How effective are obesity prevention programs implemented in schools with African American children compared to other children? Findings from a systematic review

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Abstract

• The effectiveness of obesity prevention programs differs across racial/ethnic groups (Madden, 2009).
• Twelve studies meeting a priori inclusion criteria (RCT) and five studies that were not randomized control trials (low quality studies) were extracted from 230 reports accessed through 6 electronic databases.
• The general findings for this study revealed that of the four interventions, (nutrition modification focused, exercise focused, health education focused, and hybrid focused) those that were most effective incorporated physical activity for at least 35 minutes daily for at least 10 months.
• For school-based obesity prevention programs to be effective with African American children, they must be created based on a culturally appropriate theoretical paradigms within a strong hybrid (vigorous physical activity and health education integrated across multiple classroom subjects) intervention.

Introduction

• The literature is rich with systematic reviews and meta-analysis of obesity prevention/intervention programs for children and adolescents (Bleich, Segal, Wu, Wilson, & Wang, 2015).
• Many have suggested that simple diet modifications and increases in energy expenditure are the answers to preventing obesity (Flynn et al., 2006; Stice, Shaw, & Marti, 2006). However, few studies have evaluated randomized controlled trials of school-based obesity prevention interventions.
• Those that do evaluate their programs find that they have not included a substantial ethnic minority sample to generalize findings to any subgroup (e.g., age, baseline weight status, gender, race/ethnicity and socioeconomic status).
• The Community Preventive Services Task Force (CPSTF, 2009) found “insufficient evidence to determine the effectiveness of school-based programs to prevent or reduce obesity and obesity among children and adolescents because interventions varied and reported outcomes were not comparable” (para. 2).

Methods

• The methodology for this systematic literature review followed the current systematic methods and standards established by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) (Moher et al. 2009).
• Searches for eligible studies were completed using the following databases up to September 2015, with no language or publication year restrictions: EMBASE; PsycINFO, CINAHL, and the Cochrane Library.
• Studies that met the inclusion criteria were selected among quantitative, qualitative, and mixed-methods studies published in peer-reviewed journals, grey literature, dissertations, theses, and white papers.
• Twelve studies meeting a priori inclusion criteria (high quality studies) were extracted from 230 reports accessed through 6 electronic databases. An additional five studies that were not randomized control trials (low quality studies) were included to provide an exhaustive review.

Results

• The general findings for this study revealed that of the four interventions, (nutrition modification focused, exercise focused, health education focused, and hybrid focused) those that were most effective incorporated physical activity for at least 35 minutes daily for at least 10 months.
• Health education integrated into classroom curriculum across multiple subjects was also effective.

Flowchart of the literature retrieval process

Discussion

• Systematic reviews and meta-analyses of randomized controlled trials have the potential to provide limited, levels of evidence to support the effectiveness of obesity prevention programs for African American children (Gayet & Brown, 2002).
• The general findings for this study revealed that of the four interventions (nutrition modification focused, exercise focused, health education focused, and hybrid focused) those that were most effective were those that incorporated physical activity for at least 35 minutes daily for at least 10 months.
• Health education integrated into classroom curriculum across multiple subjects was also effective. However, there was not an effort found in the hybrid and nutrition modification only interventions. The hybrid intervention did not integrate into classroom curriculum as deeply as the education only interventions. Also, the physical activity components of the hybrid programs were not as rigorous nor as long in duration as the exercise only programs.

Implications for Social Work

• Obesity is such a huge challenge that it must be addressed from the micro, mezzo, and macro levels, and social workers are among the best professionals to help tackle this issue (Donaldson & Daugherty, 2011; Kaise, 2011).
• Also, the theoretical underpinnings of AfriCore should be considered as well because it takes numerous aspects of African American cultural values into account when developing effective intervention programs. Obesity prevention studies will usually focus on the individual (Teaford-Shears, 2008) along with proper diet and exercise (Canelly, Davies, and Butler, 2017). This perspective lacks a social justice lens, a framework that social workers operate by and could be better used in addition to an ecological systems lens.
• Social workers and the profession as a whole should seek to become more actively engaged in coalitions, research, and scholarship on obesity. The profession holds a valuable role to play at all levels of interventions and preventions.

Limitations

• Based on the studies included in this review, only one program included a health literacy component (Madden, et al., 2009).
• Because most interventions are implemented with low-income children, it is imperative that obesity prevention programs include literacy components.
• Not all evidenced-based studies included an explicitly stated theoretical framework. (See table 1). This is an indication that there is a gap between theory, research, and practice.

Table 1: Studies Included for Literature Review

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References

[References list]

Figure 1: Flowchart of the Literature retrieval process

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Figure 2: Intervention Type and Quality

- [Image of figure 2]