred “big boned,” while others felt that “big boned” was not a common expression. The campaign phrase “He’s just big for his age” was accepted by all, and counteracted with the message “‘Big kids’ may be overweight, at risk for health and self-esteem problems. Get the facts about your child’s weight.” In another poster, the message “It’s just baby fat” was counteracted with the phrase “Overweight preschoolers often become obese adults. Small changes now = a healthy future.” The selection of silhouettes rather than photographs of children was designed to ensure skin color was not a barrier to identification with the message. Data in the “fact” portion of two of the posters reflected the overweight and obesity rates, and physical activity information gathered directly from Rensselaer County Head Start children, providing parents with locally relevant information. Six posters were developed, each targeting a different misconception or issue (Figure 1), while encouraging parents to critically examine their beliefs about childhood obesity and to seek information to expand their view.

Campaign implementation

The poster campaign was implemented between January and April of 2011 in five Head Start/ Early Head Start centers in Rensselaer County, N.Y. as part of a larger intervention.¹⁷ Each of the six posters was displayed in two to nine locations (throughout hallways, offices, and entryways) in participating centers for approximately one month per poster. The number

of posters displayed in each center varied based on the physical size of the center. Additionally, small copies were sent home to the parents of the 423 eligible children as promotional flyers to increase campaign exposure during the same time period.

Campaign evaluation

Prior to and following the campaign, parents completed a self-administered survey. The campaign and its evaluation were approved by the University at Albany Institutional Review Board. Community advisory board parents participated in survey development and reviewed all questions prior to finalization. All parents with children ages two to five years old enrolled in a participating Head Start center were eligible to participate in the surveys, and participation was limited to one parent per child. The survey included eight attitudinal statements (Table 1) designed to reflect the specific misconceptions portrayed in this campaign. The survey asked respondents to rate the extent to which they agreed or disagreed with each statement using a seven point scale. Questions also examined parents' exposure to the campaign and reactions to the messages. Descriptive statistics were compiled to summarize campaign exposure. Paired t-tests were conducted to assess differences in parents' responses between baseline and follow-up.

Results

In the 2010–11 academic year, 546 children were enrolled in the five participating Head Start centers, with 423 children in the targeted age range of two to five years old. Of the 423 eligible children, 154 (36% of the eligible sample) of their parents completed a self-report questionnaire. Seventy percent (n=108) of these parents also completed the follow-up survey. Among the 108 parents or guardians (93% female) who completed the survey at baseline and follow-up, 79% were White, 15% were African American, 5% were Asian, and 5% were Hispanic. The ethnicity of responding parents reflected the demographic composition of families enrolled in the participating centers, with a slightly higher participation rate observed among non-Hispanic White parents. Nearly 73% of respondents were between ages 20 to 34 years old, with a median age of 27 years old. Twenty-one percent had not completed high school, 37% had completed high school, and 42% had attended some college. Ninety two percent of respondents reported they noticed the poster campaign and 79% noticed the flyers sent home. Additionally, 80% of parents reported they read the posters, 70% read the flyers, and 68% read both. A total of 46% of respondents found the posters/flyers helpful, and more than 50% indicated that parents should pay attention to them. Less than 5% of parents reported believing the messages were not true, not relevant to their center, or were insulting.

Three of the eight survey items addressing parental attitudes showed significant decreases at follow up compared with baseline. A decreasing score over time represented reduced agreement with myths following campaign implementation (Table 1). The survey items with significant changes were associated with the posters targeting misconceptions about children outgrowing baby fat, weight being an issue only if it affects physical activity levels, and the appropriateness of limiting screen time if television shows are considered educational. Additionally, the total attitudinal score (i.e., the average score across all eight items)

declined significantly between baseline and follow-up, indicating that parents overall exhibited greater awareness of childhood obesity and its risk factors at follow-up.

Discussion

To our knowledge, this is one of the first studies to utilize a parent-led CBPR approach to develop and implement a health promotion campaign aimed at increasing parents' recognition of childhood obesity and the associated health consequences. Our findings suggest that this may be a fruitful strategy to change attitudes and promote awareness of obesity in children, an important prerequisite for parents' taking action to prevent or reduce childhood obesity.³

The use of a CBPR approach was a key strength of this study. Parents collaborated extensively with researchers and a graphic designer to determine the concepts, phrases, and images used in the campaign. This iterative, participatory process helped ensure that the campaign messages were relevant and meaningful to parents. Our success in reaching parents is illustrated by the fact that more than 80% of those surveyed recalled noticing and reading the campaign messages. This level of exposure is higher than is typically observed in child health promotion campaigns targeting parents through mass media.²³ What is more, this study's approach is amendable to scale up and could be implemented and evaluated in a variety of organizations that reach parents within disadvantaged or underserved communities.

Although the majority of parents recalled seeing the posters and the total attitude score significantly changed, not all of the individual messages were effective at changing parental attitudes. There was no significant change in any of the questions related to the poster on juice consumption. The perception that juice consumption is a healthy option not requiring limitation²⁴ may be difficult to change. This is reinforced by the fact that juice is offered by the Women Infants and Children (WIC) program, a trusted source of nutrition information for parents.²⁵

Limitations of this study include the small sample size and lack of a comparison group. Future research could build on this study by adopting a research design with a comparison group and examining possible outcomes linked with improved parental awareness of obesity in children, such as correct identification of children's weight status, receptivity to obesity-related counseling, and willingness to discuss ways to foster healthy family lifestyles. Results of this study could also be used by community organizations looking to create locally meaningful and relevant campaigns targeting childhood obesity.

Acknowledgments

We would like to thank the Commission on Economic Opportunity for their active involvement and unwavering support for CHL. Thank you to all of the Head Start Parents/Caregivers and community representatives who participated in numerous meetings and project activities and took seriously the role of key decision makers throughout the entire process.

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Figure 1.

Examples of campaign posters developed to target common misconceptions held by Head Start parents regarding childhood obesity. Parents and researchers collaborated in an iterative, participatory process to create relevant and meaningful childhood obesity awareness messages.

MEAN DIFFERENCES IN HEAD START PARENTS' ATTITUDES TOWARD CHILDHOOD OBESITY PRIOR TO AND FOLLOWING IMPLEMENTATION OF A CHILDHOOD OBESITY AWARENESS CAMPAIGN DEVELOPED USING A COMMUNITY BASED PARTICIPATORY APPROACH, RENSSELAER COUNTY, NY, 2011

Table 1

Survey Item	Baseline Mean ^a (sd)	Follow-up Mean ^a (sd)	t-value	p-value
Chubby children will outgrow baby fat	4.37 (1.1)	3.96 (1.4)	3.10	.003
A child's weight is only an issue if it affects how much they can move around	2.95 (1.6)	2.59 (1.6)	2.32	.022
An overweight child will probably become and overweight adult ^b	3.42 (1.5)	3.43 (1.6)	-.05	.957
Watching TV is good for my child	3.25 (1.3)	3.32 (1.3)	-.56	.578
My child can watch as much TV as he or she wants if it is educational	3.48 (1.6)	3.05 (1.6)	2.70	.008
Juice is like fruit and I should offer my child plenty	3.00 (1.4)	2.73 (1.4)	1.93	.056
Sweetened drinks like Kool-Aid and soda increase my child's risk of becoming overweight ^b	2.40 (1.6)	2.65 (1.9)	-1.18	.241
Watching TV for more than 2 hours per day will increase my child's risk of becoming overweight ^b	3.68 (1.6)	3.49 (1.7)	.96	.340
Total attitude score	3.32 (0.8)	3.15 (0.9)	2.31	.023

^aHigher scores reflect greater parent misconception; scale scores range from 0 to 6.

^bThese items were reverse coded to be consistent with the direction of the scale.