

Intervention Treatment Approach to
Increase Exercise Participation in
Regular Exercise Intenders

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Running head: Increasing Exercise Participation

Abstract

126 subjects filled out questionnaires designed to identify individuals who intend to exercise regularly but do not. 62 S's who answered they intended to exercise regularly but did not were assigned to either a control group or one of two treatment groups. The first treatment group (TR1) viewed a videotape consisting of up-to-date exercise information. They received information emphasizing the idea exercise does not have to be tiresome. The second group (TR2) received identical treatment and received time-management information to assist in incorporating regular exercise into weekly schedules. Telephone follow-up after one month showed significant differences between exercise habits of control group and TR2 only. Results are interpreted as indicating that with appropriate intervention, barriers preventing regular exercise can be removed by persons who have intentions to exercise.

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Today's health-minded portion of society regards exercise as important and even vital to physical and mental wellbeing. Despite multi-medium campaigning on the benefits of regular physical activity, over 50% of Canadians are too sedentary and less fit than they perceive themselves to be (Health News, 1986). These people do not exercise at the recommended level which involves using large muscle groups in dynamic movement for periods of 20 minutes or longer, 3 or more days per week, every week, and which is performed at 60 percent or greater of an individual's cardiorespiratory capacity (Casperson et al., 1986).

Proven health benefits of regular vigorous activity include a sense of wellbeing with more vitality and zest for life, less fatigue, a healthier, more alert appearance, increased mental and physical efficiency, increased cardiovascular efficiency, less need for medical care, stronger muscle tone, improved posture, greater flexibility, better weight control and body composition, better sleeping patterns, and improved ability to handle stress and crisis situations. It is possible that regular exercise delays outward signs of aging, reduces mild anxiety and depression, provides protection against coronary heart disease, lowers blood pressure and postpones or prevents adult-onset

diabetes (Health News, 1986). Other advantages of exercising include the enjoyment of competition, affiliation with others, mastery of an activity and social recognition (Duda & Tappe, 1989).

The benefits of regular exercise may be seen and heard every day as a result of a recent concentration on fitness. Even the least active person who does not exercise at all is exposed to these facts through the powerful medium of television. ParticipACTION has established a popular, high profile through exercise-promoting television commercials. Many Canadians perceive their messages as positive, practical and authoritative. Yet, too often, the messages are not translated into action (ParticipACTION, 1991). There may not be enough emphasis on promoting appropriate duration, frequency and intensity of physical activity needed to strengthen the heart and lungs. With this increased emphasis, a greater number of people should become knowledgeable of exactly what it takes to be a regular exerciser (Casperson et al., 1986). Perhaps, due to this more complete understanding of exercise, general activity levels would come closer to the recommended level.

In addition to lack of sufficient information about exercise causing irregular participation, studies have linked the following specific groups of people with inactivity. Blue-collar workers, smokers, overweight people, people lower in motivation,

people undergoing disruptions in routine such as emotional disturbance, and people who lack necessary support groups are often likely to remain inactive or to drop out of an exercise program if recruited (Godin, Shephard & Colantonio, 1986). Common reasons for inactivity include lack of willpower, poor facilities, boredom, laziness (Health News, 1986), perceived exertion, lack of time (Health News, 1986; Godin, Shephard & Colantonio, 1986), weather, irregular lifestyle, medical problems and no improvement seen (Lee & Owen, 1983).

Attitudes towards exercise have been found to be important in understanding and predicting exercise behavior (Theodorakis et al., 1991). Kenyon (1968) developed a classic model for attitudes toward physical activity which characterized exercise as a multidimensional sociopsychological phenomenon. Kenyon's model attempted to predict exercise behavior by measuring attitude toward exercise on the Kenyon Attitude Toward Physical Activity Scale. The scale has since been revised and improved and adapted for children (Children's Attitude Toward Physical Activity Scale (Smoll et. al in Theodrakis et. al., 1991). This scale has been used to determine that children participate mainly in those activities for which they hold the most positive attitudes. Also, attitudes toward exercise were reported to change due to physical education program participation (Theodorakis et al., 1991).

The Reasoned Action Theory, Ajzen & Fishbein (1978) is a more complete model of the relationship between attitude and behavior. According to Theodorakis et. al. (1991), this theory proposes that the main antecedent of a behavior is the subject's intention to perform the behavior. The stronger the subject's intention, the more likely the subject is to perform the behavior. Intention is determined by a combination of two factors. The first is a personal factor - attitude toward the behavior, and refers to the extent of a positive or negative predisposition toward a specific behavior. The second factor is a social one - subjective norms, which refers to the social pressures on the subject to perform or not to perform the behavior.

Behavior is also a function of salient information or beliefs related to the behavior. One set of beliefs is behavioral beliefs, which link the behavior to a certain outcome. The other set is normative beliefs, which indicate whether important others would approve or disapprove of the behavior. This model appears to be a useful theoretical tool for understanding the factors influencing athletic participation. It also indicates that external variables, especially past experience with the behavior, contribute to predicting athletic participation.

Bandura's Social Cognitive theory of the relationship

between attitude and behavior (1986) contains 3 mechanisms to explain the relationship. The first is self-efficacy, which refers to people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performance. The second is outcome expectancies, which refers to a person's estimate that a given behavior will lead to certain outcomes. The third is self-evaluated dissatisfaction. An individual evaluates his or her performance based on some standard and becomes either satisfied or dissatisfied. Dissatisfaction motivates the individual to attain the standard or goal and become satisfied. In concert, the three mechanisms listed above are useful for understanding people's reasons for exercising.

Dzewaltowski (1989) compared the ability of Bandura's social cognitive theory and Fishbein and Ajzen's theory of reasoned action to predict exercise behavior. It was found that social cognitive theory was more effective than the theory of reasoned action in predicting exercise behavior.

Hamid (1990) examined the dispositional bias people have to focus their attention on either positive or negative expectancies, outcomes and behaviors. Apparently, some people more readily focus on the negative aspects of their experience while others more readily concentrate on the positive aspects. This research suggests that predispositional attitudes may be

important predictors of the likelihood of an individual to exercise regularly.

Godin, Shephard and Colantonio (1986) compared the cognitive profiles (beliefs, attitudes and intentions toward exercise) of persons who intend to exercise but do not with those of persons who fulfill their positive or negative intentions (those who intend to exercise and do, and those who don't intend to exercise and don't). The study adopted the framework of the Reasoned Action Model (1978). They justified their study on the basis that few exercise studies have focused on those who express a willingness to participate but, for whatever reason, do not. This type of person may have quite different traits from dropouts or uninterested, sedentary persons. These traits may have important implications for program planning. Overall findings identified little difference between the cognitive profiles of active and inactive positive intenders. Two significant belief differences that were found involved perception of time available for exercising and energy required for exercise. The E's proposed that the common complaint of lack of time for exercise reflects not lack of interest, intention or commitment, but rather a poorly organized weekly schedule. Guidance in time management should therefore be given high priority in promoting physical activity among the sedentary who want to get regularly active. Because of

the other common complaint that exercise is too tiring, the E's recommended that the promotion of physical activity should stress the fact that exercise doesn't have to be exhausting and can even be fun. Further study of these findings was recommended so that future development of more successful fitness promotion programs may be created for those who are not active but wish to be.

It is mainly on the latter research that the present study is based. We have seen that there is little difference in the cognitive profiles (attitudes toward and intentions to exercise) of active and non-active persons. This study will therefore focus on the two most commonly reported problems that have appeared often times in a number of other studies as well. These common barriers to regular exercise are the notion that there is not enough time to exercise regularly each week and the perception that exercise has to be tiring in order to work. It is therefore hypothesized that an intervention program which corrects common misperceptions about exercise and teaches time-management for regular exercise will increase exercise levels in people who intend to exercise but do not do so on a regular basis.

Method

Subjects

Out of 126 original S's who filled out a questionnaire

to determine exercise habits, 62 S's who were not regularly active but had the intent to become regularly active were selected. 10 out of 62 treatment S's dropped out of their respective treatment groups. Therefore, the total number of S's was reduced to 52. S's were all first year Algoma University students who participated in order to receive credit for their particular courses.

Apparatus

A questionnaire to investigate the S's willingness to participate in regular physical activity included questions dealing with past and present exercise habits and perceived barriers that prevent regular exercise. An exercise information videotape was presented to each treatment group. One treatment group received information that stressed exercise does not have to be exhausting and can be fun. The second treatment group received identical information and time-management information. Telephone calls were made to subjects after one month as a follow-up procedure to gather data.

Procedure

S's received an initial questionnaire, the purpose of which was to identify those individuals who intended to exercise regularly but did not. S's who answered that they did not regularly exercise but would like to become regularly active were considered positive intenders. The positive

intenders were randomly assigned to one of three groups: a Control Group, Treatment Group 1 (TR1) and Treatment Group 2 (TR2). The Control Group received no treatment. TR1 viewed a videotape containing 27 minutes of up-to-date exercise information. This information covered all aspects of exercise including health benefits, fitness facts and recommendations for the inactive who were considering exercise for themselves. TR1 also received written information which stressed that exercise does not have to be exhausting and may be enjoyable. This information was meant to dispell negative perceptions about exercise that may have been preventing regular exercise participation. TR2 viewed the same videotape and received the identical information and received time-management information. The time-management information was meant to teach by example how to organize one's week so that exercise is a regular part of it. All subjects were telephoned one month after treatment in order to determine whether activity levels had increased.

Results

None of the 20 control group S's increased their exercise levels to that of regular exercise. Out of 16 S's in TR1, 4 increased their exercise levels to that of regular exercise. Out of 16 S's in TR2, 7 increased their exercise levels to that of regular exercise. A chi-square analysis was performed on the data. There were no significant differences found between the

control group and TR1. There were no significant differences found between TR1 and TR2. However, TR2 S's showed a significant increase in exercise levels when compared to the exercise levels of the control group S's.

Insert Figure 1 Here

Discussion

Our government spends thousands of dollars each year in an attempt to get people more physically active. Most people are aware that proper, regular exercise is a good thing. Despite these facts, many people still do not regularly exercise. If we look at the entire population, we may fail to learn about the sub-group that is most interesting.

People who are already exercising do not need to change. They are already enjoying the many benefits of exercise. The people who have the knowledge that exercise is important and still do not want to become active are in need of an attitude change before they can be expected to commit themselves to a lifestyle which includes exercising at least three times each week. This leaves the interesting sub-group of people who are not regularly active but would become so if they knew how to. This is the target group of the population that exercise promotion campaigns should be aiming at as realistic candidates

for change.

Research consistently finds two key cognitive errors that prevent people from regularly exercising. These errors are the perception that exercise is stressful and perceived lack of time for exercise. The present study focussed on these two common exercise barriers. However, only the treatment group that received time-management instruction increased exercise levels significantly. This would indicate that the second approach used in the present study was better than the first in breaking down barriers preventing regular exercise. This would indicate that the exercise paradox is caused mainly by a skills deficit, namely, lack of time-management skills. Barriers preventing regular exercise can be removed by persons who have the intent to exercise. ParticipACTION would benefit from this new knowledge and could adjust their promotion campaigns to include such time-management instruction examples as the one used in this study.

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Figure Caption

Figure 1. Graph of results of treatment to increase exercise levels.

RESULTS OF TREATMENT

