

School Health Promotion Activities in Miami-Dade County, Florida

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Abstract

Many of Florida's youth are involved in health risk behaviors, such as smoking, eating an unhealthy diet, and being sedentary. These lifestyle habits contribute to the development of many chronic conditions including cardiovascular disease. Schools are in a unique position to make valuable contributions in helping to promote cardiovascular health (CVH). A descriptive assessment of health promotion activities in Miami-Dade County Public Schools (MDCPS) was conducted using telephone surveys during Fall 2001 and Spring 2002. Administrators of 63 schools (26 elementary, 22 middle, and 15 high schools) were interviewed using the Cardiovascular Health in Miami-Dade County Public Schools (CHIMP) questionnaire. Whereas Florida statutes indicate each school should have an appointed health facilitator who would be responsible for the implementation of an effective health program, the findings suggested that only 44.4% the schools had a designated School Health Facilitator (DSHF). In the majority of schools, the DSHF's main function was to provide medical/nursing care. Although 84.1% of the subjects reported their schools provided opportunities for CVH promotion activities in the past year, 98.4% felt that organized CVH promotion activities would be beneficial to students in their schools. These findings indicate the need to establish an organized CVH promotion programs for students in this urban area.

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Problem Overview

According to the Third National Health and Nutrition Examinations Survey (NHANES III), an estimated 97 million adults and one in five children between the ages of 6 and 17 in the United States are overweight (Davis, Davis, Northington, Moll, & Kolar, 2002). Recent literature cites epidemiological data highlighting the overweight and obesity crisis in children and adolescents (Ogden, Carroll, & Flegal, 2003; Ogden, Flegal, Carroll, & Johnson, 2002). Obesity has spread rapidly across race, gender, and class lines, but its prevalence has increased disproportionately among African-American, Hispanic, and Native American children (Crawford, Story, Wang, Ritchie, & Sabry, 2001). Without intervention, obesity may soon cause more death and disease than cigarette smoking (U.S. Department of Health and Human Services, 2001). One such disease related to obesity is cardiovascular disease (CVD), the leading cause of death in the U.S. (Williams, Hayman, Daniels, Robinson, Steinberger, Paridon, & Bazzarre, 2002) and in Florida (Florida Department of Health, 2004). Some other known risk factors for CVD include lifestyle behaviors related to suboptimal diet, physical inactivity, and smoking (Andersen, Crespo, Bartlett, Cheskin, & Pratt, 1998; Epstein, Myers, Raynor, & Saelens, 1998; Fleming, Green, Martin, & Wicks, 2000). Overweight, obesity, and physical inactivity are also linked to elevated cholesterol profiles, abnormal glucose tolerance, and the risk for Type II diabetes, all of which are related to an increased risk of developing CVD (Chen, Jeng, & Reaven, 1987; Davis, Dawson, Riley, & Lauer, 2001; Dietz, 1998; Janz, Dawson, & Mahoney, 2002).

Studies show that although persons with CVD typically do not manifest symptoms until adulthood, health-related lifestyle risk behaviors associated with the development of CVD begin during childhood (Fleming et al., 2000). Additionally, atherosclerosis begins in childhood and the degree of atherosclerotic change in children and young adults can be correlated with the presence and progression of the same risk factors identified in adults (Harrell, Gansky, McMurray, Bangdiwala, Frauman, & Bradley, 1998; Newman, Freedman, Voors, Gard, Srinivasan, Cresanta, Williamson, Webber, & Berenson, 1986; Strong, Malcom, McMahan, Tracy, Newman, Herderick, & Cornhill, 1999; Williams, Hayman, Daniels et al., 2002). Furthermore, obesity, high cholesterol, high blood pressure, physical inactivity, and smoking remain in the same quintile of risk from childhood through adulthood (Harrell et al., 1998).

Therefore, it is appropriate to initiate healthful lifestyle training in childhood to promote improved cardiovascular health in adult life. More than 95% of American youth, ages 5-17 attend school. Unlike other public institutions, schools have continuous and thorough contact with children and youth during the first two decades of life (Davis et al., 2002). The school environment, as opposed to the home environment, has the potential to provide social support from teachers and peers, school nurses, and physical education programs (Davis et al., 2002). An additional aspect of the benefits of primary prevention and intervention beginning in school is that children will be accessed throughout their critical and vulnerable phases of development (Hayman & Reineke, 2003). Thus, schools are the ideal place to

improve both the education and health status of young people in the nation.

Studies have established the benefits of promoting healthy habits, such as physical activity, nutrition, and smoke-free lifestyle, in schools. These health promotion activities range from survey of food frequency or physical activity to randomized controlled trials of fitness and nutrition interventions to environmental interventions (Agron, Takada, & Purcell, 2002; Domel, Baranowski, Davis, Leonard, Riley, & Baranowski, 1994; Nader, Stone, Lytle, Perry, Osganian, Kelder, Webber, Elder, Montgomery, Feldman, Wu, Johnson, Parcel, & Luepker, 1999; Sallis, McKenzie, Conway, Elder, Prochaska, Brown, Zive, Marshall, & Alcaraz, 2003; Vandongen, Jenner, Thompson, Taggart, Spickett, Burke, Beilin, Milligan, & Dunbar, 1995). Whereas some studies concentrate on some form of physical activity (dance, physical education) during or after school (Flores, 1995; Luepker, Perry, McKinlay, Nader, Parcel, Stone, Webber, Elder, Feldman, & Johnson, 1996; Neumark-Sztainer, Story, Hannan, & Rex, 2003; Pate, Saunders, Ward, Felton, Trost, & Dowda, 2003), others emphasize nutrition, food, and school meal modification (Luepker et al., 1996; Nicklas, Johnson, Myers, Farris, & Cunningham, 1998; Perry et al., 1998; Snyder, Story, & Trenkner, 1992; Story, Mays, Bishop, Perry, Taylor, Smyth, & Gray, 2000; Williams, Bollella, Strobino, Spark, Nicklas, Tolosi, & Pittman, 2002). Several studies target multiple interventions using two or more risk components, for example, nutrition, physical activity, smoking cessation, health education curricula enhancement, and parental involvement (Agron et al., 2002; Downey, Frank, Webber, Harsha, Virgilio, Franklin, & Berenson, 1987; Gortmaker, Cheung, Peterson, Chomitz, Cradle, Dart, Fox, Bullock, Sobol, Colditz, Field, & Laird, 1999; Nicklas, & O'Neil, 2000; Perry, Bishop, Taylor, Murray, Mays, Dudovitz, Smyth, & Story, 1998; Robinson, Killen, Kraemer, Wilson, Matheson, Haskell, Pruitt, Powell, Owens, Thompson, Flint-Moore, Davis, Emig, Brown, Rochon, Green, & Varady, 2003; Story, Sherwood, Himes, Davis, Jacobs, Cartwright, Smyth, & Rochon, 2003; Walter, 1989). The goals of some studies are to increase specific knowledge, such as the benefit of low-fat milk, (Wechsler, Basch, Zybert, & Shea, 1998) or general knowledge (Levine, 1982; Shannon, Graves, & Hart, 1982; Singleton & Rhoads, 1984), and others incorporate hands-on training and skill building (Snyder, Anliker, Cunningham-Sabo, Dixon, Altaha, Chamberlain, Davis, Evans, Hurley, & Weber, 1999), and still others provide information via Internet or multi-media games (Baranowski, Baranowski, Cullen, Marsh, Islam, Zakeri, Honess-

Morreale, & deMoor, 2003; Frenn, Malin, Bansal, Delgado, Greer, Havice, Ho, & Schweizer, 2003).

Whereas some modern school health programs implement these promising health promotion activities, many schools do not even though they may help to reduce chronic disease burdens in children. According to National Opinion Poll of Teachers and Parents, only 8.0% of elementary, 6.4% of middle, and 5.8% of high schools provide daily physical education for the entire school year and most after-school programs do not address physical activity and healthy eating (Centers for Disease Control and Prevention [CDC], 2000). However, the Florida School Health Services Act of 1974 authorized the development and implementation of the School Health Services Plan that is a joint responsibility of the Florida Department of Health and the School Board of Miami-Dade County (Miami Dade County Public Schools [MDCPS], 2004).

The primary purpose of the School Health Services Program is to provide learning experiences and health services that will help a student and his or her family develop and maintain sound health practices throughout their lives. The objectives of this program include the promotion of health, the prevention of disease and injury, and the provision of an optimal educational environment. Under the School Health Services Program, the designation of a School Health Facilitator is addressed. It emphatically states: "Each school shall have a health facilitator appointed by the principal who works with the principal, faculty, public health nurse, and other resource persons in the implementation of an effective health program" (MDCPS, 2004). Additionally, the Sunshine State Standards require students to be educated in health and physical education, among other subjects, such as language arts, mathematics, and science (*F.S. Title XLVIII, Chapter 1003.41*, n.d.). Yet, the only instructional standards listed for health and physical education include: the effects of all alcoholic and intoxicating liquors and beverages and narcotics upon the human body and mind; concepts of community health; consumer health; environmental health; family life, including an awareness of the benefits of sexual abstinence as the expected standard and the consequences of teenage pregnancy; mental and emotional health; injury prevention and safety; nutrition; personal health; prevention and control of disease; and substance use and abuse (*F.S. Title XLVIII, Chapter 1003.42*, n.d.). There is no specific mention of prevention of chronic diseases, such as CVD. Moreover, no published report exists that documents an organized effort supporting cardiovascular health (CVH) promotion activities in

Miami-Dade County. This exploratory study assessed to what extent CVH promotion activities are carried out in individual schools in the county.

Methods

Sample

Miami-Dade County Public Schools (MDCPS) is the fourth largest school district in the country. In 2000-01, there were 296 schools in the county, including 207 elementary, 56 middle, and 33 high schools (MDCPS, 2001). That number increased to 340 in 2002-03. School contact information was obtained from the published book (MDCPS, 2001) and selected schools alphabetically from three lists (elementary, middle, and high schools). Initially, 103 schools were contacted to set up a telephone appointment with one of the school administrators (principal or vice principal). Only one school refused to participate. Of all those schools willing to participate, a maximum of three attempts were made to survey the administrators. Those schools (n=63) that completed the survey during Fall 2001 and Spring 2002 (November 2001- February 2002) were included in the study.

Data Collection

The *Cardiovascular Health in Miami-Dade County Public Schools* (CHIMPS) questionnaire was developed for this survey. For the purpose of preliminary assessment in schools, the 18-item questionnaire included 15 close-ended questions and three open-ended questions. Eight questions related to the administrators: his/her interest and willingness to participate in the survey, the best time(s) for telephone appointment, and demographic information. Two items were related to schools: total number of students and teaching staff in the school in past year. Five items were related to health education and designated school health facilitator and three items were related to cardiovascular health promotion activities. In addition, school information was abstracted from the MDCPS Profile book (MDCPS, 2001). Approximately 10 minutes were required to complete the interview. The survey was tested for face validity by survey methodologists at Florida International University.

Procedure

Three interviewers (graduate assistants) were trained to conduct telephone interviews. A script was prepared for the interviewers to follow that included the purpose of the study and the confidentiality and voluntary nature of participation. Data entry and analyses were facilitated with SPSS and SAS software. Descriptive statistics (frequencies and percentages) were extracted.

Results

The sample consisted of administrators from 63 schools (41.3% elementary, 34.9% middle, and 23.8% high schools). Most respondents (85.9%) were vice principals, whereas remaining respondents were principals. Half of the respondents (50.8%) reported themselves as Caucasian. Additional respondents were Hispanic (34.9%), African American (11.1%), and other (3.2%). The respondents were 33.3% male and 66.7% female. The largest percentage of administrators (49.2%) had been employed by the schools for more than five years. About 14.3% of administrators had been employed for less than one year.

Almost half of the schools (42.9%) reported that the student population was predominantly Hispanics. About 28.6% had a predominantly African American student population. Mean class sizes were 18.8 to 30.3 students per class, with a pupil teacher ratio of 11:1 to 30:1 in these schools.

Approximately half of the respondents (49.2%) indicated that they did not have a Designated School Health Facilitator (DSHF). Whereas 6.4% of participants did not know if the school had a DSHF, 44.4% indicated that their schools had a DSHF. Three-fourths of the respondents who indicated as having a DSHF identified the DSHF as someone who was in charge of teaching health and promoting health-related activities. More than half of the schools (55.9%) that did not have a DSHF stated the main reason for not having one was due to the lack of funding. About 14.7% of the administrators thought that it was not necessary to have a DSHF and 20.6% of them stated no reason.

Of the schools that indicated the presence of a DSHF, his/her main function was to provide medical or nursing care (31.6%). Only 5.3% of respondents indicated the DSHF's main function was to teach health or health education. A little over a quarter of them indicated that DSHF has a combination of many roles. The majority of respondents specified that the grade level at which the subject "health" or "health education" was introduced was in 6th grade or lower. About 84.1% of respondents reported their school organized and provided opportunities for CVH promotion activities (e.g., healthy lunch in the cafeteria, Jump Rope for Heart, etc.) for students in the past year. These opportunities were provided for the school staff in 50.8% of the schools. However, nearly all (98.4%) stated they thought school staff and students could benefit from learning more about CVH promotion activities.

Discussion

This study represents a preliminary assessment of a descriptive evaluation based on a convenience sample of administrators. The survey, nonetheless, provided much needed information revealing the status of DSHF as well as CVH promotion activities. One of the objectives of School Health Services Program in Florida includes the promotion of health. Noted in this plan is that each school shall have a health facilitator appointed by the principal who works with the principal, faculty, public health nurse, and other resource persons in the implementation of an effective health program.

However, the results of this survey revealed that schools did not have such a health facilitator. Interviewers noted that although the majority of administrators mentioned that the school provided CVH promotion activities for their students and staff in the past year, they could not name any specific "activity." This lack of specificity may be a result of administrators not being aware of the specific health activities that were provided for the students, especially if activities are conducted in class by a teacher. Most respondents also did not know the specific grade level where "health education" was introduced. The interviewers felt that more accurate information may be obtained from the administrators if the survey instrument were mailed to them. This assumption is because it would have given them opportunities to consult with those teachers and staff members who were responsible for health education and promotion activities in the schools. In addition, information obtained from the DSHF about health issues may be a better measure than the information obtained from the administrators. However, a mailed survey might also have promoted a lower response rate. The administrators mentioned that they would welcome the opportunity to provide CVH promotion activities in their schools. Informal conversations with the administrators also revealed that CVH promotion activities were needed for students and staff alike in most schools.

Conclusion

This study focused on cardiovascular health promotion activities, the common denominators to most chronic conditions such as cancer, diabetes and obesity. By reducing CVH risk factors, we may see a decreased burden of most chronic diseases. This study serves as the foundation for future studies where information can be sought from a wide range of school staff members.

Whereas convincing young people to adopt healthy habits to reduce future chronic diseases is challenging, it is a worthwhile goal for school health

programs. It is particularly relevant for schools in an urban setting having multi-ethnic and diverse socioeconomic background populations because of the disproportionate burden that chronic diseases places on them.

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