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Cultural and Contextual Adaptation of a Childhood Obesity Preventive Intervention Program

Abstract

This article describes the adaptation of a parent-focused evidence-based childhood obesity intervention program for implementation by county-based Extension educators in coordination with school district personnel in rural Pennsylvania. The Lifestyle Positive Parenting Program was designed and evaluated in Australia in clinical settings. Several minor and more serious adaptations, such as featured recipes and content of follow-up telephone calls, were made so that the program would be more appropriate for and appealing to target families. Conceptual issues regarding the adaptation of evidence-based programs are reviewed.

Keywords: [adaptation](#), [evidence-based intervention](#), [child obesity](#)

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Much Extension work involves the dissemination of evidence-based intervention programs focused on critical community needs. However, evidence-based intervention programs often require some adaptation to maximize fit, acceptability, and impact in new settings (Barrera & Castro, 2006; Kumpfer, Alvarado, Smith, & Bellamy 2002). For many years, Extension has been involved in addressing the childhood obesity epidemic (Benke et al., 2013; Dart, Frable, & Bradley, 2008; Lanigan & Power, 2008). This article describes the adaptation of an evidence-based childhood obesity program for use by Extension educators in coordination with local school district personnel.

Principles of Adaptation

Adaptation refers to modifications of evidence-based program content or delivery mode to accommodate cultural beliefs, attitudes, and behaviors in a new population (Castro, Barrera, & Martinez, 2004; Whaley & Davis, 2007). Adaptation at the surface structure level involves changes to observable "superficial" characteristics, such as matching photographs in program materials to participants' race/ethnicity. Adaptation at the deep structure level involves core components implicated in the program logic model (Resnicow, Soler, Braithwaite, Ahluwalia, & Butler, 2000).

Whereas changes at the surface structure level are widely accepted, changes at the deep structure level are actively discouraged (Ferrer-Wreder, Sundell, & Mansoor, 2012; Kumpfer et al., 2002). Once deep structure level changes are made, the evidence base for a program is compromised and may no longer apply.

Adaptation of a Childhood Obesity Program

Stemming from prior successful collaborations, Extension educators, local school district personnel, and our team of university-based researchers comprised an ideal partnership for addressing childhood obesity in two rural communities in Pennsylvania. Partnership members were especially interested in the Lifestyle Positive Parenting Program, also known as Lifestyle Triple P (LTP), because it is one of the few childhood obesity programs with rigorous evidence of effectiveness. In a randomized controlled trial with a clinic-based sample of families with overweight children, LTP improved parents' effectiveness in promoting children's healthful behaviors and reduced children's body mass index over 1 year, compared to usual care (West, Sanders, Cleghorn, & Davies, 2010). LTP is manualized, consisting of 10 weekly parent group sessions and four individual telephone calls. After reviewing curriculum content, we agreed that LTP was likely to be feasible and efficacious in rural Pennsylvania, with some modifications.

Surface Structure Adaptations

In close consultation with Matthew Sanders, PhD, the developer of LTP, we settled on two adaptations at the surface structure level.

First, the Australian-normed dietary guidelines for LTP did not conform to U.S. Department of Agriculture MyPlate guidelines. Furthermore, many of the recipes included in the recipe book included unfamiliar and possibly unappealing ingredients. Therefore, we revised all dietary recommendations and featured recipes.

Second, with extensive experience in implementing the Strengthening Families Program: 10–14 (Molgaard, Spoth, & Redmond, 2000), Extension educators and school district personnel believed that providing childcare and meals would reduce a major barrier to family participation. They also believed that parents would be more inclined to use LTP recipes if they could try them first. Thus, we provided meals from the program recipe book to families before each group session.

More Serious Adaptations

In close consultation with Dr. Sanders, we also decided to make three adaptations that existed in the gray area between being clearly surface structure changes or being more serious deep structure changes.

First, although the Australian trial of LTP relied on clinical psychologists to deliver the program, we were committed to implementing LTP in a community setting, using local facilitators with varied backgrounds. This decision was based on the understanding that in rural areas of the country, schools, not mental health centers, were the most stable existing community-based infrastructure for the dissemination of evidence-based programs for children.

Second, Extension educators and school district personnel believed that content of some of the telephone calls, such as questions about marital conflict and its effect on children's health, was too personal given the

new context in which LTP would be implemented. As a result, we eliminated two telephone calls. We left the remaining two telephone calls, which featured more general questions about positive parenting practices, unchanged.

Third, because obesity is a highly stigmatizing issue, we believed that too much emphasis on obesity would be off-putting to families. Instead, we chose to focus the program on health promotion, such as nutritious eating and increased physical activity, during both recruitment and implementation.

Testing Results and Concluding Remarks

When adapting an evidence-based program, best practices involve maximizing program–context fit without compromising program core components (Backer, 2001; Barrera & Castro, 2006). In this case, Extension educators and local school district personnel were experts in the local context and Dr. Sanders was the expert in LTP core components. The contributions of all these experts increased the chances of program success.

Some changes to LTP, such as featured recipes, were relatively minor and clearly affected only surface structure features. Unfortunately, even with consultation with the program developer, it is sometimes difficult to discern whether other changes, such as eliminating potentially uncomfortable telephone calls, might have a greater impact than intended. It was not clear how critical these features were to LTP's prior success. Because of that uncertainty, we incorporated one additional best practice of adaptation: testing the effectiveness of the revised program in the new context. The study we undertook relied on the fact that more families were interested in the program than could be accommodated. Rather than enroll families on a first-come-first-served basis, we randomly assigned families to receive the program at two different time points, thus creating an ideal waiting list control condition that could be tested in a rigorous experimental study design (Li, Welsh, DiNallo, & Nix, 2020).

In sum, Extension educators should be aware that evidence-based intervention programs often require some adaptation for new contexts. In these cases, it is critically important to distinguish between changes at surface structure and deep structure levels. When there are concerns that adaptations might broach the gray area between surface features and deep structure, it is important to retest the revised program. In this way, educators are most likely to serve the mission of Extension in disseminating the best programs possible.

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