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DISCIPLINE OF GREEK STUDENTS IN RELATION TO GENDER, INTEREST IN PHYSICAL EDUCATION LESSON AND SPORT ACTIVITY

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SUMMARY

The purpose of this study was to compare the differences between different groups (student's gender, type of school, interest in physical education and sport activity outside school hours), based on the student's disciplined/undisciplined behavior in the physical education class. Sample consisted of 565 secondary education students aged between 15 and 16, in the Region of Athens (Greece). Participants completed the following scales: Reasons for Discipline Scale (RDS) and Strategies to Sustain Discipline Scale (SSDS). Results showed that female students were more disciplined and perceived more intrinsic reasons in their teachers for maintaining discipline than boys, who demonstrated more undisciplined behavior and perceived more reasons of indifference or introjection in their teachers to maintaining discipline. On the other hand, students that liked physical education and did sport were more disciplined and perceived more intrinsic reasons in their teachers for maintaining discipline.

Key Words: discipline, physical education students, gender, sport activity.

INTRODUCTION

One of the aspects of most concern to professionals and researchers in connection with physical education is understanding the cognitive mechanisms related to disciplined and undisciplined behavior in the class (Lewis, 2001; Siedentop, 1991).

Discipline is a concern to many teachers (Doyle, 1986). To maintain an environment that supports learning, teachers must have the cooperation of their students to engage in the learning process (Rink, 1998). Teaching objectives may not be reached and teachers' perceptions of competence may be affected if students behavior is not controlled (Vogler & Bishop, 1990).

Harrison and Blakemore (1992) define discipline as orderly social behavior in an atmosphere that allows learning to transpire. Siedentop (1991) defines discipline as the management of behavior that is consistent with the educational goals of the learning environment.

Positive experiences in physical education will be able to influence students to adopt physically active lifestyles in adult life (Goudas, Biddle, & Fox, 1994; Sallis & McKenzie, 1991). In this respect, it is essential to know the motivational, cognitive and affective processes that will determine if the students perceive physical education classes as a valuable, pleasant and gratifying experience, or as something unpleasant, boring and humiliating (Atkinson, 1977; Ntoumanis, 2001).

There are three possible sources of pupils' misbehavior: parents, students and teachers (Brophy & Rohrkemper, 1981; Emmer, 2001; Ishee, 2004). Regardless of the method teachers use to reach these two goals, success is dependent on properly functioning of instructional and managerial skills (Hammer et al., 2010; Harrison & Blakemore, 1992). The way educators develop and maintain their environment directly impacts student behavior and teaching effectiveness (Rink, 1998).

In sports and physical education, the achievement goal perspective theory (Ames, 1992; Nicholls, 1989) has been the theoretical model which has contributed the most to the understanding of cognitive, behavioral, and emotional patterns related to students' achievement in physical education (Papaioannou, 1998b). Key aspects such as the study of disciplined behavior, the appearance of prosocial conduct, such

as sportsmanship and moral development in sport and physical activity, have been analyzed with respect to the achievement goals model (Bortoli, Bertollo, Comani, & Robazza, 2011; Duda & Huston, 1995; Duda, Olson, & Templin, 1991; Kavussanu & Roberts, 2001; Papaioannou, 1997, 1998b; Spray & Wang, 2001). Persistence at exercise is related to the motivational constructs described above. For example, young athletes cite fun as a primary reason for participating in sports (Carrol & Loumidis, 2001; Gill, Gross, & Huddleston, 1983). This feeling of fun depends on experiencing the intrinsic satisfactions of skill improvement, personal accomplishment, and excitement (Boyd, Weinmann, & Yin, 2002; Wang, Liu, Chatzisarantis, & Lim, 2010; Wankel & Kreisel, 1985; Wankel & Sefton, 1989).

In a sample of 254 Greek secondary education students, Hassandra, Goudas, and Chroni (2003) reported that a wide variety of social factors and individual differences influence students' intrinsic motivation in physical education. These need to be taken into account when designing physical education lesson.

Motivational climate refers to all the social and contextual signs through which the related social agents define success and failure. With regards to discipline, Papaioannou (1998a), and Spray (2002) indicated that the perception of a task-involving climate is related to intrinsic and identified reasons promoted by teachers for behaving well in physical education classes. However, the perception of an ego-involving climate is more likely to encourage more means of controlling motivation, due to the promotion of external assessment criteria. In this environment, the role of effort and hard work is emphasized, students try to perform better than the others and they are concerned about the errors they make (Ames, 1992; Papaioannou, 1998b; Spray, 2002).

Recent studies have shown the association between the perception of a motivational climate and discipline. In a sample of 456 Spanish students Moreno, Cervello and y Martinez Galindo (2007) reported that female students were more disciplined and perceived more intrinsic reasons in their teachers for maintaining discipline than boys, who demonstrated more undisciplined behavior and perceived more reasons of indifference or introjection in their teachers to maintaining discipline. Cervello, Jimenez, Del Villar, Ramos, and Santos Rosa (2004) demonstrated that the perception of a motivational task-oriented climate is linked positively with more disciplined behavior, while the perception of a motivational ego--oriented climate is linked to more indiscipline in physical education classes. Spray and Wang (2001) found that those students that had low scores in ego and task orientation, as well as in perceived competence in physical education, also had low self-concept feelings. They also assessed their discipline in physical education classes as being below the assessment of students that are strongly task and ego-oriented, who trusted in their abilities and had a feeling of autonomy in their behavior, showing high levels of discipline.

On the other hand, Heaven (1996) considers that the formation of a self-image, which is known as self-concept, is one of the challenges that the adolescent has to face. Different studies have demonstrated that individuals with more self-determined rates of motivation (intrinsic motivation) demonstrate more disciplined behavior, whereas, by contrast, individuals with low rates of self-determined motivation (extrinsic motivation, amotivation) are more inclined to demonstrate disruptive or undisciplined behavior in class (Papaioannou, 1998a; Papaioannou & Kouli, 1999).

Therefore the aim of this study is to compare differences due to student's gender, type of school, interest in physical education and sport activity outside school hours, based on the student's disciplined / undisciplined behavior in Greek physical education students.

METHODS

Sample

Our study sample consisted of 536 secondary education students, aged between 15 and 16 ($M \pm SD$: 15.7 ± 0.52). The 536 students in our sample consisted of an equal number of boys and girls both divided into two groups (male and female), all members of PE classes in schools at the region of Athens (Greece). 46.4% of the students attended state schools and 53.6% of them attended private schools. 312 of these participants did physical activities outside physical education classes and 144 indicated that they did not do any physical activity. Also 378 liked physical education and 78 did not. All subjects volunteered to participate in the study.

Procedure

Permission to conduct this investigation was received from head teachers. The students were told the purpose of the research and their rights, and were asked to sign a consent form. The instruments for measuring the different variables were administe-

red in a classroom to the students when the teacher was not present. Measures were given to all students in the same order. Each student took 15-20 minutes to complete the questionnaires and responses to the instrument were kept anonymous. Students were told to ask for help if confused concerning either instructions or the clarity of particular items. No problems were encountered in either completing the inventories or understanding the nature of the questions.

TABLE 1

Mean and Standard Deviation for the Sociodemographic variables students gender and type of school.

Geneder	Boys		Girls	
Reasons scale	*M*	*SD*	*M*	*SD*
Identified reasons	74.20	15.32	81.44	12.20
Introjected reasons	58.30	22.84	67.30	21.93
Intrinsic reasons	73.46	17.28	78.41	16.80
Amotivation	42.88	21.63	39.41	23.91
Caring Reasons	61.97	19.94	69.46	18.41
Strategies Scale				
Caring and responsibility	69.34	15.93	72.17	16.22
Intrinsic	68.69	17.30	73.99	18.05
Introjected and external	45.81	21.30	35.41	23.98
Indifference	39.40	24.93	31.28	24.40
Type of School	State		Private	
Reasons scale	*M*	*SD*	*M*	*SD*
Identified reasons	78.83	13.40	77.91	15.94
Introjected reasons	65.21	22.80	60.34	22.90
Intrinsic reasons	72.60	19.14	78.88	16.82
Amotivation	47.56	21.69	39.69	22.11
Caring Reasons	67.31	19.59	64.94	19.02
Strategies Scale				
Caring and responsibility	67.61	17.40	71.88	15.90
Intrinsic	66.69	20.51	75.49	15.91
Introjected and external	49.09	21.67	39.41	22.21
Indifference	41.55	25.55	33.32	20.19

Reason for Discipline Scale (RDS)

This questionnaire measured students' reasons for behaving in the PE class (Papaioannou, 1998a). The original questionnaire created by Papaioannou was formed by 26 items grouped into 6 factors: intrinsic reasons for behaving, external reasons for behaving, reasons for not behaving, introjected reasons for behaving, responsibility reasons for behaving and caring reasons for behaving. It showed the existence of five factors (we eliminated the external reasons for behaving factor) and an organisation of the items that formed each factor that was similar to the original one, although with slight modifications: identified reasons (i.e. "It is important for me to pay attention"), intrinsic reasons (i.e. "I enjoy the classes"), introjected reasons (i.e. "I will feel bad if I misbehave"), amotivation (i.e. "I do not know why I am disciplined") and caring reasons for behaving in class (i.e. "I like helping my classmates"). The reliability obtained for every one of the factors was: .86, .76, .71, .58, and .66, respectively. Only two factors showed a reliability or alpha value below the one recommended .70 (Nunnally, 1978). Given the small number of items and due that Alpha coefficient was related to the number of items that formed both factors (number of items = 3), the internal consistency observed could be accepted (Nunnally & Bernstein, 1994). The items forming the questionnaire were preceded by the phrase: "In the PE class […]". The responses

were graded on a Likert type scale with a point range fluctuating from 0 (totally disagree) to 100 (totally agree).

Strategies to Sustain Discipline Scale (SSDS)

The original questionnaire was created by Papaioannou (1998a) based on the theory and research of Ryan and Connell (1989), and Vallerand et al. (1992) in order to evaluate students' perception of the strategies used by their teacher to maintain discipline in the physical education class. The original questionnaire was formed by 27 items grouped into four factors: teacher's emphasis on intrinsic reasons to maintain discipline, teacher's emphasis on introjected reasons to maintain discipline, teacher's indifference to maintaining discipline and teacher's emphasis on external reasons to maintain discipline in the physical education class. The scale was formed by 24 items grouped into four factors: teacher's emphasis on caring and responsibility reasons (i.e. "He helps us to be responsible for our progress"), teacher's emphasis on intrinsic reasons (i.e. "He makes the classes fun"), teacher's emphasis on introjected and external reasons (i.e. "He makes us feel bad with ourselves when we misbehave") and teacher's indifference to maintaining discipline in class (i.e. "He makes us feel that there is no discipline in the class at all"). The reliability obtained for every one of the factors was: .86, .88, .76, and .70, respectively. The items forming the questionnaire were preceded by the phrase: "The PE teacher […]". The responses were graded on a Likert type scale with a point range fluctuating from 0 (totally disagree) to 100 (totally agree).

TABLE 2

Mean and Standard Deviation for the Sociodemographic variables, interest in Physical Education (PE) and Sport Activity.

Interest in PE	Not interest		Interest	
Reasons scale	*M*	*SD*	*M*	*SD*
Identified reasons	69.38	20.59	80.22	13.12
Introjected reasons	61.30	28.10	61.28	21.69
Intrinsic reasons	54.49	21.59	75.45	16.39
Amotivation	44.20	22.99	41.34	22.41
Caring Reasons	58.37	24.60	66.69	19.53
Strategies Scale				
Caring and responsibility	55.49	21.49	71.30	15.12
Intrinsic	52.30	25.13	72.90	16.98
Introjected and external	45.28	21.92	41.89	22.81
Indifference	31.99	22.95	33.69	24.44
Sport Activity	Daes not any sport		Does sport	
Reasons scale	*M*	*SD*	*M*	*SD*
Identified reasons	76.30	15.30	79.37	12.20
Introjected reasons	62.41	21.80	61.39	21.50
Intrinsic reasons	70.29	17.56	75.40	19.34
Amotivation	40.84	21.36	40.66	21.64
Caring Reasons	63.69	19.50	68.68	19.56
Strategies Scale				
Caring and responsibility	66.21	15.91	72.40	15.91
Intrinsic	65.40	17.40	75.28	17.41
Introjected and external	42.38	24.40	43.27	24.41
Indifference	36.55	25.41	37.80	25.81

Sociodemographic Variables

Data about the characteristics of the students associated with their personal environment and their demographic character were also collected. The following variables were analyzed: student's gender (male or female), type of school (state or private), interest in physical education (interested or not interested), and the level of sport activity outside school hours (does or does not do any sport). Sport was understood as any physical activity (aerobics, jogging, weight training, swimming etc.) or sport (football, basketball) that was done outside school hours.

Statistical Analysis

The Statistical Program SPSS 17.0 was used to analyze the data. Descriptive statistics means and standard deviations for all variables were obtained. This statistical approach test of the subjects was different in some variables. The univariate factorial design was developed using a single factor ANOVA calculation, establishing significant differences depending on the student's gender, type of school, interest in physical education and sport activity outside school hours (independent variables) and every one of the factors forming both questionnaires (dependent variables). MANOVA calculation was used to establish significant differences by means of the interaction between every one of the variables among themselves and all the factors forming both questionnaires.

TABLE 3

Univariate and Multivariate analysis of the RDS and the SSDS.

Variables	Gender	School	Interest in PE	Sport Activity	School + Interste in PE
Reasons scale					
Indentified reason	26.80**	1.15	11.44**	.01	5.68*
Introjected reason	15.91**	3.56	.09	.04	3.91
Intrinsic reason	8.33**	8.14*	42.28**	6.12**	.77
Amotivation	7.71**	33.69**	.41	.00	4.12*
Caring reason	12.28**	1.33	2.98	.25	7.68*
Strategic scale					
Caring and responsibility	2.91	11.24*	22.98**	7.17**	.00
Intrinstic	5.88**	23.87**	37.69**	8.68**	1.92
Introjected and external	16.33**	25.97**	1.58	.01	.82
Indifference	15.41**	44.68**	.19	.21	.33
Multivariate Analysis					
Λ	.94	.91	.93	.90	.93
F	3.38**	2.14*	4.12**	2.18*	2.64*

Legend: ***** – $p < .05$; ****** – $p < .01$; **Λ** – Wilks's multivariate test criterion; ***F*** – F distribution.

RESULTS

Table 1 presents the descriptive statistics (means and standard deviation) for the variables: student's gender and type of school. As shown, girls scored higher in most of the factors of the two questionnaires (RDS and SDDS).

Table 2 presents the descriptive statistics (means and standard deviation) for the variables: interest in physical education (PE) and sport activity outside school hours. As shown, students that liked physical education and did sport were more disciplined and perceived more intrinsic reasons in their teachers for maintaining discipline.

Table 3 shows the results of Univariate differences. Table 3 shows the results of Univariate differences. With regards to the relationship between the student's gender variable and each one of the factors established, we observed significant differences in all the factors in the "RDS": identified reasons ($F = 26.80$, $p < .01$), introjected reasons ($F = 15.91$, $p < .01$), intrinsic reasons ($F = 8.33$, $p < .05$), amotivation ($F = 7.71$, $p < .05$) and caring reasons ($F = 12.28$, $p < .01$) and in three of the four factors in the "SSDS": emphasis on intrinsic reasons ($F = 5.88$, $p < .05$),

emphasis on introjected and external reasons (F = 16.33, p < .01) and the teacher's indifference to maintaining discipline in class (F = 15.41, p < .01).

With regards to the variable type of school, we found significant differences in the factors belonging to the "RDS": intrinsic reasons (F = 8.14, p < .05) and amotivation (F = 33.69, p < .01), as well as in all the factors related to the strategies the teacher used to maintain discipline in class: emphasis on caring and responsibility reasons (F = 11.24, p < .05), emphasis on intrinsic reasons (F = 23.87, p < .01), emphasis on introjected and external reasons (F = 25.97, p < .01) and teacher's indifference (F = 44.68, p < .01).

With regards to the variable that referred to interest in physical education, we observed significant differences in the identified reasons (F = 11.44, p < .05) and intrinsic reasons (F = 42.28, p < .01) factors in the "RDS", as well as in the teacher's emphasis on responsibility and caring reasons factors (F = 22.98, p < .01) and teacher's emphasis on intrinsic reasons (F = 37.69, p < .01) in the "SSDS".

With regards to the variable referring to doing sport outside school hours, there were only significant differences in the intrinsic reasons factor (F = 6.12, p < .05) for behaving in the "RDS" and in the teacher's emphasis on caring and responsibility reasons (F = 7.17, p < .05) and teacher's emphasis on intrinsic reasons (F = 8.68, p < .05) factors for maintaining discipline in the PE class.

After doing the MANOVA calculation (Table 3), significant differences were found in the interaction established between the type of school (state or private) and the interest in physical education (Λ = .94, F(9, 335) = 2.64, p < .05). Specifically, significant differences were found in the factors belonging to the "Reasons for Behaving Scale": identified reasons (F = 5.68, p < .05), amotivation (F = 4.12, p < .05) and caring reasons (F = 7.68, p < .05). As a result, students from state schools who liked physical education had more reasons of responsibility, amotivation and interest and caring for their classmates for behaving in the class than students from state schools that did not like physical education, as well as compared with all the students from private schools (whether they liked physical education or not).

DISCUSSION

In this study we proposed to compare the differences between different groups (student's gender, type of school, interest in physical education and sport activity outside school hours), based on the student's disciplined/undisciplined behavior in the Greek physical education class.

With regard to the relationship between the student's gender variable and each and every one of the factors established, results obtained suggested that female students show more self-determined reasons to be disciplined and perceive their teacher as more intrinsically motivated to maintain discipline in the classroom than the male students. These data are in agreement with those found by Moreno, Cervello & y Martinez (2007).

We can justify the results by reporting that women do not feel as much need to compete to be successful in the PE class and are interested in more cooperative activities, and this is most likely having an influence on the appearance of disciplined behavior. Similarly, these results are in line with research carried out by Duda & Whitehead (1998), Escartí, Roberts, Cervelló & Guzmán (1999) and White, Kavassanu & Guest (1998). According to these authors, women tend to be more task-oriented and intrinsically motivated, while males are more ego-oriented and extrinsically motivated or amotivated.

As for the variable type of school, we observed that students from private schools are more intrinsically motivated to behave than students at state schools, who are totally amotivated to behave well. Similarly, students at private schools perceive that their teachers are intrinsically motivated to maintain order and discipline in their classes, they care about their students' behavior and they feel responsible for it. On the contrary, students at state schools perceive that their teachers are totally indifferent to discipline and in the event that there is a concern, it is mainly motivated by reasons related to avoiding guilt feelings, as well as avoiding any possible reprisals from external sources. These results are in agreement with those found by Moreno, Cervello & y Martinez (2007).

With reference to the variables concerning students' interest in physical education, and sport activity outside school hours, we found significant differences in the group of students that said they liked PE and in the group that do sport outside school hours with more self-determined reasons for discipline. These findings are in agreement with previous study (Moreno, Cervello & y Martinez, 2007). We explain these results to the fact that an intrinsically motivated individual takes part in an activity for his own good, as well as for the feeling of pleasure and satisfaction obtained directly from his participation (Deci & Ryan, 1985; Dorobantu, & Biddle, 1997; Ntoumanis, 2001; Standage & Treasure, 2002; Wang, Chatzisarantis, Spray, & Biddle, 2002; Wang, Liu, Chatzisarantis, &

Lim, 2010). According to Hassandra, Goudas, & Chroni (2003) and Ryan & Deci (2000), an individual motivated intrinsically will be characterized by psychological wellbeing, which will lead him to experience feelings of enjoyment and satisfaction with what he is doing, and, consequently, to doing sport outside school hours, internalizing the rules established and, therefore, exhibiting more disciplined behavior.

Finally, with regards to the interaction between the type of school variable and interest in physical education, our findings suggested that students from state schools who liked PE behaved better in the classroom than students from state schools that did not like PE, as well as compared with all the students from private schools. Similarly, and in a contradictory manner, it was also these students that had more amotivation reasons, as well as more undisciplined behavior in the class. These findings are in agreement with the findings of Moreno, Cervello & y Martinez (2007).

Research has shown that there is a decrease in the students' motivation to take part in physical education activities (Parish & Treasure, 2003; Trudeau & Shephard, 2005) and a decrease in the level of perceived competence (Weiss & Amorose, 2005) as they progress through the school and perceive more academic demands. Given the decrease in the level of physical self-perception and motivation that occurs in the first years of adolescence, it is important to understand the motivational process students are wrapped up in at these ages and their effects on their physical self-perceptions.

Self-esteem is affected by exercise and an increase in its level leads to both psychological and physical benefits (Boyd & Hrycaiko, 1997). Therefore, students that do some physical or sport activity have a more positive perception of their physical self-concept, a more positive self-esteem in all the dimensions forming this construct: body image perception, sport competence perception, physical condition, perception of general physical competence and physical strength (Bortoli, Bertollo, Comani & Robazza, 2011). According to Ntoumanis (2001), positive social factors, such as promoting cooperative learning, emphasis on individual improvement and changes in tasks can result in positive motivational results in physical education.

In conclusion, we would like to highlight the importance that both this study and similar studies already carried out, may have in understanding the causes of disciplined and undisciplined behavior appearing in the PE class. Student's internal reasons for developing disciplined or undisciplined behavior give an insight into a better understanding of the reasons for disruptive behavior.

These findings may have implications for the practice of physical education. Lessons should be structured in a way that students have the opportunity to satisfy their needs for autonomy, competence and social relatedness. Therefore, students need to be given choices about their participation, to experience a sense of accomplishment and to have ample opportunities for interaction with their peers during the lesson.

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