Correlation Between Exercise And Other Health Related Behaviors In Greek Students

Abstract

Physical education could help students to adopt an active life style in their free time.

The aim of this study was to examine the relation between predisposition factors of exercise and the behaviors of: eating fruits, smoking, drug use, and participation in violence incidents as a team fan.

The study involved 882 students 10 to 16 years old coming from primary and secondary Greek schools. The sample was taken from six areas of Greece covering urban and rural populations.

During the physical education classes, students completed a questionnaire designed for the assessment of variables of planned behavior theory (PBT): attitudes to act, intention to act, perceived behavioral control, and the behavior itself, concerning the behaviors: exercise, eating fruits, smoking, drug use and participation in incidence of violence as a team fan. The particular interest of the study was the assessment of correlations of the same variables between exercise and each one of the other behaviors.

The results showed:

• All the examined variables: attitudes, intentions, perceived behavioral control and behavior itself concerning exercise was positively correlated to the same variables concerning eating fruits behavior.

• All the variables concerning exercise were negatively correlated to the same variables concerning smoking.

• Only in attitudes there were negative correlations between exercise and the other two behaviors: drug use and participating in violence act as team fan.

As there are significant correlations in cognitive variables between exercise and other health related behaviors, there had to be a practical interest on the relation between exercise and other health related behaviors, regarding the way that adoption of exercise, from adolescents, could affect other health related behaviors. School community has to introduce suitable programs, which can contribute in broadening the meaning of physical education to comprehend the predisposition factors for a healthy way of life, so that unhealthy behaviors could be reduced.
1. Introduction

Adolescence exercise improves health in both physical and psychological domain. Regular physical activity has many health benefits, including improving aerobic endurance and muscular strength, promoting weight control, and building mass density (U.S. Department of Health and Human Services, 1996). Physical activity among adolescents is also consistently related to higher levels of self-esteem and self-concept and lower levels of anxiety and stress (Centers of Disease Control and Prevention, 1996).

Health attitudes play an important role as a person approaches adulthood. A major rationale for promoting regular physical activity in children is to facilitate a carryover of healthful habits into adult life (Stucky-Ropp, & DiLorenzo 1993). Moreover, over the years there has been a shift in emphasis from hard training to improve fitness scores towards enjoyable participation in physical activity for health benefits (Harris, 1998). According to Shephard (1989), participation to exercise for health reasons is related more with other health related behaviors than participation generally. Adolescence is an important period in which teenagers deal directly with behaviors concerning health. Many health behaviors begin in adolescence, including patterns of exercise, eating behaviors, sexual activity, smoking and alcohol consumption, illicit drug use, interpersonal violence, and behaviors that cause unintentional injuries, among others (Santelli, Rosenfeld, DuRant, Dubler, Morreale, English & Rogers, 1995).

Nutrition and exercise are considered as behaviors promoting health. Healthy eating and physical activity patterns during adolescence promote optimal growth and development can help prevent immediate health problems, and may prevent long-term chronic diseases (Story & Neumark-Sztainer, 1999). In reverse, behaviors as smoking,
drug use and violence are referred as risk for health behaviors that contribute to morbidity and mortality (Muscari, Phillips & Bears, 1997). Engagement in such risk behaviors has the potential to jeopardize the accomplishment of normal development tasks, the fulfillment of societal roles, the achievement of a sense of competence, the acquisition of skills, and the preparation for the transition into adulthood, (Guthrie, Lovelamd-Cherry, Frey, & Dielman, 1994).

Among the factors that determine whether or not an individual practices health behaviors are the cognitive factors. These include perceptions of health risk, potential efficacy of behaviors in influencing this risk, perceived social pressures to perform the behavior, and control over performance of the behavior (Conner & Norman, 1996). The theory of planned behavior (TPB) represents a model developed by social psychologists, which has been quite widely applied to the understanding of a variety of behaviors (Ajzen, 1988, 1991). According to the theory, the proximal determinants of behavior are one’s intention to engage in that behavior and one’s perceptions of control over that behavior. Intentions represent a person’s motivation in the sense of her or his conscious plan or decision to exert effort to perform the behavior. Perceived behavioral control determines how difficult or easy someone perceives to be the engagement in a behavior, and reflects the resources and opportunities to perform a behavior. Attitude, a function of beliefs about the perceived consequences of the behavior, constitutes a main determinant of intention to engage to a behavior.

2. Aims

Our study concerns for the correlation between attitudes, intentions, perceived behavioral control, and behavior of exercise and that of the same variables of the behaviors of eating fruits, smoking, using drugs, and involving in violence acts as a team fun.

3. Methods

3.1 Sample

The sample consisted of 882 students (329 boys and 553 girls) selected for XXXX schools, by using stratisfied sambling method. Their mean age was M=13.94 (SD±
2,14), and were distributed at three grades: elementary: 187 students, high school: 398 students, and senior high school: 297 students.

3.2 Variables

In classroom settings, students completed reliable scales assessing attitudes, intention, perceived control, and behavior, for each of the five behaviors of the study.

Attitude toward behavior assessed by the mean rating on three bipolar adjectives (e.g., good-bad, useful-of no use, healthy-unhealthy). Seven point scales were used. “I think that exercising, eating fruits, smoking, using drugs during, involving in violence acts, the next two months is …”. Intention was estimated with the mean score of the responses to three different items: “I intent / I will/ I am determined to exercise, eating fruits, smoking, using drugs/ be involved in violence acts, during the next two months”. Responses to the first item were rated on a 7-point scale from likely to unlikely. A scale with endpoints labeled yes, sure to not at all, was used for the other two items. Perceived Behavioral Control was assessed by two questions. (a) “I can exercise/ eat fruits/ smoke/ use drugs/ involving in violence acts, during the next two months. Responses rated from likely to unlikely in a 7-point scale. (b) “For me to exercise, eat fruits, smoke, use drugs, during the next two months is …”. Cronbach’s á for these scales were greater than .75. Responses rated from easy to difficult in a 7-point scale. Self reported behavior was defined as the frequency in the time period prior to the questionnaire’s application. Behavior was measured, by questionnaire, asking for the previous behavior, and calculated indirectly in a six grade numerical order from 1 to 6 (Likert 6-point scale). One (1) accounted for the frequency close to zero and six (6) accounted for a fairly wide range of frequencies for each behavior, with mid frequency values of 2 to 5. In that study, what was considered, as exercise was every physical activity lasting for more than 20 minutes.

3.3 Methods of Analysis

Pearson correlation coefficients were calculated to examine the relationship between the variables: attitudes, intention, perceived control, and behavior of exercise and the same variables of the other four health related behaviors.
Results

Results showed that there were significant positive correlations for p<.001, between exercise and eating fruit, in all the corresponding variables: attitudes (r=.364), intentions (r=.257), perceived behavioral control (r=.235), and the behavior itself (r=.191), all significant at p<.001. As it had been expected, there were negative correlations between exercise and smoking in all the corresponding variables. Correlation in attitudes was r= -.271, in intention r= -.224, in perceived behavior control r= -.235, and in behavior r= -.113, all significant at p<.001. Correlations between exercise and the two other behaviors were significant only in the variable of attitudes. Attitudes for exercise correlated to attitudes for drug use (r= -.269, p<.001), and attitudes for exercise correlated to attitudes for taking part in violence acts as team fun (r= -.118, p<.001). All the other correlations between behavior variables were not significant (See Table 1).

Table 1.

<table>
<thead>
<tr>
<th>Attitude for eating fruits</th>
<th>Attitude for smoking</th>
<th>Attitude for drug use</th>
<th>Attitude for team fan violence</th>
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<tr>
<td>Attitude for exercise</td>
<td>.364**</td>
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<td>-.269**</td>
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<table>
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<th>Control for smoking</th>
<th>Control for drug use</th>
<th>Control for violence</th>
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<tbody>
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<td>Control for exercise</td>
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<td>-.239**</td>
<td>-.014</td>
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<th>Drug use</th>
<th>Involvement at violence</th>
</tr>
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<tbody>
<tr>
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<td>-.113**</td>
<td>-.038</td>
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<td></td>
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<td>́I=872</td>
<td>́I=693</td>
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</table>

** Correlation is significant for p<.001
* Correlation is significant for p<.05

4. Discussion
In our study, predisposition factors of exercise and eating fruits behavior are related, in a similar pattern of change. Similarly, Johanson, Thelle, Solvoll, Bjorneboe, and Drevon, (1999), found that people exercising regularly, had higher intakes of fruits than subjects exercising less than once weekly, while adolescents, who perceived themselves as exercisers consumed fruits and vegetables more constantly than no exercisers (Georgiou, Betts, Hoos & Glenn 1996). However, attitudes, intentions, and perceived behavior control, were more correlated between exercise and eating fruits than behaviors themselves, showing common characteristics in predispositions for these two behaviors.

In reverse, exercise behavior was related negatively to smoking, in agreement, with previous studies, which used adolescents (Marti, Abelin, Minder & Vader, 1988; Marti & Vartianen 1989; Winnail, Valois, McKeown, Saunders, & Pate, 1995). Attitudes, perceived behavior control, and intentions for exercise were correlated more negatively, to smoking, showing that these variables represent a factor for estimation for these two behaviors.

Exercise was correlated negatively with drug use only in the variable of attitudes in a similar extent to that of smoking. Similarly there was, only in attitudes a significant, even though small, correlation between exercise and participation in violence acts as a team fun. It seems that attitudes reflect behavioral tendencies independently from the correlation of the behaviors themselves.

5. Conclusion

It seems, that the promotion of exercise, as a healthy behavior, in adolescents, could help health education. An orientation of physical education in the formation of positive attitudes, intentions, and perceived control for exercise could help the education for health related behaviors, in the direction of adoption of healthy behaviors and abstinence from unhealthy behaviors. This could be also a result of participation to exercise in order to abstain unhealthy behaviors. Under this perspective, there is a need for the implementation of appealing programs of physical education, that take into account the needs of adolescents, their interests and aptness and their individual capabilities.
References


