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Lessons learned from two decades of research in nutrition education and obesity prevention: Considerations for alcohol education

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ABSTRACT

Objective: Effective health interventions involve an understanding of the specific needs and wants of the population to be served. Lessons from more than two decades of obesity prevention can be applied to understanding how to design and implement other behaviorally-focused health interventions, including those for alcohol education.
Methods: Three obesity prevention campaigns were reviewed and evaluated for elements critical to their success in achieving desired outcomes.
Results: Evaluation of the three cases studies revealed six key elements common to successful interventions. These include: specifying the desired outcome at the outset, understanding the target population, identifying a framework for the intervention, creating a campaign "identity", enlisting champions, and evaluating both outcomes and process.
Conclusion: Successful health interventions should be behaviorally-focused and include multiple components to address the various factors that influence behavior. A clear understanding of how and why desired outcomes were achieved can inform dissemination to a wider audience and improve sustainability.
Practice implications: Lessons learned from obesity prevention provide guidance for development of alcohol education. It must be acknowledged that there is still much to be learned to maximize success in prevention efforts. It is likely that analysis of future efforts in alcohol education can contribute to that understanding.

1. Introduction

Health education was until late in the 20th century almost universally a one-sided communication from experts to the lay public. In the case of both nutrition and alcohol education, it was ineffective. Gradually, enlightened educators recognized that to be more effective behavioral interventions require interaction between experts and the populations they are trying to serve.

Early nutrition guidance was prescriptive, overly detailed, and paid minimal attention to factors which influenced what people actually consumed [1]. In the case of alcohol education, scholars have traced the origins of more nuanced approaches to 19th century educational philosophers like John Dewey who recognized that communication was a continuous, experimental, and interactive process [2]. It can be argued that it was not until the 21st century that the momentum to understand and influence nutrition behavior required interventions that considered individuals within the context of a many-layered environment [3]. It is now clear that educational approaches to influence long term behavior change require individual skill development to improve decision-making, problem-solving, and self-efficacy [4].

Solutions to nutrition-related problems require multidisciplinary approaches. Effective interventions depend on understanding the target population. Nutrition education over the past three decades has shown a growing appreciation of the critical role of the environment on food choices and consumption. Stakeholders from both public and private sectors have addressed the growing obesity epidemic, which extends from early childhood through the life cycle. The root causes are not fully understood, but the process of approaching the issue has evolved.

Newer definitions of nutrition education account for multiple factors influencing food choice and health. It has recently been defined as "any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition-related

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behaviors conducive to health and well-being; nutrition education is delivered through multiple venues and involves activities at the individual, community, and policy levels" [5]. As that definition has evolved, the conceptualization and implementation of nutrition interventions have expanded. This paper describes current thinking about the design, implementation, and evaluation of successful interventions which include both individuals and their multiple environments. There are obvious differences between food and alcohol consumption—the former is essential and the latter is not. But there are similarities in the factors that impact what and how much we eat and drink. The cases presented here were chosen for their potential to guide behavioral interventions that focus on effective alcohol education.

2. Methods for designing successful nutrition interventions: lessons from three multi-component approaches

Three examples of campaigns that focus on changing behavior to prevent weight gain in different populations illustrate this newer approach. Together they provide insights on particular aspects of nutrition interventions that can be applied to alcohol education.

2.1. Sisters Together: Move More, Eat Better

Sisters Together: Move More,Eat Better was a community-based communications campaign launched in 1995. It was designed to prevent obesity through promotion of healthful lifestyles among African American women 18–35 years old in three inner-city communities in Boston, Massachusetts. The campaign focused on increasing physical activity and improving nutrition, and emphasized strengthening community resources to support and sustain these lifestyle changes [6]. Since *Sisters Together* was a pilot communications campaign, not an intervention, outcome data at the individual level were not collected. It is presented here as an example of the value of rigorous, iterative formative research.

The conceptual framework was drawn from the social–ecological model, which views behavior as influenced by factors at multiple levels, from the individual to societal [7]. Understanding the processes at work at each level, and their influences on behavior, allows for development of context-specific communications. Focusing communications at multiple levels of influence increases the likelihood that messages will be received and acted upon. In *Sisters Together*, campaign themes and activities were designed to increase individual knowledge and skills with respect to healthy eating and physical activity, to utilize existing social networks, and to support and promote community resources.

2.1.1. Formative research: identifying and understanding the target population

Campaign development began with identifying and understanding the target audience. A review of published literature documented a higher prevalence of obesity and associated health consequences, including diabetes and cardiovascular disease, in African American women than in the general population [8–12]. The literature review, which included a search of the popular press as well as peer-reviewed publications, helped to define population-specific factors that would affect acceptance of the campaign and its messages [13]. The research also highlighted an opportunity: while previous studies had acknowledged the importance of culturally relevant strategies to address dietary and physical activity behavior change [14–16], few culturally appropriate programs had been designed to promote healthy lifestyles [17,18].

Researchers interviewed nutritionists who provided insight on the target population's knowledge and attitudes about healthy eating and physical activity, and identified barriers to the adoption of healthy lifestyle behaviors [19]. These included a general acceptance of a higher weight for height and strong perceptions that reducing dietary fat negatively affected taste and increased food costs (when *Sisters Together* was implemented, low-fat diets were generally being recommended for weight control). In addition, nutritionists described environmental barriers, including a lack of supermarkets in many areas and limited access to high quality, affordable food. They emphasized the need for culturally relevant, skill-building messages.

These interviews informed development of focus group discussion guides for use with the target population. Approximately 50 women participated in focus groups intended to further refine researchers' understanding of the population's knowledge, attitudes, and beliefs about healthy behaviors. Findings confirmed some, though not all, information from interviews with nutritionists. Participants said they preferred the taste of fried foods. At home, frying was the common cooking method. Taste, cost, time, and lack of information emerged as barriers to healthful eating. This was consistent with information from the nutritionists. Women confirmed that skill-building information, including recipes, shopping tips, and charts comparing healthful and unhealthful choices, would help them make healthier choices. With respect to physical activity, women did not include exercise and physical activity as leisure activities. They said their mothers who knew their entire health history and were "more concerned" were the most credible source of health information. Physicians, especially women and African-Americans, nutritionists, and other health professionals were considered reliable sources. Women generally rejected African-American celebrities as role models, saying their resources and lifestyles were not relevant.

Direct observation was important to identify barriers to and opportunities for change. Neighborhood tours confirmed reports of limited access to high-quality, affordable food, especially fresh produce. Tours helped researchers identify community programs and leaders, including local chefs, who were already offering nutrition education. Observations identified existing resources and potential partners to support the campaign, and highlighted the need for additional resources.

2.1.2. Refining and sharing the message

Findings from interviews, focus groups, and community observations led to development of campaign themes, messages about healthy eating and physical activity, and ideas for activities and resources to support messages. Qualitative research in *Sisters Together* continued throughout program design and implementation. Themes and messages were rigorously tested with the target population. At all points, campaign branding, materials, and activities were evaluated to determine if they addressed three fundamental questions:

- Do materials address themes, key information, and skills that are needed?
- Does the design reflect the culture and preferences of the target population?
- Are language and style appropriate and understandable?

Recipes were a primary communication element. They addressed women's key concerns, relying on comparatively less expensive ingredients and were easy and quick to prepare. Development required several steps to insure that recipes would be acceptable. Popular dishes were modified, tested with members of the target audience, revised to respond to feedback, and retested before dissemination.

Sisters Together built recognition of and support for campaign themes and activities by establishing a strong community presence. Promotional activities conveyed healthy eating and

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