

Yes I Can Exercise Adoption/Adherence Model

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Annotation

Although other correlates of physical activity among youth have not been clearly established, a growing literature has suggested that social-cognitive factors such as attitudes, social norms and self-efficacy influence the decision to become physically active among youth. The “yes i can” builds on existing prominent theoretical models employed to study physical activity determinants and provides a curriculum design framework for the development of specific fitness education programs in schools and other educational settings.

Key words

Adherence, physical activity, health-promoting behavior, self-efficacy.

Background

The view of physical activity as a health-promoting behavior is gaining recognition throughout the scientific literature. Physical educators across the nation are working to strengthen fitness education curricula, and particularly to find ways to achieve desired outcomes relating to the adoption and maintenance of personal exercise programs beyond school years. Despite the remarkable growth of interest in the effect of physical activity on the incidence of certain diseases, and recent promotional efforts to increase physical activity, national objectives for participation in physical activity (Center for disease Control and Prevention, 1997) have not been met. Physical activity contributes to physiological benefits such as a lower risk of cardiovascular disease (CHD) (U.S. Department of Health and Human Services 2000; Malina 1996), better control of hypertension (Haapanen-Miemi at al. 2000; Hagberg 1997) and diabetes mellitus (Helmrich, Ragland, Leung & Paffenbarger 1991; Shwartz 1997), reduced risk of certain types of cancer (Lee 1994), and lower risk of osteoporosis (Surgeon General’s Report on Physical Activity and Health 1996). Physical activity also contributes to psychological benefits such as improving self-esteem and self-concept (Calfas, Taylor 1997) and reducing depression (Morgan 1994), anxiety, and stress (Surgeon General’s Report on Physical Activity and Health 1996). Physical activity during leisure time therefore becomes even more important and can contribute greatly to fitness and well-being. It has been shown that increasing the level of leisure time physical activity benefits both men and women as it lessens the mortality risk in both obese and non-obese individuals (Haapanen-Miemi at al. 2000). Whether this physical activity is derived from organized sport or a generally more active lifestyle appears less important than the overall benefits that it can provide. In general, staying active combined with a balanced diet maintains a healthy bodyweight, decreases the risk of CVD and makes a healthier and fitter individual.

Although the health effects of regular physical activity have been well documented, the majority of the western society remains sedentary. Recent surveys conducted in Australia, Canada, England, and the United States indicated that only about 10% of the adult population of each country could be called “aerobically active” (Stephens & Caspersen 1994). In Australia, during the 12 months ended June 1996, over 5.8 million people (35.5% of the population aged five years and over) participated in organized sport and physical activities. The highest participation rate was exhibited by children aged 9-11 years (71.0%), with the rate declining for each successive age group. The largest falls occurred between 15-19 year olds and 20-24 year olds (14.0 percentage points) and between 12-14 year olds and 15-19 year olds (12.5 percentage points) (Australian Bureau of Statistics 1998). . The diminishing rates in these age groups coincide with the ages at which people leave school and the years when their interests, preferences and commitments may be changing (Rehor & Cottam 2000). For some time physical educators have recognized the need for fitness education focused on exercise adoption and adherence. While many school districts have made progress in demonstrating gains in student fitness scores, the absence of a comprehensive, theoretically sound curriculum development model, oriented toward change in exercise behavior, has limited the success of school fitness programs. The Yes I Can Exercise Adoption/Adherence Model is offered as a framework for planning instruction focused on long-term commitment to a personal active lifestyle (Figure1).

Rational for the Yes I Can Exercise Adoption/Adherence Model

The Fitness Education Model focuses on the development of a habit of regular exercise rather than on the enhancement of physical performance. The need for the model grew out of dissatisfaction with our present instructional emphasized in the teaching of motor skills. The majority of today’s physical education curricula are designed with the basic assumption that desired changes in fitness participation and performance can be sought in the same fashion as enhancement of motor performance. And yet, our goals and objectives in each of these two major areas are quite different.

The primary aim of teaching motor skills is the acquisition of a higher order of movement process skill. Instruction is organized in sequences leading to progressively higher levels of skill. While fitness instruction is sometimes directed toward the attainment of a specific fitness activity participation skill, the main focus of instruction should be on permanent adoption of regular exercise habits. The fitness education construct is of a behavioral nature, structured around personal intentions, individual incentive motivation, and a framework of personal meaning.

The Yes I Can Exercise Adoption/Adherence Model

The foundations for the model lie in social psychology and in a personal meaning philosophy of education. Social psychologists have provided a number of attitude-behavior models (Godin & Shepard, 1990). The two key concepts of the Yes I Can Exercise Adoption/Adherence Model derived from these models postulate (1) a sequence of behaviors leading from intention to exercise to adherence to a personal exercise program and (2) three categories of factors that influence the intention to exercise.

A basic assumption of the Yes I Can Exercise Adoption/Adherence Model is that the development of a regular exercise pattern must begin with the individual’s perception of some aspect of personal meaning leading to the intention to exercise. Intentions to exercise are influenced by personal beliefs, social norms, and self-efficacy.

Beliefs

Personal beliefs about the values and benefits that will follow from exercise participation are considered to be an important factor leading to the intention to exercise. The belief component also includes expectations that performance of exercise will result in the desired outcomes. The perceived consequences of participation are then compared against an individual's predisposed values, such as a desirable lifestyle.

Social Norms

The second component, social norms, may also be a crucial factor in determining whether an individual develops a positive intention to exercise. Normative belief carries a connotation of self-responsibility and willingness to behave according to personal principles. Unfortunately, at this point in time, regular exercise is not a normative expectation from the social and societal point of view in the way that other aspects of personal health care are. Consequently, motivation to comply may have to be substituted for societal expectations, in influencing the intention to exercise. Furthermore, the motivation to comply may be either strengthened or depressed by the student's perception of the role model and subjective analysis of the importance of compliance in the particular setting. The perceived exercise exertion that will be required also shapes the motivation to comply.

Self-efficacy

Self-efficacy or perceptions of how easy or how difficult the adoption of a regular exercise regime is likely to be, is the third component that, like personal beliefs and social norms, can influence the intention to exercise. Self-efficacy reflects attitudes about the difficulty of adopting an activity behavior, formed mainly by personal experiences, but also affected by examples of others. It also reflects a personal belief about resources and opportunities available to acquire the desired behavior.

These three categories of factors that influence intention to exercise are shown horizontally as the base of the Yes I Can Exercise Adoption/Adherence Model (Figure 1). The sequence of behaviors leading to adherence to regular exercise, or a physically active lifestyle, are represented vertically within the figure. Beliefs, social norms, and self-efficacy influence intention to exercise; intention, to exercise can lead to actual exercise acquisition. The acquisition of regular exercise behavior is viewed as a three-stage process originating with an attempt to exercise, followed by exercise adoption, and terminating with adherence.

In addition to factors influencing intentions, and the sequence of behaviors leading to exercise adherence, the Yes I Can Exercise Adoption/Adherence Model includes two other components, attitudes and habit. Attitudes include feelings experienced during exercise participation. Based on the exercise duration, intensity, type, and setting, these feelings can be pleasant or unpleasant, interesting or boring. This component is shaped by the recall of previous experiences, including memories of feelings experienced during earlier attempts to change exercise behavior and during periods of initial adoption of exercise programs. The enjoyment or pleasure experienced during exercising has an important effect, both on self-efficacy and on subsequent intentions to exercise.

Habit

The biochemical and psychosocial feedback resulting from exercise participation established by past exercise participation at the adherence stage, is now clearly identified as an important determinant of current exercise behavior. The model postulates that adherence to exercise is a habit-forming behavior, deriving either from somatic responses or adaptations or

from psychosocial interactions such as belonging or identity. Habit, together with facilitating and reinforcing factors, moderates the predication of exercise adherence from intention.

Selection of Instructional Content

Present practice in physical education is typically oriented toward the teaching of motor performance skills. The Yes I Can Exercise Adoption/Adherence Model s designed to provide a framework for curriculum development focused on long-term commitment to a personal active lifestyle. In behavioral fitness programs the main focus of instruction should be on permanent adoption of regular exercise habits. Curriculum planners using the Yes I Can Exercise Adoption/Adherence Model take a different approach in selecting the content for physical education classes. Planners address the particular basic components of the model that are appropriate for the personal fitness status and developmental levels of the students in choosing learning activities and instructional techniques.

Beliefs

If the physical educator is to influence relevant personal beliefs, the curriculum should include provision of knowledge about the benefits of exercise. It should be designed to emphasize demonstrated relationships of regular exercise participation to health, productivity, personal appearance, feelings well-being, and other outcomes valued by the students. Most important, it should foster belief in the likelihood that regular participation really will lead to these desired results.

Social Norms

Typical adult physical activity patterns, and social expectations in the industrialized world today, do not provide much motivation for young people to development commitment to physically active lifestyles. Consequently, it is especially important that the behavioral fitness curriculum develop effective techniques for self-motivation to exercise. This challenge can be addressed through curriculum content related to planning for supportive environments for desired exercise behavior, to exploring the characteristics of physical activity that make regular exercise attractive and enjoyable for the individual, and to developing the personal attributes that lead to self-motivation (Rehor, 1994).

Self-efficacy

A number of curriculum strategies are available for helping students to develop positive perceptions about their abilities to acquire the desired exercise behaviors. Teaching students to set personal goals that are both realistic and challenging is basic to many of the other self-regulatory skills for reinforcement of effective and satisfying exercise behavior. Activities selected to strengthen the student's internal locus of control increase the feeling of personal control and the belief that a particular action will lead to the particular outcome sought.

A wide variety of self-assessment techniques have been designed and utilized to involve the student in self-testing personal fitness status and progress in self-management. Self-assessment provides both the foundations for sound goal setting and motivation for further achievement. Teaching students that there are effective strategies for exercise adherence helps them to believe in their capabilities for experiencing success in their efforts to develop and maintain active lifestyles.

Intentions

Every curriculum plan for behavioral fitness education begins with the recognition that the students must be directed toward positive intentions to develop habits of regular exercise

behavior. The standard curriculum approach is to include instruction in designing a sound personal exercise program. Implementation of this component of the Yes I Can Exercise Adoption/Adherence Model is most likely to be successful if instruction includes the planning and monitoring of an exercise program for current use, help in adapting various exercise plans for individual use, and assistance in understanding how personal programs can be modified to adjust to future changes in life circumstances.

Exercise Attempt

Curriculum planning designed to focus on the attempt component in the three-stage process of acquisition of regular exercise behavior usually employs time management, behavioral contracts, and feedback. Since the most frequently cited obstacle to regular exercise participation is the perception of too little time, instruction suggesting alternative ways to plan time for exercise can be very helpful. Behavioral contracts, which lead the student to agree to meet certain exercise performance standards, are frequently used to encourage students to make serious attempts to exercise. Ensuring positive feedback, especially pleasurable somatic responses to participation, is generally believed to be successful in eliciting future attempts to become involved in regular exercise programs.

Exercise Adoption

Strategies identified for supporting the adoption of personal exercise programs include rewards, self-monitoring, and stimulus control. The use of rewards, or varied desirable contingencies for providing extrinsic motivation, is a common behavior modification strategy, sometimes used to stimulate exercise adoption. Self-monitoring is an associational learning cognitive behavior modification technique that requires participants to keep records of completion of specific exercise behaviors. Stimulus control is a facilitating and reinforcing technique in which the environment is restructured in order to remove or diminish real or imagined barriers to activity.

Exercise Adherence

When the individual reaches the stage of actual adherence to a regular exercise pattern, curriculum support for maintaining this achievement can be provided by instruction designed to prevent relapse behavior. This usually takes the form of identifying participation. Identifying these risks in advance, and providing instruction in how to deal with these situations, helps students to avoid the potential relapse.

Conclusion

In implementing the Yes I Can Exercise Adoption/Adherence Model as a guide for selection of instructional goals and students learning outcomes, curriculum planners need to address the particular basic components of the model that are appropriate for the personal-wellness status and developmental levels of the students in choosing learning activities and instructional techniques. Much attention is given to self-assessment, self-monitoring, and other self-management skills. Learning activities are selected to develop the personal attributes that lead to self-motivation. A supportive learning climate is needed to ensure individual success and greater self-efficacy. Students need to develop goal-setting skills and require guidance in learning to set goals that are both realistic and challenging. A wide variety of self-assessment techniques are employed; self-assessment abilities need also to be supported by skills for self-reinforcement.

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