Comparison of Program Costs for Parent-Only and Family-Based Interventions for Pediatric Obesity in Medically Underserved Rural Settings

There is a significant gap in scientific literature regarding obesity treatment for children in rural areas. As these children report higher rates of obesity than urban children, and these communities tend to have fewer medical resources than urban areas, finding evidence-based, cost-effective treatments is of the utmost importance. The purpose of this article was to determine if there was a significant difference in cost between a childhood obesity intervention targeted at rural families or parents exclusively. Children living in rural “Health Professional Shortage Areas” were invited to participate if they had a BMI above the 85th percentile and were approved by their primary care doctor.

Eligible families were split into the family intervention, parent-only, or control groups. Trained instructors gave 90 minute sessions with both a diet component ("Families were taught to categorize foods as red, yellow, and green based on a modified version of the Stoplight program") and a physical component ("a pedometer-based step program") to both groups. At each session, children in the family-based group experienced a “group-based physical activity, the chance to sample a healthy snack and an educational topic” while all parents attended “a discussion of the progress made and challenges encountered over the past week, as well as knowledge and skills training related to nutrition, physical activity, and behaviour management strategies.” After the conclusion of the study, “program costs were determined by summing costs for personnel serving as trainers, group leaders, weekly supervision, materials (ie, manuals, materials to measure energy consumption, pedometers), incentives, food, and travel.” Careful data analysis showed a decrease in BMI z-scores of participating children as compared to children in the control group, demonstrating the efficacy of the intervention. However, children in the family-based group did not decrease their BMI z-score significantly more than children in the parent-only group. The family-based program was also much more expensive ($20,928 total) than the parent-only ($13,546) intervention.

This study is of particular interest due to its focus on the needs of underserved communities. However, it is limited in that research costs, doctor’s appointments, and participant expenses were not counted in the total. Additionally, the study would be stronger if it accounted for long-term effects by using a longer follow-up period.