School-Based Obesity Treatment: The MATCH Program

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Motivating Adolescents with Technology to Choose Health (MATCH) is a curriculum for middle school students developed by one of the authors (G.T.H.) when he was a science teacher in Martin County, North Carolina, where obesity rates are extremely high. The program is based on insights gained from studies of school-based interventions [1, 2]. It adopts a behavioral approach widely applied in health promotion, one that is based upon the social cognitive theory of self-regulation [3]. MATCH combines what is known about how children learn best in a classroom setting with strategies for promoting behavior change. The curriculum has 4 essential elements: It provides students with information about the unhealthy effects of overweight, teaches them specific self-regulation health skills, gives them individualized tasks that require them to apply those skills, and reinforces the skills with age-appropriate external motivational strategies.

MATCH takes an interdisciplinary approach to student wellness: The curriculum includes lessons on nutrition, physical activity, and technology, and the program provides teachers with a Web-based resource system that allows them to meet educational and wellness objectives simultaneously. The lessons, which are delivered over a 16-week intervention period, are aligned with National Common Core Curriculum Standards. They are designed to parallel the North Carolina Standard Course of Study for seventh grade and are taught embedded within existing curriculum rather than requiring additional instructional time.

When MATCH is implemented in a school, all seventh-grade teachers are trained to deliver MATCH lessons within their subject area, and one teacher serves as the coordinator. All materials are available for download from a secure Web site, and students complete lessons in a student-friendly workbook. Students learn about the body system by system (eg, cardiovascular system, endocrine system) as a structure for the sequenced series of interdisciplinary lessons and receive intermittent rewards for completion of MATCH-related activities. All students receive the same intervention regardless of weight category; the only time weight status is noted is during the student’s self-categorization, which is completed privately.

Because the program lasts 16 weeks and is integrated across subjects, students are able to acquire the knowledge and skills they need to begin internalizing positive health behaviors. Lessons are taught in health, science, math, language arts, and technology classes, and cover such topics as energy balance, peer accountability contracts, body mass index (BMI) calculation, and persuasive writing. At the beginning and end of the program, height, weight, fitness level, and health behaviors are measured. All results are entered into the Web-based system by teachers, and key data are shared with the students, who use this information to establish health-related goals and to develop action plans for weight management.

The program’s objectives are aligned with those of the Coordinated School Health program of the Centers for Disease Control and Prevention, and it follows recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity outlined in the report of an expert committee consisting of representatives from 15 professional organizations [4]. First offered in 2006, the MATCH program is now being implemented in 15 public schools in eastern North Carolina during the 2012-2013 school year. More information is available at www.MATCHwellness.org.

MATCH is now a community-academic partnership led by 2 of the authors—G.T.H. and S.L.; the latter is an obesity-focused preventive medicine pediatrician at East Carolina University (ECU). In 2008, the North Carolina State Board of Education selected MATCH for pilot expansion as a promising school-based obesity intervention. Through funding from the Blue Cross and Blue Shield of North Carolina Foundation and the Kate B. Reynolds Foundation by system by system (eg, cardiovascular system, endocrine system) as a structure for the sequenced series of interdisciplinary lessons and receive intermittent rewards for completion of MATCH-related activities. All students receive the same intervention regardless of weight category; the only time weight status is noted is during the student’s self-categorization, which is completed privately.

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Communicating the Results of BMI Screening to Parents

Despite clear definitions for overweight and obesity across all ages, ensuring that parents understand the results of BMI screening remains a challenge. One reason for this is that children, particularly those aged 3-8 years, have a naturally low percentage of body fat, so a child at the 95th percentile for BMI will often appear to parents to be at a healthy weight or even “skinny.” Indeed, these children do not appear overweight by adult standards, so one cannot trust visual impressions. These children are at higher risk for their growth trajectories to continue to be overweight throughout childhood and into adulthood [20].