The Educational System for Obesity and Cardiometabolic Prevention and Intervention

Schools are a great environment to implement obesity and cardiometabolic prevention and intervention, because of the opportunities for multi-level, multi-organizational, and communal involvement and support.

Reynolds, Jackson-Cotwright, Polhamus, Gertel-Rosenberg, and Chang (2013) outlined why the early care and education (ECE) setting is a good starting point. Reynolds et al. (2013) pointed out that 27% of 2-5 year olds are already overweight/obese. Over 60% of children under 6 years old are already in some kind of non-parental "away" care during some parts of the day, on a weekly basis (Reynolds et al., 2013). ECE settings such as preschools, child care centers, day care, Head Start, and kindergarten programs can reach many young children, expose them to good habits early, and extend this healthful education and partnership to the teachers, child care workers, and the parents/guardians of the children (Reynolds et al., 2013). Reynolds et al. (2013) noted that it was important to identify the stakeholders, open the dialogue about healthful habits and nutrition, and involve people as "partners" as opposed to a more didactical stance. ECE settings are also a good place to introduce children to healthier snack and meal options that perhaps they may not have as much at home (Reynolds et al., 2013). It offers children a chance to develop their palate for more fruits, vegetables, and whole foods. Once children develop the "taste" and preference for fatty items, or too much sugar or salt, it is more difficult to change that preference when children lack the impulse control that adults are better equipped with.

Organizations such as the YMCA and the National Farm to Preschool (F2PS) Initiative have collaborated with ECE and afterschool care programs to support healthful eating and physical activity (Reynolds et al., 2013). F2PS connects ECE to local food producers to help young children access nutritious food and spark and interest in the food system (Reynolds et al., 2013). Many states have adopted policies limiting the availability of sugary drinks in school systems as well (Reynolds et al., 2013).

The Child Health Initiative for Lifelong Eating and Exercise (CHILE) was a 2 year (2008-2010) trial program piggy-backing on the Head Start (HS) program in 6 rural American Indian pueblos and 10 Hispanic communities in New Mexico (Davis et al., 2013). Head Start is a comprehensive program that includes educational, social, health, and nutritional services to children from low-income households (Davis et al., 2013). CHILE was structured using a socioecological framework considering the factors of the individual/intrapersonal, interpersonal, organizational, community, and public policy (Davis et al., 2013). This framework recommended integrating the classroom with a larger school units such as cafeteria, other classrooms and also integrating the classroom with intervention at the home and community level for better unification and support (Davis et al., 2013).

The CHILE program was comprised of 6 components addressing nutrition and physical activity: classroom curriculum, staff professional development (training/education), foodservice recommendations, family involvement, community grocery store involvement, and the local health care provider participation (Davis et al., 2013). The CHILE nutrition curriculum was based on the observation that young children need 8 to 12 exposures to new food items before developing a preference for a food item (Davis et al., 2013). Young children tend to avoid

unfamiliar foods (Davis et al., 2013). The classroom and cafeteria/foodservice worked on introducing new food items (fruits and vegetables) to the children (Davis et al., 2013). The physical activity curriculum was based on the National Association of Sport and Physical Education recommendations that pre-school aged children should have at least 60 minutes of unstructured play and at least 60 minutes of structured (led by adult) physical activity per day (Davis et al., 2013). The CHILE program also provided resources for HS teachers to include another 30 minutes of activity into their HS program. In order to involve the family, the children had take-home materials (activity sheets, promotional items like balls) and there were some family events to provide a sense of community (Davis et al., 2013). Grocery stores participating in CHILE marked shelves with CHILE recommendations and offered recipes and nutrition information (Davis et al., 2013). CHILE recommended items (healthier items) were marked with the CHILE logo to help simplify choices (Davis et al., 2013).

Healthy Choices (a collaboration between the Massachusetts Department of Public Health and Blue Corss Blue Shield of Massachusetts) was another multi-level school intervention program with the goals of increasing physical activity, better nutrition, decreasing television-watching time, and reducing obesity/overweight (Greaney et al., 2014). Healthy Choices targeted middle schools and provided participating schools with funding, resources/supplies, training, and regional coordinators to facilitate the implementation (Greaney et al., 2014). Teams were created at schools including physical education teachers, classroom teachers, food service, and staff (Greaney et al., 2014). Difficulties that were identified included teacher compliance issues, limitations of budget/stipend, and the difficulties of the food service in steering sales towards the healthier options (low sales on healthy foods, higher sales on "bad" foods) (Greaney et al., 2014). Program sustainability was questioned, and it was suggested that more support and involvement from parents/guardians and the community would make a big difference (Greaney et al., 2014).

It makes sense that the educational system provides fertile grounds to instill good habits and knowledge about healthful choices, good nutrition, and physical activity. Sometimes the schools provide more attention than children/students are able to receive at home. However, schools cannot do it by themselves; viable and sustainable programs including outreach programs need support from families, community, and businesses.

References

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