

**A Call to Action: Addressing the Childhood Obesity Epidemic
Through Comprehensive School Counseling Programs**

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Abstract

The need for school-based interventions targeting the childhood obesity epidemic has been well documented. The risk factors associated with childhood obesity are physical, mental, psychosocial, academic, and economic. With training in developing comprehensive programs and interventions, professional school counselors are positioned to assist students suffering as a result of childhood obesity. This manuscript provides strategies for intervening with students and other school community stakeholders within the context of the themes of school counseling as indicated by the *National Model (2005)*: advocacy, leadership, collaboration, and systemic change.

Keywords: childhood obesity, school counselor, comprehensive school counseling

A Call to Action: Addressing the Childhood Obesity Epidemic Through Comprehensive School Counseling Programs

An unprecedented need for action regarding the health of United States (U.S.) students has emerged, as the prevalence of childhood obesity has reached an alarming all-time high (Story, Nannery, & Schwartz, 2009). More children than ever are considered obese, and today's obese children and youth are significantly heavier than those of past generations (Estabrooks, Fisher, & Hayman, 2008). Maziak, Ward, and Stockton (2007) credited this rise to "obesogenic environments" encouraging unhealthy eating habits, sedentary behavior, and dependence on "technology-based, comfort-oriented lifestyles" and noted the economic impact of obesity – an estimated \$117 billion spent yearly in the U.S. on obesity-related costs for adults and children. With over 95% of U.S. children and youth spending large amounts of time in school and many students receiving as many as two meals per day at school, this appears to be a powerful setting to address childhood obesity, and professional school counselors are in position to provide education, prevention, and remediation and to broker resources that combat current trends (American School Counselor Association [ASCA], 2005; Foster et al., 2008; Leviton, 2008; Story et al., 2009; Wechsler, McKenna, Lee, & Dietz, 2004). Using the *ASCA National Model* (2005) as the blueprint for developing comprehensive school counseling programs, professional school counselors employ the themes of advocacy, leadership, collaboration, and systemic change to improve student wellness, to engage school and community stakeholders in obesity prevention and remediation, and to encourage multilevel advocacy by students, parents, faculty, and community members.

Definition, Etiology, and Systemic Issues

The Centers for Disease Control and Prevention (CDC) identifies obese children and adolescents as possessing a body mass index (BMI) registering “at or above the 95th percentile for children of the same age and sex,” meaning these individuals have a BMI greater than or equal to 95 percent of their peers in the same age and gender category (CDC, 2011). In the past thirty years, obesity rates have increased tremendously to roughly 17 percent of children and adolescents; in children ages 2 to 5 and 12 to 19, the rate has increased threefold, while the rate is four times higher for children ages 6 to 11 (CDC, 2011; Daniels, Jacobson, McCrindle, Eckel, & McHugh Sanner, 2009). The highest rates are reported in members of low socioeconomic status (SES) groups and racial/ethnic minorities, with Hispanic Americans and African Americans, respectively, topping the list (Caprio et al., 2008; Singh, Kogan, & Van Dyck, 2008; Maziak et al., 2007). Nearly one third of children and adolescents are on the brink of becoming obese, and the risk more than doubles when at least one of the parents is obese (Cottrell, Northrup, & Wittberg, 2007; Sinha & Kling, 2008).

The increase in prevalence has been attributed to numerous factors, including genetics, poor diet, and inactive lifestyles (Daniels et al., 2009; Estabrooks et al., 2008; Sinha & Kling, 2008; Steinbeck, 2001). While studies have been conducted linking cases of childhood obesity to genetics and specific childhood syndromes, most of the correlational research is limited to studying the environment and lifestyle of obese and at-risk children. Dietary issues, such as poor food selection (e.g. fast food, calorie-dense foods, low nutrient foods) and overeating, as well as sedentary behaviors, like

excess television viewing and video game use, contribute strongly to childhood obesity prevalence and instill behaviors and values in children that persist into adulthood (Biro & Wien, 2010; Tuuri et al., 2009). Singh, Siahpush, & Kogan (2010) contend that the effects of low SES, low levels of education, and lack of access to healthier foods and recreational facilities are increasing obesity rates in children and adults.

Risk Outcomes of Childhood Obesity

Childhood obesity affects children physically, mentally, and emotionally. Obese children and adolescents are at high risk for developing diabetes, asthma, and high blood pressure in childhood, as well as high cholesterol, sleep apnea, heart disease, and premature death in adulthood (Steinbeck, 2001; Taras & Potts-Datema, 2005; Wechsler et al., 2004). Obese female children have an escalated risk for early maturation and early puberty, which elevates other potential risks, including depression, bullying, teasing, sexual behaviors, and substance abuse (Biro & Wien, 2010). Additionally, Sinha and Kling (2008) reported that nearly 80% of children who are obese will maintain an obese weight into adulthood. These same children can also develop emotional issues like low self-esteem and suicidality, and they are at high risk for social discrimination at school and in the workforce, including bullying and teasing (Daniels et al., 2009; Pyle et al., 2006; Shore et al., 2008; Wang & Veugelers, 2008). Furthermore, obese children and adolescents rated their quality of life similarly to individuals battling cancer (Sinha and Kling, 2008), a finding that underscores the holistically debilitating impact of childhood obesity.

The epidemic is proving to be detrimental to physical and cognitive functioning in school and at work and, moreover, has a substantial economic impact. Numerous

studies have shown that children who are obese tend to have lower grade point averages and standardized test scores, specifically in math and reading, than children of the same age and sex who have a healthy body weight, though these relationships may exist for a variety of factors (Castelli, Hillman, Buck, & Erwin, 2007; Chomitz et al., 2009; Pyle et al., 2006; Taras & Potts-Datema, 2005; Trudeau & Shephard, 2008). One study looking at young children established a correlation between impaired verbal skill attainment and high BMI in both boys and girls, while social and motor skill impairment was linked to high BMI in boys (Cawley and Spiess, 2008). Similarly, Li, Dai, Jackson, and Zhang (2008) found that “lower educational achievement among adults is associated with obesity.” These children are also more likely to be absent from school for health-related reasons (Story, Kaphingst, & French, 2006).

The Role of the Professional School Counselor

The ASCA *National Model* (2005) lists four major themes—leadership, advocacy, collaboration, and systemic change—as paramount to the role of the professional school counselor. As obesity in children and adolescents increases the risk factor for an array of physical, social, emotional, and mental problems, these four themes should permeate through the work of professional school counselors when researching the prevalence of childhood obesity and when providing education, prevention, and remediation interventions for students and other stakeholders (ASCA, 2005).

Furthermore, the *National Model* and the ASCA *Ethical Standards for School Counselors* (2010) indicate academic, career, and personal/social development direct services as imperatives for professional school counselors, including large group guidance, small group and individual counseling, parent workshops, faculty in-service

training, collaboration/ consultation, and advocating for student welfare and policy change. Approaching the issue from an ecological perspective is useful as childhood obesity permeates through various realms including personal, familial, social, and even larger governmental policies (Bronfenbrenner, 1974; Estabrooks et al., 2008).

Professional school counselors can consider this multisystemic perspective in determining how these factors impact one another and where to target interventions.

The authors will now discuss potential interventions and services that professional school counselors can provide; additionally, Appendix A includes a listing of resources not discussed in this article.

Advocacy

Engaging in and promoting advocacy represents a fundamental piece of the *ASCA National Model (2005)*; moreover, the *ASCA Ethical Standards for School Counselors (2010)* and the American Counseling Association's *Code of Ethics (2005)* cite multilevel advocacy as paramount to the counseling profession. In addition, the *ACA Advocacy Competencies (2003)* require counselors to empower their clients through education, as well as serve as an advocate for clients when external obstacles become a potential risk factor to an individual's development and academic achievement. With regard to childhood obesity, two overarching advocacy themes emerge: increasing physical activity and improving nutrition habits, which, when examined from a school policy framework, translate into increasing standards for physical education (PE) classes and improving the quality of school nutrition. As both physical activity and nutrition are also directly related to performance at school,

improving the school's role in these areas should be one focus of attention for professional school counselors and other stakeholders.

Physical education. Professional school counselors should involve themselves and engage other stakeholders in multilevel advocacy surrounding PE standards within schools. Incorporating a standards-based, data-driven PE program into school curriculum gives children the opportunity to engage in physical activity and to learn how to make healthy choices, and how to carry these choices into adulthood. Research demonstrates that physical activity—both structured and unstructured—improves circulation, increases blood flow to the brain, and raises the levels of Norepinephrine and endorphins in the body, which calm the mind and increase attention span (Taras, 2005). In 2009, though, fewer than 60% of high school students attended PE classes, with only 33% attending daily; the level of participation in PE and unstructured physical activity drops sharply as students advance to higher grades, as only 18% of high school students reported participating in at least one hour of activity each day (CDCP, 2010). School districts around the country have sacrificed PE to make more time for classroom instruction in an attempt to boost standardized test scores; however, numerous studies have indicated that students who were exposed instead to more PE time (including physical education and activity) either “maintained or improved their grades and scores on standardized achievement tests, even though they received less classroom instructional time than students in control groups” (Active Living Research, 2007; Castelli et al., 2007; Story et al., 2006).

Nutrition in schools. Professional school counselors and other stakeholders should advocate within their schools and districts, as well as on the state and federal

level, for improved standards for nutrition education and school food programs. Similar to augmenting physical activity, consuming healthier foods can increase stamina, boost attention span, reduce the adverse effects of “sugar highs,” and decrease student absence rates (Wechsler et al., 2004). Nutrition education provides students with a basis of knowledge about healthy weight and how to determine nutritional value of food, both of which serve as a prevention strategy, as well (Pyle et al., 2006). Tuuri et al. (2009) noted that comprehensive wellness programs that educate students about healthy eating habits have a positive impact on students’ food selection, especially in regard to choosing “low-calorie, nutrient-dense fruit and vegetables” over fatty, low-nutrient foods. Moreover, programs that target students, as well as their families, have proven to be some of the most effective strategies (Leviton, 2008).

In addition to enhancing overall health, consuming these healthier foods has been linked to improved academic performance in students (Florence, Asbridge, & Veugelers, 2008). Specifically, professional school counselors can support national campaigns aimed at reducing childhood obesity, like Michelle Obama’s *Let’s Move!* campaign, the U.S. Department of Agriculture’s HealthierUS School Challenge, and continued efforts to improve the Child Nutrition and WIC Reauthorization Act, to bolster support for these issues and effect change. Within schools, counselors should advocate for the removal of sugary calorie-dense foods from vending machines in their schools and discourage the excessive use of candy as a classroom reward and classroom parties that rely on heavily carbohydrate and sugar treats, as well as removing physical activity as a punishment for poor classroom behavior.

Large Group Guidance

Classroom presentations, led by the professional school counselor or a classroom teacher, allow school counselors to reach many students at one time and primarily fill the need for prevention services (Baker & Gerler, 2008). Pre-developed lessons and activities on nutrition, physical activity, and body image are available for professional school counselors (see Appendix), or new curriculum units can be developed based on the specific needs of the school, in accordance to the ASCA National Standards for Students (2005). A unit focusing on nutrition and physical wellness may include lessons on healthy eating habits and food selection, proper amounts of physical activity and exercise, and appropriate methods of safe dieting (Story et al., 2009; Tuuri et al., 2009). Perhaps paramount to student growth across all personal/social areas – especially wellness – is the comprehension of how decisions and choices correlate to both positive and negative consequences (PS:B1.2); these guidance lessons should not only inform them of the consequences but also empower them to make wise, informed decisions (PS:C1.7). These lessons would be more effective if resources and activities throughout the school, such as assemblies with health professionals as guest speakers, tie-ins to health and physical education classes, or bulletin boards highlighting superfoods, reinforce the concepts discussed in classrooms.

Due to the psychosocial risks associated with childhood obesity (e.g. depression, low self-esteem, bullying, etc.), professional school counselors should also utilize classroom presentations as an avenue for discussing body image, media literacy, eating disorders, and the availability of the professional school counselor for those who are

struggling (Pyle et al., 2006). Because peer pressure surrounding body image may lead students to engage in drastic measures for weight loss, they need to be engaged in discussions about coping with peer pressure, as well as the dangers of using inappropriate or unmonitored dieting methods (PS:C1.9; PS:C1.8). Students should be informed about available resources for obesity and dietary issues; moreover, school counselors should aid students in understanding when they should seek assistance from peers, a counselor, or medical assistance (PS:C1.5). In addition to educating students, these classroom presentations should be used to distribute needs assessments for further counseling services, so that the school counselor can determine what topics should be covered in future lessons, workshops, or groups.

Large group guidance lessons and classroom presentations also present an avenue for introducing obesity-related advocacy topics (e.g. school-specific programs and standards for school nutrition and physical education). Involving students in and recruiting them for multilevel advocacy allows them to develop interpersonal skills and to identify people who can provide assistance in reaching goals (PS:A.2; PS:C1.6). When teaching students about healthy eating habits and physical activity, the professional school counselor, health professionals, or other guest speakers can highlight the importance of improving standards for physical education and school nutrition and empower students to become advocates for their own health. On a local level, this could entail recruiting students as health ambassadors, in which they encourage their families and peers to adopt healthier food choices and levels of activity by modeling these habits and working collaboratively with the school's cafeteria staff to plan healthy menu options (e.g. Jamie Oliver's *Food Revolution*, 2010); additionally,

counselors could collaborate with students in presenting concerns and ideas to local stakeholders (e.g. principals and school board members). Bringing in guest speakers and representatives from organizations dedicated to obesity-related causes can involve students in awareness and fundraising endeavors. For example, the American Diabetes Association (ADA) assists schools with hosting a School Walk for Diabetes, “an educational school fundraising program that promotes healthy living, school spirit and community involvement” (ADA, 2010); furthermore, ADA offers educational materials that can be used to teach students (K-12) about diabetes and healthy eating as a promotion for the event (See Appendix A).

Group and Individual Counseling

Group counseling may be appropriate for students requiring responsive services, though some groups do serve as sources of prevention (Steen, Bauman, & Smith, 2007). Based on the results of needs assessments and self-referrals, the professional school counselor should determine whether groups should be psychoeducational or counseling-oriented in nature, construct a group proposal for the established topic, and screen potential members (Newsome & Gladding, 2007). As many students suffering from obesity or unhealthy body image may feel isolated or alone, small groups help build a support system for these children by providing psychoeducational information and helping students develop friendships based on acceptance and understanding (Shechtman, Friedman, Kashti, & Sharabany, 2002; Yalom, 2005). Groups that teach coping skills, anxiety management, or self-care and groups for bullying victims and students with poor body image could be very beneficial to obese students, as they incorporate verbal support between members and the professional school counselor by

utilizing discussions of emotional struggles stemming from obesity related issues. However, the authors are not suggesting that these groups be run specifically for students who are obese or overweight but rather that these students be considered during the screening process for such groups since the subject matter could be beneficial.

Students may also benefit from group activities aimed at prevention and remediation that are not therapeutic in nature, and someone other than the counselor may lead these groups. In addition to psychoeducation and counseling groups, small groups or clubs based on exercise and physical activity present obese students with a way to get active while offering emotional support and accountability among members; however, a trained fitness instructor or other health professional should facilitate this group or at least be present, as professional school counselors generally do not have a background in developmentally appropriate exercise regimens or health monitoring (Leviton, 2008). One such idea is intramural sports, where members learn how to play new sports, feel the collectiveness of being a member of a team, and practice other skills learned in small group activities (acceptance, self-management, etc.). Other possibilities include cooking clubs, health ambassador clubs, and student/parent/teacher exercise clubs. When these options are not available, the professional school counselor should advocate for such groups and encourage parents and students to advocate for these groups, as well.

Individual counseling may be necessary for some students who are suffering from obesity-related issues and for whom group counseling is not appropriate (Newsome & Gladding, 2007). As aforementioned, the professional school counselor is

not a medical professional and should not engage the student in weight loss or diet planning, but instead should support out-of-school treatment plans and the child's desire to lead a healthier lifestyle (Leviton, 2008). However, professional school counselors should familiarize themselves with the presenting issues related to obesity, such as depression, poor self-worth, anxiety, and lethargy, and engage these students accordingly in treatment options. The ASCA position statement on The Professional School Counselor and Student Mental Health (2009) highlights providing brief counseling interventions when needed as paramount to comprehensive programming. Daniels et al. (2009) illuminated motivational interviewing as an effective technique to boost "intrinsic motivation to change behaviors by exploring and resolving ambivalence" regarding obesity and unhealthy lifestyle in children and adolescents. In addition to individual treatment for specific problems, the professional school counselor should provide referrals when appropriate (e.g. pediatrician, nutritionist, private counselor) and teach the student and his/her guardians to advocate for the students' health and wellness needs.

Parent Workshops

Parent workshops are conducted to complement the school guidance curriculum and are need-based and informative by design (ASCA, 2005). In regard to childhood obesity, professional school counselors should collaborate with school nurses to conduct psychoeducational workshops to reinforce many of the topics discussed in large group guidance curricula targeting prevention and remediation (Erford, 2007). Potential topics for parent workshops include reading nutritional labels, interpreting and applying the USDA's Food Plate, helping the child to become more physically active,

shopping for affordable nutritious foods, and recognizing the potential health risks obesity poses to children and teenagers. In many situations, parents, like their children, simply lack knowledge about healthy food choices and the importance of physical activity and would benefit from a workshop facilitated by a nutrition educator, another health professional, and the professional school counselor. Information can be presented through parent/teacher group meetings, health fairs, or other events where these stakeholders may have a captive parent and community audience. Another example would be to have a professional chef present information about designing a menu, selecting foods and ingredients, and healthy preparation techniques. Furthermore, professional school counselors can use parent workshops to present information on risk factors (physical, social, emotional, and academic) associated with childhood obesity and how to recognize these in children.

School counselors must assist parents and the community with psychoeducational information and resources when possible. For instance, parents from low SES and underserved neighborhoods, where healthy food options are more expensive and harder to find while sugary foods and fast foods are cheaper and more available, could benefit from a workshop linking them to resources and community agencies that assist in locating healthier food options; providing information about local farmers markets and how to select the healthiest produce items could help resolve this disparity (Andrieu, Darmon, & Drewnowski, 2006). Counselors should work to fill gaps when the lack of information is a barrier. Attending a parent workshop may not always be feasible for some parents and guardians. Therefore, it may be indicated that a professional school counselor needs to include an outline of covered information in the

school newsletter, on the school website, and bulletin boards. In using multiple ways to disperse information, professional school counselors are making information accessible to parents and encouraging parents to advocate on their child's behalf.

Faculty In-service Training

Faculty and administrator in-service training allows professional school counselors the opportunity to delineate information regarding the goals of the counseling program and how these school stakeholders can be involved (ASCA, 2005). Story et al. (2009) posited that many surveyed educators listed nutrition education as a topic on which professional development is needed. As with parents, the professional school counselor should introduce to the faculty the risk factors of childhood obesity, especially the effects on academic achievement, psychosocial development, physical health, and emotional wellness, and how to recognize when students are suffering as a result (e.g. prolonged fatigue/exhaustion, bullying, depression, early maturation, etc.) (Sinha & Kling, 2008). Teachers and administrators also need to be made aware of high-risk groups, such as young girls and students of low SES and minority groups. When faculty and staff are able to obtain information and knowledge about the effects of obesity, they are more likely to be interested in hearing proposals for how they can advocate for students in their current roles. Topics for discussion can be integrated into faculty meetings, in-service days, and even reiterated through faculty newsletters, e-mails, and bulletin boards in the teacher's lounge.

Professional school counselors should provide psychoeducational information to faculty and staff, but also provide ample opportunities to them involved in advocating for students. Professional school counselors should encourage faculty to participate in

school wellness committees and engage in multilevel advocacy for obesity-related issues; for this reason, faculty members need to be provided with policy-related information (PE standard recommendations, school food options, etc.) that can be shared with stakeholders in order to help shape policies in these areas. Moreover, faculty members need to model healthy behaviors while at school. Though the counselor may not necessarily organize such a program, a faculty wellness challenge is one fun method for faculty members to model healthier behaviors; in such a program, teachers and staff, either individually or in teams, compete to see who can be the “healthiest” by monitoring health-related habits (e.g. counting steps, monitoring time spent exercising, after-school walking groups, tallying the amount of superfoods eaten, etc.). When initiating these projects, including others like the School Walk for Diabetes, professional school counselors and faculty can collaborate to promote both the project and healthier lifestyles.

Collaboration and Community Partnerships

Collaborating with members of the community is not only a vital asset to professional school counselors, but also an ethical imperative (ASCA, D.2.a., 2004). According to the *ASCA National Model (2005)*, “School counselors become effective leaders by collaborating with other professionals in the school to influence system wide changes and implement school reforms” (p. 24). Professional school counselors can use community asset mapping and school-family-community partnerships to link students, parents, and faculty members to established resources in the community that provide assistance, support, and opportunities for all stakeholders (Griffin & Farris, 2010; Griffin & Steen, 2010). Cooperative extension programs (or the Extension Service

of the USDA) are a part of a nationwide system that provides education to consumers through agricultural research (USDA, 2010). These offices are usually located at land-grant universities in each state. Counselors can collaborate with their local cooperative extension network to provide education to their students, school, and community. Most cooperative extension offices offer website resources including curriculum material for teachers as it relates to students learning about where food comes from, how to manage money, and how to stay active, etc. Counselors can also work with cooperative extensions to organize educational and interactive field trips for students, and to have professionals serve as guest speakers to provide information to the school community. In addition, most 4-H programs are funded through cooperative extension programs. These programs allow students to participate in hands-on educational activities while developing leadership, self-esteem, life skills, knowledge of healthy living, and a sense of community (4-H Youth Development Organization, 2010). Counselors can get their students involved in 4-H through contacting their local cooperative extension office or their local 4-H chapter.

Local and community farmer's markets and gardens provide a great opportunity for school field trips where student can talk to local producers about how food is grown, while learning about economics as well. In addition, school counselors can collaborate with faculty, administrators, and community members to build a school garden. School gardens allow students to be active in learning how to grow fruits and vegetables, how to cook and eat them, and how to determine their nutritional value. A school garden allows science teachers to provide a hands-on approach to learning concepts such as photosynthesis, ecosystems, decomposition, asexual reproduction, and composting. If

the school chooses to sell its fruit and vegetables, students then learn about economic issues, as well. One example of a successful and fully integrated school gardening program is The Edible Schoolyard in New Orleans, Louisiana. Here, students not only learn how to grow their own food, but they also sell it to community members and learn how to cook the same food through cooking classes (The Edible Schoolyard, 2011). School gardens are beneficial because they provide learning opportunities for students and community members and they instill healthy eating habits in children from a young age. Additionally, professional school counselors can work with members of the community to initiate other opportunities such as school wellness fairs, cooking classes, fun runs, in which all stakeholders can participate.

Implications for Future Research

While research about childhood obesity is highly prevalent in literature pertaining to public health and wellness, the topic has garnered minimal interest in school counseling literature. Consequently, many of the interventions and ideas discussed thus far have been compiled from various sources to model a comprehensive school-based approach to combating the obesity epidemic. In many cases, school counselors may likely lack the resources and professional development needed to efficaciously approach this issue; moreover, they may also lack the time to implement the components of such a program, but the concept of physical wellness could and should be integrated into an existing school counseling program, especially since physical health and wellness relates to academics, career development, and personal/social functioning.

Due to the limited amount of related information for school counselors, future research on school-based interventions is essential, especially regarding the outcomes of the ideas presented in this manuscript. Additionally, school counselors need to know both what other interventions are being implemented around the country and how effective these approaches are. More specifically, exploration of guidance lessons and small group curriculums pertaining to body image and wellness would give school counselors a starting point for reaching out to students who struggle with these related issues. As time constraints and resource deficits often lead to school counselors not providing services, another area for consideration would be evaluating the aforementioned partnerships and collaboration opportunities to discover the impact that these entities (e.g. Cooperative extension programs, American Diabetes Association, local health professionals, etc.) can make in a school setting if called upon. Finally, school counselors – acting as advocates – should continue to monitor research into standards and recommendations for physical education and school nutrition in effort to ensure that schools are in compliance.

Conclusion

With the prevalence of childhood obesity at the highest rate in history, prevention and remediation services for affected students have never been more needed to combat the associated risks that exist across life areas. Professional school counselors are ethically compelled to provide need-based direct and indirect services to school stakeholders, and the opportunity for professional school counselors to involve themselves with obesity-related interventions should not be ignored. The multi-systemic, multilevel approaches mentioned in this article are meant to decrease apprehension

and unfamiliarity among practitioners and to provide a foundation of knowledge upon which future interventions can be based.

References

- 4-H Youth Development Organization. (2010). *Who We Are*. Retrieved from <http://www.4-h.org/about/youth-development-organization/>
- American Counseling Association. (2005). *ACA Code of Ethics*. Retrieved from <http://www.counseling.org/Resources/CodeOfEthics/TP/Home/CT2.aspx>
- American Diabetes Association. (2010). *School Walk for Diabetes*. Retrieved from http://schoolwalk.diabetes.org/site/PageServer?pagename=SW_teach
- American School Counselor Association. (2004). ASCA National Standards for Students. Retrieved from <http://ascamodel.timberlakepublishing.com/files/NationalStandards.pdf>
- American School Counselor Association. (2005). *The ASCA National Model: A framework for school counseling programs. (2nd ed.)*. Alexandria, VA: Author.
- American School Counselor Association. (2004). Ethical Standards for School Counselors. Retrieved from <http://www.schoolcounselor.org/content.asp?contentid=173>
- American School Counselor Association. (2009). The professional school counselor and student mental health. Retrieved from http://www.schoolcounselor.org/files/PS_StudentMentalHealth.pdf
- Andrieu, E., Darmon, N., & Drewnowski, A. (2006). Low-cost diets: more energy, fewer nutrients. *European Journal of Clinical Nutrition*, 60, 434-436. doi:10.1038/sj.ejcn.1602331
- Baker, S. B., & Gerler, Jr., E. R. (2008). *School counseling for the twenty-first century (5th ed.)*. Upper Saddle River: Pearson.

- Biro, F., & Wien, M. (2010). Childhood obesity and adult morbidities. *American Journal of Clinical Nutrition, 91*, 1499-1505. doi:10.3945/ajcn.2010.28701B
- Bronfenbrenner, U. (1974). Developmental research, public policy, and the ecology of childhood. *Child Development, 45*, 1-5. doi:10.1111/1467-8624.ep12265367
- Caprio, S., Daniels, S., Drewnowski, A., Kaufman, F., Palinkas, L., Rosenbloom, A., Schwimmer, J. (2008). Influence of race, ethnicity, and culture on childhood obesity: Implications for prevention and treatment. *Diabetes Care, 31*, 2211-2221. doi:10.2337/dc08-9024
- Castelli, D., Hillman, C., Buck, S., & Erwin, H. (2007). Physical fitness and academic achievement in third- and fifth-grade students. *Journal of Sport & Exercise Psychology, 29*, 239-252.
- Cawley, J., & Spiess, C. (2008). Obesity and skill attainment in early childhood. *Economics and Human Biology, 6*, 388-397. doi:10.1016/j.ehb.2008.06.003
- Centers for Disease Control and Prevention. (2004). Participation in high school physical education-United States, 1991-2003. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5336a5.html>
- Centers for Disease Control and Prevention. (2011). Basics about childhood obesity. Retrieved from <http://www.cdc.gov/obesity/childhood/basics.html>
- Chomitz, V., Slinning, M., McGowan, S., Mitchell, S., Dawson, G., Hacker, K. (2009). Is there a relationship between physical fitness and academic achievement? Positive results from public school children in the northeastern United States. *Journal of School Health, 79*, 30-37. doi:10.1111/j.1746-1561.2008.00371.x

- Cottrell, L., Northrup, K., & Wittberg, R. (2007). The extended relationship between child cardiovascular risks and academic performance measures. *Obesity, 15*, 3170-3177. doi:10.1038/oby.2007.377
- Crepinsek, M., Gordon, A., McKinney, P., Condon, E., & Wilson, A. (2009). Meals offered and served in US public schools: Do they meet nutrient standards? *Journal of the American Dietetic Association, 109*, 31-43. doi:10.1016/j.jada.2008.10.061
- Daniels, S., Jacobson, M., McCrindle, B., Eckel, R., & McHugh Sanner, B. (2009). American Heart Association childhood obesity research summit: Executive summary. *Circulation, 119*, 2114-2123. doi:10.1161/CIRCULATIONAHA.109.192215
- ESYNOLA. (2011). About the edible schoolyard. Retrieved from <http://esynola.org/index.php?page=about-the-edible-schoolyard>
- Erford, B. T. (2007). Consultation, collaboration and parent involvement. In B. T. Erford (Ed.), *Transforming the school counseling profession* (2nd ed., pp. 211-235). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Estabrooks, P., Fisher, E., & Hayman, L. (2008). What is needed to reverse the trends in childhood obesity? A call to action. *The Society of Behavioral Medicine, 36*, 209-216. doi:10.1007/s12160-008-9070-7
- Florence, M., Asbridge, M., & Veugelers, P. (2008). Diet quality and academic performance. *Journal of School Health, 78*, 209-215. doi:10.1111/j.1746-1561.2008.00288.x

- Foster, G., Sherman, S., Borradaile, K., Grundy, K., VanderVeur, S., Nachmani, J., Kumanyika, S., & Shults, J. (2008). A policy-based school intervention to prevent overweight and obesity. *Pediatrics*, *121*, 794-802. doi:10.1542/peds.2007-1365
- Goodnough, G., Perusse, R., & Erford, B. T. (2007). Developmental classroom guidance. In B. T. Erford (Ed.), *Transforming the school counseling profession* (2nd ed., pp. 142-167). Columbus, OH: Pearson Merrill Prentice Hall.
- Griffin, D., & Farris, A. (2010). School counselors and collaboration: Finding resources through community asset mapping. *Professional School Counseling*, *13*, 248-256. doi:10.5330/PSC.n.2010-13.248
- Griffin, D., & Steen, S. (2010). School-family-community partnerships: Applying Epstein's theory of the six types of involvement to school counselor practice. *Professional School Counseling*, *13*, 218-226. doi:10.5330/PSC.n.2010-13.218
- Healthier U.S. School Challenge. (2010). Retrieved from <http://www.fns.usda.gov/tn/HealthierUS/index.html>
- Let's Move. (2010). Retrieved from <http://letsmove.gov>
- Leviton, L. (2008). Children's healthy weight and the school environment. *The ANNALS of the American Academy of Political and Social Science*, *615*, 38-55. doi:10.1177/0002716207308953
- Li, Y., Dai, Q., Jackson, J., & Zhang, J. (2008). Overweight is associated with decreased cognitive functioning among school-age children and adolescents. *Obesity*, *16*, 1809-1815. doi:10.1038/oby.2008.296
- Maziak, W., Ward, K., & Stockton, M. (2007). Childhood obesity: Are we missing the big picture? *Obesity Reviews*, *9*, 1-8. doi:10.1111/j.1467-789.2007.00376.x

- Newsome, D., & Gladding, S. (2007). Counseling individuals and groups in school. In B.T. Erford (Ed.), *Transforming the school counseling profession* (2nd ed., pp. 168-194). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Oliver, J. (2011). *Jamie's Food Revolution USA*. Retrieved from <http://www.jamieoliver.com/campaigns/jamies-food-revolution>
- Pyle, S., Sharkey, J., Yetter, G., Felix, E., Furlong, M., & Poston, W. (2006). Fighting an epidemic: The role of schools in reducing childhood obesity. *Psychology in the Schools, 43*, 361-376. doi:10.1002/pits.20146
- Schechtman, Z., Friedman, Y., Kashti, Y., & Sharabany, R. (2002). Group counseling to enhance adolescents' close friendships. *International Journal of Group Psychotherapy, 52*, 537-553. doi:10.1521/ijgp.52.4.537.45519
- Shore, S., Sachs, M., Lidicker, J., Brett, S., Wright, A., & Libonati, J. (2008). Decreased scholastic achievement in overweight middle school students. *Obesity, 16*, 1535-1538. doi:10.1038/oby.2008.254
- Singh, G., Siahpush, M., & Kogan, M. (2010). Rising social inequalities in U.S. childhood obesity, 2003-2007. *Annals of Epidemiology, 20*, 40-52. doi:10.1016/j.annepidem.2009.09.008
- Singh, G., Kogan, M., & VanDyck, P. (2008). A multilevel analysis of state and regional disparities in childhood and adolescent obesity in the United States. *Journal of Community Health, 33*, 90-102. doi:10.1007/s10900-007-9071-7
- Sinha, A., & Kling, S. (2008). A review of adolescent obesity: Prevalence, etiology, & treatment. *Obesity Surgery, 19*, 113-120. doi:10.1007/s11695-008-9650-4

- Steen, S., Bauman, S., & Smith, J. (2007). Professional school counselors and the practice of group work. *Professional School Counseling, 11*, 72-80. doi:10.5330/PSC.n.2010-11.72
- Steinbeck, K. (2001). The importance of physical activity in the prevention of overweight and obesity in childhood: A review and an opinion. *Obesity Reviews, 2*, 117-130. doi:10.1046/j.1467-789x.2001.00033.x
- Story, M., Kaphingst, K., & French, S. (2006). The role of schools in obesity prevention. *The Future of Children, 16*, 109-142. doi:10.1353/foc.2006.0007
- Story, M., Nannery, M., & Schwartz, M. (2009). Schools and obesity prevention: Creating school environment and policies to promote healthy eating and physical activity. *The Milbank Quarterly, 87*, 71-100. doi:10.1111/j.1468-0009.2009.00548.x
- Taras, H. (2005). Physical activity and student performance at school. *Journal of School Health, 75*, 214-218. doi:10.1111/j.1746-1561.2005.00026.x
- Taras, H., & Potts-Datema, W. (2005). Obesity and student performance at school. *Journal of School Health, 75*, 291-295. doi:10.1111/j.1746-1561.2005.00040.x
- Trost, S. (2007). Active education: Physical education, physical activity, and academic performance. Retrieved from <http://www.activelivingresearch.org/files/Active.Ed.pdf>
- Trudeau, F., & Shephard, R. (2008). Physical education, school physical activity, school sports and academic performance. *International Journal of Behavioral Nutrition and Physical Activity, 5*, 1-12. doi:10.1186/1479-5868-5-10
- Tuuri, G., Zanovec, M., Silverman, L., Geaghan, J., Solmon, M., Holston, D., Guarino, A., Roy, H., & Murphy, E. (2009). "Smart Bodies" school wellness program

increased children's knowledge of healthy nutrition practices and self-efficacy to consume fruit and vegetables. *Appetite*, 52, 445-451. doi:10.1016/j.appet/2008/12/007

United States Department of Agriculture. (2010). Cooperative extension systems offices. Retrieved from <http://www.csrees.usda.gov/Extension/>

Wang, F., & Veugelers, P. (2008). Self-esteem and cognitive development in the era of the childhood obesity epidemic. *Obesity Reviews*, 9, 615-623. doi:10.1111/j.1467-789x.2008.00507.x

Wechsler, H., McKenna, M., Lee, S., & Dietz, W. (2004). The role of schools in preventing childhood obesity. *State Education Standard*, 5, 4-12.

Yalom, I. D. (2005). *The theory and practice of group psychotherapy* (5th ed.). New York: Basic Books.

Appendix

School Counselor Resources Related to Childhood Obesity Prevention

<u>Web Address</u>	<u>Specific Topic</u>
http://www.letsmove.gov	Advocacy
http://www.keepgyminscool.com/	Advocacy
http://www.fns.usda.gov/tn/HealthierUS/index.html	Advocacy
http://www.four-h.purdue.edu/foods/	Information for Students
http://www.wholefoodsmarket.com/nutrition/nutrition-kids-teens.php	Information for Students
http://www.dole.com/#/superkids	Information for Students
http://www.extension.org/all/learning_lessons	Information for Students
http://www.nflrush.com/play60/	Information for Students
http://www.aahperd.org/jump/	Jump Rope for Heart: School and Community Involvement
http://www.aahperd.org/hoops/	Hoops for Heart: School & Community Involvement
http://schoolwalk.diabetes.org	School Walk for Diabetes: School & Community Involvement
http://www.heart.org/HEARTORG/Educator/FortheClassroom/For-the-Classroom_UCM_001115_SubHomePage.jsp	K-8 Classroom Lessons
http://www.sparkpe.org/physical-education/lesson-plans/	K-8 Physical Education Lessons
http://teamnutrition.usda.gov/resources/mypyramidclassroom.html	1-6 Classroom Lessons
http://www.nourishinteractive.com/hco/lesson_plans	K-5 Classroom Lessons
http://www.heart.org/HEARTORG/Educator/FortheGym2/For-the-Gym2_UCM_001117_SubHomePage.jsp	K -12 Physical Education Lessons
http://www.dole.com/SuperKids/Educators/LessonsPlans/tabid/745/Default.aspx	K-12 Classroom Lessons
http://www.eeweek.org/resources/garden_curricula.htm	K-12 School Garden Integration Lessons

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