

Body Basics: A nutrition education program for adolescents about food, nutrition, growth, body image, and weight control

JENNIFER O'DEA, MPH, PhD

Body Basics is a large, collaborative, nutrition education project implemented at a national level in Australian schools. The project addressed nutrition education policy directives from various medical and government agencies (1-4). The project was funded by Kellogg Australia as a nonprofit community service with the goal of providing adolescents with information and activities to promote better nutrition, physical activity, and sensible attitudes toward weight control and body image. The two major objectives of Body Basics were to:

- Provide teachers and adolescents with information about food, nutrition, growth, development, body image, and sensible weight control; and
- Help teachers and adolescents develop positive attitudes, beliefs, and behaviors related to food, nutrition, growth, development, body image, and weight control.

Jennifer O'Dea is a registered dietitian (Australia), and a senior lecturer in nutrition education for the Faculty of Education, University of Sydney, NSW 2006 Australia. Currently she is a visiting scholar in the Department of Nutritional Science, University of California, Berkeley. Email: jodea@nature.berkeley.edu

The Body Basics resources were designed to give nutrition education a positive focus rather than the negative approach to food often used in schools (5,6), and the lessons and materials were also designed to “do no harm” (7-9) to the adolescent participants. For example, the program was designed to avoid inadvertently creating body image or food concerns and to help young people learn how to enjoy healthful eating, rather than focusing on which foods they should not eat. The program emphasized educating the teachers as well as the students, with the provision of informative fact files for home economics and physical education teachers, including detailed lesson plans, teacher notes, and correct answers to nutrition quizzes. An outline of the program content is given in Figure 1.

NEEDS ASSESSMENT

When designing nutrition education programs, it is important to involve the target audience in the planning process (10-13). Students randomly selected from grades 7 to 10 (approximate age range: 13 to 16 years) at 5 high schools participated in various needs assessment activities. These participants included 370 adolescents who evaluated a current video about nutrition, body image, and weight control using a questionnaire de-

veloped by the author. Participants were asked to rate the video as “excellent,” “good,” “OK,” or “poor,” according to its content and presentation methods, what they liked and disliked about the video, how they would improve the video, and additional topics for inclusion in future nutrition education resources. Focus group discussion (14) centered on the nutrition education topics students would most like to add to their current curriculum. A second needs assessment involved a detailed, 3-hour workshop for 25 adolescents from 3 schools, in which they discussed food habits, nutrition, body image, and weight control issues and practices. Participants were asked to make suggestions for dealing with these issues and their preferred methods of nutrition education classroom delivery. Figure 2 shows the summary of themes and suggestions from the needs assessment activities. All research activities were conducted by the author and trained research assistants.

PROGRAM DEVELOPMENT AND IMPLEMENTATION

Body Basics was developed in 1993 by the author in collaboration with Efi Farmakalidis, PhD, a nutritionist from Kellogg Australia, and David Bennett, MD, and his clinical staff from the Department of Adolescent Medicine at the Royal Alexandria Hospital for Children, Sydney. The objectives of Body Basics were agreed upon by the major project team members as well as federal and state government departments of health and education (N=26), teachers associations (N=10), parents associations (N=3), nutrition and education professional associations (N=10), schools (N=24), and high school students (N=551). The materials were written and developed by the author in collaboration with a team of students, teachers, parents, dietitians, pediatricians, health educators, psychologists, and youth workers. All draft materials were reviewed by the collaborative team, as well as federal and state departments of health and education and an advertising company. A video production company assisted in creating a video for the program. All materials were pilot-tested in school classrooms and revised accordingly. Body Basics was offered to teachers of grades 7 through 10 at every high school in Australia at a minimal cost and supplied via mail order. A national mass media publicity campaign was undertaken to draw attention to the program.

Fact Files

The 14 fact sheets were designed to serve as educational materials for teachers and students. Presented in full color and double-sided, these fact sheets link to the content of lesson plans and contain lists of suggestions for further reading. They are also suitable for photocopying to facilitate distribution. Among students, 59% rated the Fact Files as "excellent" or "good," and 37% rated them as "OK." Fact File topics were the following:

- Food Groups
- Healthy Eating Pyramid
- Dietary Guidelines
- Calcium and Iron
- Fad Diets
- Normal Growth in Adolescence
- Breakfast
- Self-Esteem and Body Image
- Physical Activity
- Eating Disorders
- The Adolescent Growth Spurt
- Fats
- Dietary Fiber
- Healthy Weight for Adults

Lesson Plans

Body Basics is composed of 27 lesson plans of 40 to 80 minutes. The student-centered, interactive lessons include 13 full-color overhead projection sheets and 35 activity sheets/handouts (quizzes, games, puzzles). Each lesson has clear objectives and expected outcomes and includes activities for evaluation of the program. Lesson plans were divided into 3 categories: Food and Nutrition (evaluated as "excellent" or "good" by

59% of students, rated "OK" by 39%), Growth and Development (evaluated as "excellent" or "good" by 55% of students, rated "OK" by 42%), and Body Image and Self-Esteem (evaluated as "excellent" or "good" by 55% of students, rated "OK" by 39%).

Food and Nutrition

- Influences on Eating Habits
- Food Groups
- Fats
- Food Pyramid
- Dietary Guidelines
- Fad Diets
- Sensible Weight Control

Growth and Development

- Adolescent Growth Spurt
- Heredity and body size
- Value of Exercise
- Healthy Weight Range for Adolescents
- Individuality

Body Image and Self-Esteem

- Developing positive self-image
- Peer Support Activities
- Decision Making
- History of Body Image
- Media stereotypes
- Dealing with Stress

Body Basics Videos

The two Body Basics videos—Food & Nutrition and Self-Esteem & Body Image—are both 22 minutes long and include music and lyrics by a teenage rock band and Clip Art nutrition facts. Peer leaders—"average" teenagers—and a teenage drama group are used

as presenters in the videos; they use teenage humor and drama activities to help students identify with them. The videos are linked to the lesson plans and Fact Files. Among students, 57% rated the videos as "excellent" or "good" and 40% rated them as "OK." The following topics are addressed in the videos:

Food & Nutrition

- Adolescents discuss their growth & development
- Nutrition Q & A with dietitian
- Food Pyramid explained
- Healthy Weight Range BMI^a Chart explained
- Fad Diets

Self Esteem & Body Image

- Adolescent fashion and body image
- How media images are manipulated
- Relationships between boys & girls
- Self-esteem—how we are all unique

"Body Board" Game

"Body Board" is a food and nutrition board game modeled after Trivial Pursuit. It includes 52 game cards with answers. Among students, 51% rated the game as "excellent" or "good," and 40% rated it as "OK."

Poster: Healthy Weight Range for Teenagers

This 2x2½-in, full-color, glossy wall poster features BMI percentile ranges and is linked to lessons about normal growth. Among students, 60% rated the poster as "excellent" or "good," and 39% rated it as "OK."

FIG 1. Components and features of Body Basics program and student evaluations.
^a BMI=Body mass index

Themes

- Nutrition education resources are often negatively focused—that is, they show large amounts of fat in foods, tell you what you can't eat, and make you feel guilty.
- Weight control and body image advice is often perceived by teenagers to be hypocritical—for example, advice about healthful eating or weight control communicated by "perfect" looking, skinny models.
- Foods shown in books, videos, and so forth are often old-fashioned and not attractive to teenagers.
- Shocking pictures of obesity or anorexia nervosa are very unappealing to teenagers
- Teenagers perceive people in nutrition education videos as "too old."

Participants' Suggestions:

- Provide factual information about weight control, diets, growth, "normal" weight, food composition, foods related to acne, how magazines "touch up" images.
- Teenagers should deliver information, not "old" people.
- Dietary information should be delivered by a dietitian.
- Presenters should be ordinary teenagers—not celebrities, models, or "perfect-looking" people
- Use music, humor, and ordinary teenagers talking about their problems and issues.
- Use fun, fast presentation with music clips.

FIG 2. Summary of themes and suggestions for nutrition education activities from the Body Basics needs assessment, completed by adolescent participants in the program.

EVALUATION

A questionnaire was used for program evaluation and was completed by 156 adolescents who had participated in the school program. The "Healthy Weight Range for Teenagers" poster (15) was the most highly rated component. The majority of students (81%) reported the program to be valuable, and 82% indicated they would like to participate again. Evaluation questionnaires (N=375) were randomly mailed to teachers who had ordered Body Basics and 98% reported the program to be "very valuable" or "valuable," and all indicated that they would continue to use the program. An average of 89% of teachers rated the program as "excellent" or "good." The fact files were rated most highly, with

96% of teachers rating them as "excellent" or "good."

In a 2000 study, the self-esteem lessons from Body Basics have been shown to improve the body image of young adolescents (16), including those adolescents—such as those with low self-esteem—who were most at risk for developing eating disorders (17-19). Other aspects of the Body Basics program, including its impact on overweight adolescents, are currently being investigated.

Body Basics is an example of a large, comprehensive, and cooperative nutrition education program, which is characterized by input from adolescents, parents, educators, health professionals, the food industry, and government

CONCLUSION

Body Basics was an instant success. It was ordered by 1,000 schools in its first month after release. By 2001, Body Basics had been implemented in two thirds of Australian high schools and it is now being used by many educators and health professionals, including elementary school teachers, extension nutritionists, school nurses, health educators, teacher trainers, and physicians who have modified it for their own use.

Body Basics is an example of a large, comprehensive, and cooperative nutrition education program, which is characterized by input from adolescents, parents, educators, health professionals, the food industry, and government. The success of the program in Australian schools is the result of its collaborative approach and its relevance to the needs and interests of adolescents, which was facilitated using a thorough needs assessment, for-

native evaluation, and pilot testing of materials.

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