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MOTIVATION IN PHYSICAL EDUCATION IS CORRELATED WITH PARTICIPATION IN SPORT AFTER SCHOOL[1]

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Summary.—The aim of the present study was to examine differences in motivation with respect to physical education of students who participate in after-school sport clubs and students who do not. 247 secondary school students responded to scales assessing intrinsic motivation, outcome expectancies, perceived competence, and perceived usefulness of physical education. Analysis showed that students in after-school sports exhibited a more positive motivational pattern regarding physical education with intrinsic motivation, outcome expectancies, and perceived competence making unique contributions to the overall difference.

Relatively little research has examined psychological aspects of participation in physical education at school despite such classes being presented to almost all children and youth. Moreover, it is recognised that physical education may have a potentially significant influence on public health (Haywood, 1991). Consequently, it is important to examine students' motivation for participation in physical education, especially after recent reports that youngsters do not engage in vigorous physical activities sufficiently to benefit their health (Armstrong & Biddle, 1992).

The focus of physical education frequently is on teaching sport skills; however, youngsters have opportunities to become acquainted with sport activities in settings other than school-like sport clubs and so some are familiar with the content of these lessons. Yet, for other students who have not played a sport, learning sport skills may present a challenge of their self-worth (Fox, 1992). Such differences among students may be reflected in their motivation in physical education lessons.

It is interesting, however, that there is limited empirical evidence regarding the effect of sport participation on motivation in physical education at school. Anderssen (1993) reported that students with sport experience hold more favourable attitudes toward physical education than students without sport experience. Also, students with higher physical self-competence reported liking physical education more than students with lower physical self-competence. Although these results are informative, further research is warranted to examine more closely the effect of sport participation on motivation

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for participation in physical education at school. More specifically, the role of sport participation in significant motivational constructs such as intrinsic motivation, outcome expectancies, and perceived usefulness of physical education needs to be examined. These constructs have accounted for differences in students' motivation in physical education as well as for their choices of participation in physical activities (Papaioannou & Theodorakis, 1996; Goudas & Bagiatis, 1998; Biddle & Chatzisarantis, 1999).

According to Deci and Ryan (1985) intrinsically motivated behaviours are those engaged in for their own sake—for the pleasure and satisfaction derived from their performance. On the other hand, extrinsically motivated behaviours are performed with the belief that they lead to certain consequences. It has been shown that intrinsic motivation affects students' intention to stay involved with physical education lessons and to participate in physical activities in the future (Goudas, Biddle, & Underwood, 1995; Papaioannou & Theodorakis, 1996). Cognitive evaluation theory (Deci & Ryan, 1985) proposes that intrinsic motivation is primarily based on individuals' sense of competence and their perception of autonomy regarding their actions. Perceived physical competence is especially crucial in physical education. Studies have shown that perceived competence influences positively both intrinsic motivation and students' intention to participate in physical activities in the future (Goudas, Biddle, & Fox, 1994).

Outcome expectancies refer the individuals' perception regarding the utility of a given behaviour. Rodgers and Brawley (1991) argued that outcome expectancies are formed by the interaction of likelihood of outcome which refers to the probability that a certain action will lead to a certain outcome, and outcome value, which refers to the value assigned by the individual to the possible outcome of the action. This formulation follows an expectancy–value approach (Eccles, 1983) wherein individuals are thought to be motivated both by the anticipated consequences or outcomes of their actions and the utility or significance they attach to these outcomes. Goudas and Bagiatis (1998) showed that students' outcome expectations from physical education were related to a large extent to their intrinsic motivation in physical education lessons as well as their perceptions regarding the usefulness of physical education. Perceived usefulness of physical education has also been shown to influence students' participation in these lessons at school (Papaioannou & Theodorakis, 1996).

Based on the above, the aim of the present study was to compare students who participated in organised sports outside school with students who did not participate in sports on several motivational variables related to physical education such as intrinsic motivation, perceived competence, outcome expectancies, and perceived usefulness.

Method

Sample

The sample consisted of 247 secondary school students (144 boys and 103 girls, *M* age = 15.3 yr.) from two schools located in a medium-sized town in Greece. Permission for the study was obtained by the physical education advisor as well as by the schools' head teachers.

Procedure

Data were collected during physical education classes by a trained research assistant. Students responded to the questionnaires anonymously and were assured about the confidentiality of their answers.

Tests

Two different scales were used to assess students' outcome expectancies for physical education. In the first one, Outcome Likelihood, students rated on 7-point scales anchored by 1: very unlikely and 7: very likely occurrence of the 10 different possible outcomes of physical education. On the second scale of Outcome Value students rated on 7-point scales with anchors of 1: very unimportant and 7: very important each of the outcomes in terms of its value for them. Each Outcome Likelihood score was multiplied by the respective Outcome Value score, and a composite Outcome Expectancy score was obtained by summing these products. These scales were developed by Goudas and Bagiatis (1998) based on recommendations offered by Rodgers and Brawley (1991).

The Intrinsic Motivation Inventory (Ryan, 1982) was used. There are four subscales of Enjoyment/Interest (4 items, e.g., 'what we do in physical education is very interesting'), Effort/Importance (4 items, e.g., 'I put a lot of effort into physical education classes'), Competence, and Pressure/Tension (4 items, e.g., 'sometimes I worry about making mistakes in physical education'). A composite score provides an index of intrinsic motivation. However, in the present study the Competence subscale was omitted because it overlaps conceptually with the measure of perceived competence we employed. Students rated their answers on a 5-point scale using anchors of 1: strongly disagree and 5: strongly agree. A composite score for Intrinsic Motivation was obtained by adding all the items, with those of the Pressure-Tension subscale being reverse-coded. Cronbach alpha for the composite score was .81.

Perceived Competence was assessed by two items asking students to rate their competence in physical education compared to that of their classmates, e.g., 'my ability in physical education is above average' and 'compared with my classmates, I am one of the best in physical education'. Students rated their answers on a 5-point scale with anchors of 1: strongly disagree and 5: strongly agree. Correlation of these two items was .76.

On Perceived Usefulness students responded to a scale of two items asking about the usefulness of the physical education, e.g., 'generally, how useful is physical education?' and 'how useful is what you learn in physical education?'. These items had been adapted by Papaioannou and Theodorakis (1996). Students rated their answers on a 7-point scale anchored by 1: not at all useful and 7: extremely useful. Correlation of scores on these two items was .63.

To judge participation in sports students were asked to indicate whether they trained in a sport outside normal school hours, how many times a week, and for how long. Students participating in a sport two or more times a week for more than three months were classified as participants.

Results

Table 1 presents descriptive statistics for the motivational variables separately for students who participated or who did not participate in organised sports after school. As can be seen, there are significant differences on all variables, and students who participated in sports scored higher. A multivariate analysis of variance was performed with the two groups of students (students in organised sport and students not in organised sport) as the independent variable and ratings on Perceived Competence, Intrinsic, Motivation, Outcome Expectancies, and Perceived Usefulness as dependent variables. There was an overall multivariate effect ($F_{10,243} = 10.39$, $p < .05$). Step-

TABLE 1
Means and Standard Deviations of Ratings on All Variables by Participation in Organized Sport ($N = 247$)

Measure	Participation in Organized Sport			
	Yes		No	
	M	*SD*	*M*	*SD*
Outcome Expectancy	28.5	6.6	27.4	8.4
Intrinsic Motivation	3.9	.5	3.7	.6
Perceived Competence	3.7	1.0	3.0	.9
Perceived Usefulness	5.2	1.2	5.0	1.2

down F tests were then performed to test the effect of the independent variable on dependent variables. Perceived Competence was entered first because it has been theorised to be a determinant of intrinsic motivation. The two groups differed significantly on Perceived Competence (Stepdown $F_{1,246} = 30.94$, $p < .05$). After partialling out differences in Perceived Competence, the two groups differed significantly on Intrinsic Motivation (Stepdown $F_{1,245} = 3.84$, $p = .05$). After partialling out the effect of Perceived Competence and Intrinsic Motivation, the two groups differed on Outcome Expectancy (Stepdown $F_{1,244} = 4.23$, $p < .05$) but not on Perceived Usefulness (Stepdown $F_{1,243} = 1.60$, $p > .05$).

Discussion

The present results indicate that students' motivation in physical education classes differs depending on whether they participate in organised sports outside of school. Students with sport experience reported significantly higher ratings on intrinsic motivation, perceived competence, and outcome expectancies than students with limited sport experience. It seems that the current practice in Greek physical education either favours those students who are familiar with sports or these are the students who are motivated in the first place. These results parallel those of Anderssen (1993) who reported that physically active and physically competent Norwegian students perceived physical education classes more favourably than less physically active students.

It is interesting, however, to note that in the present study differences in Intrinsic Motivation hold even after differences in Perceived Competence were controlled. Perceived sport competence has been shown to be a significant determinant of students' intrinsic motivation (Deci & Ryan, 1985) as well as of their attitudes toward participation in physical activity (Papaioannou & Theodorakis, 1996). However, given the present results, the effect of sport participation on students' motivation in physical education cannot be attributed to perceived competence alone. Classes that focus on competitive sport activities may not only favour those students that are more physically competent and intrinsically motivated but also provide a familiar environment for those who have relevant experience.

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