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## ORIGINAL

### MOTIVATIONAL CLIMATE, REASONS FOR DISCIPLINE AND BEHAVIOR IN PHYSICAL EDUCATION

### CLIMA MOTIVACIONAL, RAZONES PARA LA DISCIPLINA Y COMPORTAMIENTO EN EDUCACIÓN FÍSICA

Gutiérrez, M.<sup>1</sup> y López, E.<sup>2</sup>

<sup>1</sup> PhD. Psychology. University of Valencia, Spain. [melchor.gutierrez@uv.es](mailto:melchor.gutierrez@uv.es)

<sup>2</sup> MA. Physical Education. University of Valencia, Spain. [esteruca\\_lopez@hotmail.com](mailto:esteruca_lopez@hotmail.com)

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## **ABSTRACT**

The purpose of this study was to analyze the relationships among the perceptions of the motivational climate, students' reasons for being disciplined, students' self report on discipline-indiscipline, and students' behavior assessed by their teachers in physical education lessons. For this, 2189 students, with ages between 13 to 17 years, completed questionnaires about Motivational Class Climate, Reasons for Discipline, and Discipline-Indiscipline. Teachers, at the same time, assessed the students' Behavior in physical education. Firstly, the psychometric properties of the instruments used were analyzed through Confirmatory Factor Analyses (CFA). Then, Structural Equation Modelling (SEM) was carried out to predict the students' behavior and discipline. Results showed a direct relationship between the perception of learning climate and students' discipline. The implications of these findings for teaching-learning process are discussed.

**KEY WORDS:** Motivation, teaching, learning, adolescents, self-determination.

## **RESUMEN**

El propósito de este trabajo fue analizar las relaciones entre las percepciones del clima motivacional, las razones de los alumnos para la disciplina, su auto-informe sobre disciplina-indisciplina y la valoración que sus profesores hacen de su comportamiento en clase de educación física. Para ello, 2189 alumnos de 13 a 17 años completaron cuestionarios de Percepción del Clima Motivacional, Razones para la Disciplina y Disciplina-Indisciplina. Los profesores valoraron el Comportamiento de sus alumnos en educación física. En primer lugar, se analizaron las cualidades psicométricas de los instrumentos utilizados mediante Análisis Factoriales Confirmatorios. Posteriormente, se aplicó un Modelo de Ecuaciones Estructurales para predecir el comportamiento y disciplina de los alumnos. Los resultados han mostrado una relación directa entre la percepción del clima de aprendizaje y la disciplina de los alumnos. Se discuten las implicaciones de estos resultados en términos de aportación al proceso de enseñanza-aprendizaje.

**PALABRAS CLAVE:** Motivación, enseñanza, aprendizaje, adolescentes, auto-determinación.

## 1. INTRODUCTION

A major concern of this century is the physical inactivity among young people, although we know the benefits that physical activity can bring, both psychological and physical (Blair, 2009, Ortega et al., 2010). It is generally accepted that physical education (PE) can play an important role in promoting students' participation in physical activity outside school, and also to teach healthy lifestyles (Beltrán, Devís and Peiró, 2012; Biddle and Chatzisarantis, 1999; Digelidis, Papaioannou, Laparidis and Christodoulidis, 2003). But to help young people to reach the potential that physical practice can provide, more research is needed on the influence of motivation in such practices (Stuntz and Weiss, 2009).

The literature recognizes that PE is interpreted from two important perspectives. On one hand, understood as valuable in itself, emphasizing intrinsic feelings of wellbeing. On the other hand, considered as a means to achieve several consequences: physical fitness, healthy lifestyles, prevention of health risks and child and youth socialization, among others (Arruza et al., 2008; Gutiérrez and Pilsa, 2006; Nuviola et al., 2009; Pérez-Samaniego, Iborra, Peiró and Beltrán, 2010). For these reasons, it is necessary the study of the conditions under which the PE is developed, and must pay attention to several variables that have proven their importance in the teaching-learning process. Among these variables, first we will approach the classroom motivational climate, and secondly, discipline and students' behavior.

In PE, the achievement goal theory has been one of the largest contributors to the understanding of cognitive, emotional and behavioral patterns relevant for development and progress of the students (Papaioannou, Ampatzoglou, Kalogiannis and Sagovits, 2008). This theory postulates that in achievement contexts such as PE, two main goals are predominant: the goal of task, learning, or mastery, which usually involves a positive impact on personal development, and the goal of ego, comparison, or performance, which usually carry out more negative consequences for the person (Roberts, 2001; Roberts, Treasure and Conroy, 2007; Stuntz and Weiss, 2009). As Stuntz and Weiss has stated, when students are task-oriented or involved in a learning environment (mastery) they experiences physical activity as an end in itself, focusing on the best and take on challenges, seeking for intrinsic perspective more than the activity results. By contrast, students who are ego-oriented or involved in a performance environment (comparison) consider physical activity as a means to an end, seeking to raise their status, and extrinsic rewards success with minimal effort.

According to cognitive evaluation theory, "the students' behavior is regulated by several reasons: (a) *intrinsic reasons*, that produce pleasure or excitement while performing an activity, (b) *identified reasons*, determined by personal values and goals, (c) *introjected reasons*, determined by internal pressures oriented to avoid a negative evaluation (such as guilt, shame or embarrassment), (d) *external reasons*, related to behavior formed by external rewards, compliance

with rules, or fear of punishment, and (e) *absence of reasons*, related to the conduct non-motivated or without reason in which are prevailing lack of control feelings” (Papaioannou, 1998).

Students feel more self-determined when the behaviors are regulated by intrinsic and responsible reasons and less self-determined when they are regulated by external reasons or no reasons to justify these behaviors (Vallerand et al., 1992). In line with this, the reasons that promote good behavior in class are the intrinsic and of responsibility, i.e. reasons that allow students to feel that they operate under its own decision, not by the standards imposed or fear of punishment (Deci and Ryan, 1991; Spray, 2002; Zounhia, Hatziharistos and Emmanouel, 2003).

Connecting the cognitive evaluation theory with discipline, Papaioannou (1998) indicates that mastery climates promote intrinsic and identified reasons for discipline in class, and that researchers have found that task orientation is positively related to reasons for implication in PE such as skill development, affiliation (making friends) and intrinsic motives. Thus, school discipline has become one of the major concerns for education, among other reasons, because many teachers believe that a disciplined class is one of the most important indicators of successful teaching (Bekiari, Kokaridas and Sakellariou, 2006; Gutiérrez, López and Ruiz, 2009; Wang, Selman, Dishion and Stormshak, 2010).

On the other hand, the perception of an ego-involving climate (comparison, performance) reduces the students’ self-determination, because this environment imposes external criteria of evaluation. Therefore, teachers should help students to become in something personal the value of discipline and responsibility, while they clarify what is the purpose of both. The ultimate goal of discipline should not remain only in the conformity, but must go farther to the internalization of norms and social values. That is, the goal of teachers should not be educating students to behave well only when they are being monitored, but also outside the control of their teachers (Spray and Wang, 2001; Gutiérrez et al., 2009).

Although in the general education context the issue of students’ discipline has been a most studied concept, are less abundant the researches done in the specific context of the PE. Among these are the studies carried out by Cervelló, Jiménez, del Villar, Ramos and Santos-Rosa (2004), Moreno, Cervelló, Martínez and Ruiz (2008), Martínez-Galindo, Alonso, Cervelló and Moreno (2009), Gutiérrez et al. (2009) and Gutiérrez, Ruiz and López (2010), in Spanish context, and those by Papaioannou (1998), Spray and Wang (2001), Spray (2002), Zounhia et al. (2003) and Bekiari et al. (2006) in an international context. The study by Papaioannou (1998) is a seminal work which supports this research, having taken from the author the Reasons for Discipline Scale, which serves as a basis for analyzing the relationships between perceived motivational climate and the students’ reasons for being disciplined in PE classes.

From all the above mentioned, we have considered the following research questions: Will it be valid the Reasons for Discipline Scale by Papaioannou (1998) made in Greece, to be applied in the Spanish educational context? What variables will be the better predictors of discipline and students' behavior in PE classes? We hypothesize that the perception of a learning-oriented climate will be able to predict positively the students' behavior in the classroom mediated by their reasons for being disciplined, and that the perception of a comparison-oriented climate will be negatively related to students' behavior in PE classes.

## 2. METHOD

### Sample

Participants were 2189 students (1<sup>o</sup> to 4<sup>o</sup> ESO and 1<sup>o</sup> BS), 1106 boys and 1083 girls, aged between 13 and 17 years ( $M = 14.78$ ,  $SD = 1.32$ ) belonging to 43 schools (59.8% public, and 40.2 % private) (see Table 1). The selection of schools will be developed through convenience sampling, trying to be representative of the whole spectrum of schools in Valencia (Spain). All participants were enrolled in their schools. After obtaining the approval of the schools managers, PE teachers were contacted to be informed about the research and also were invited to collaborate. Letters were also sent to the students' parents requesting permission for the participation of their children. Only the students who returned signed parental consent were allowed to participate in the study.

**Table 1.** Sample distribution by age of students and type of school

Age	Public Schools		Private Schools		Total	
13	291	13.3%	201	9.2%	492	22.5%
14	282	12.9%	183	8.4%	465	21.2%
15	302	13.8%	242	10.5%	531	24.3%
16	258	11.8%	170	7.8%	428	19.5%
17	177	8.1%	96	4.4%	273	12.5%
Total	1310	59.8%	879	40.2%	2189	100.0%

### Instruments

*Motivational climate.* Perceived motivational climate in PE classes was assessed with L'Echelle de Perception du Climat Motivational (EPCM) by Biddle et al. (1995). In this study we used a Spanish translation and adaptation by Gutiérrez, Ruiz and López (2011). The 19 items of the scale provides five first-order factors: Pursuit of Progress by Pupils, Promotion of Learning by the Teacher, Pursuit of Comparison by Pupils, Worries about Mistakes, and Promotion of Comparison by the Teacher, grouped at the same time into two second-order factors: Learning Climate or Mastery, and Comparison Climate or Performance.

Students were asked to answer making reference to what more often happens in their PE classes. Examples of items that compose the learning climate are: "Pupils learn new things and feel pleased", "The teacher is pleased when each pupil learns something new". Examples of items of the Comparison Climate: "The students try to do better than one another", "The teacher only bothers with those who do well the exercises". Responses were given on a Likert-type scale from (1) *strongly disagree* to (5) *strongly agree*.

*Reasons for being disciplined.* It is an adaptation of the Reasons for Discipline Scale-RDS, translated into Spanish by Gutiérrez (2003). Under the cognitive evaluation theory, Papaioannou (1998) built the Reasons for Discipline Scale, consisting of 26 items, grouped into six reasons categories for students to behave properly in PE class. Its factorial solution provided the following dimensions: Intrinsic Reasons for being disciplined ( $\alpha = .90$ ), External Reasons ( $\alpha = .76$ ), No Reasons ( $\alpha = .68$ ), Introjected Reasons ( $\alpha = .72$ ), Responsibility Reasons ( $\alpha = .77$ ), and Caring Reasons for being disciplined ( $\alpha = .80$ ).

The stem for all items was "When I am disciplined in PE class it is because ...". Students were asked to answer on a 5-point Likert-type scale from (1) *strongly disagree* to (5) *strongly agree*. As an example of each factor the following items were included: "I want to follow the class", "That's the rule", "I feel like I waste my time by being disciplined in PE", "I feel ashamed when I don't", "I try to be a responsible person".

*Discipline.* To measure the classroom discipline it was used the Disciplined-Undisciplined Behavior Inventory (ICDIEF, Cervelló, Jiménez, del Villar, Ramos and Santos-Rosa, 2004). This instrument consists of 18 items, 9 of them grouped in the Discipline factor (i.e., "I follow the standards that are set up in the class development", "I help my fellows when they need it"), and another 9 grouped in the Indiscipline factor (i.e., "I do not attend to the teachers' explanations", "I do activities different to what the teacher is proposing me").

Students were asked to answer making reference to what more often happens in their PE classes. The stem for all items was "in PE classes ...". Responses were indicated on a Likert-type scale from (1) *strongly disagree* to (5) *strongly agree*.

*Pupils' behavior.* Teachers rated on a 0 to 10 scale the overall behavior that each of their students had shown in PE classes during the last month.

## **Procedure**

School's managers were contacted by writing to explain to them the investigation and to request their permission to carry out the study. After, were contacted the PE teachers, of the centers that were agree, to request their participation. The instruments were applied by a researching team member, without the presence of PE teacher in the classroom to facilitate students' spontaneity in the answers. On the other hand, the teachers gave an assessment of the behavior of their students. The data were collected between March and May. This way students and teachers had at least six months of experience on working together. All the questionnaires were completed anonymously but using a key that allowed matching their answers with the evaluations provided by the correspondent PE teacher.

## **Data analysis**

Following the methodological guidelines by Merenda (2007) about the requirements for validation and transcultural adaptation of psychological and educational tests, Confirmatory Factor Analysis (CFAs) were conducted to examine the adaptation of the factorial structure of the instruments used in the sample study. CFAs and structural models were estimated within EQS 6.1 program (Bentler, 2005) using maximum likelihood estimation with Satorra-Bentler corrections in standard errors and fit indices (Finney and DiStefano, 2006). For this, the indices recommended by the literature have been used. It was calculated the CFI, GFI and AGFI. For those coefficients is often considered the value 0.9 or greater as appropriate to accept the model; SRMR and RMSEA that should approximate or be less than 0.8 to be indicative of adequate fit of the model to the data, and the chi-square test (Kaplan, 2000).

We also calculated the scales' internal consistency through Cronbach's alpha coefficients. Subsequently, there were calculated the Pearson correlations between the variables in study. Finally, there were implemented a Structural Equation Model (SEM) with observed variables (Path Analysis) to predict the students' behavior based on the perceptions of motivational climate and the reasons for being disciplined in PE class.

### 3. RESULTS

#### Psychometric properties of the instruments

Confirmatory Factor Analysis was used to test the factorial structure of the instruments in the sample, since there are theoretical models relevant for these structures at international level and also in previous Spanish validations. In these conditions of theory testing about data, the CFA is recognizably superior to exploratory factorial analysis (EFA) with its multiple options (Tabachnick and Fidell, 2007).

*Motivational Climate.* A second-order CFA showed a reasonable fit to de model ( $\chi^2_{147} = 916.1$ ,  $p < 0,001$ , CFI = 0,93, RMSEA = 0,05, GFI = 0,94, AGFI = 0,92, SRMR = 0,09), obtaining two dimensions: Learning or Master Climate ( $\alpha = 0,87$ ) and Comparison or Performance Climate ( $\alpha = 0,76$ ) (Gutiérrez et al., 2011), which confirms the bi-factorial structure proposed by Biddle et al. (1995).

*Reasons for discipline.* Through CFA, we tested all the models offered to us by the literature about the validation of Reasons for Discipline Scale: the model by Papaioannou (1998), the model by Spray and Wang (2001), and the model by Moreno, Cervelló, Martínez and Ruiz (2008). From all of them, the model that better fit was the provided by Papaioannou (1998):  $\chi^2_{215} = 799,06$ ,  $p < 0,001$ , CFI = 0,91, GFI = 0,90, AGFI = 0,89; SRMR = 0,08, RMSEA = 0,03, with the factors and standardized weights shown in Table 2.

**Table 2.** Standardized loads and factors obtained through CFA of Reasons for Discipline Scale



Ítems	IRBD	ER	NR	IRBD	RR	RPD
<i>Intrinsic reasons for being disciplined (IRBD)</i>						
1. I want to follow the lesson	0,38					
11. It's important for me to do well in PE lesson	0,38					
18. The physical education lesson is fun	0,79					
21. I enjoy the physical education lesson	0,84					
24. The physical education lesson is exciting	0,77					
<i>External reasons for being disciplined (ER)</i>						
9. That's the rule		0,44				
14. So that the PE teacher won't yell at me		0,71				
26. So others won't get nervous with me		0,81				
<i>No reasons for being disciplined (NR)</i>						
5. I don't see why I should be disciplined			0,85			
13. I really feel that I lose time by being disciplined in the physical education lesson.			0,90			
19. I really don't know why I am disciplined			0,78			
<i>Introjected reasons for being disciplined (IRBD)</i>						
8. It bothers me when I don't				0,66		
16. I will feel bad about myself if I don't				0,65		
22. I will feel ashamed if I don't				0,80		
<i>Responsibility reasons for being disciplined (RR)</i>						
3. try to be a responsible person					0,40	
7. To understand where I am right or wrong					0,59	
12. I feel that I am responsible for what I learn					0,53	
17. I try to be consistent with myself and the others					0,69	
25. I want to be consistent with what I say and what I do					0,61	
<i>Caring reasons for being disciplined (CRD)</i>						
6. I try with any means to help my schoolmates in the lesson						0,60
10. It's important for me everybody in the class to improve						0,76
20. I want my schoolmates to understand what they are doing right or wrong						0,77
23. I like all the class to progress						0,78

*Discipline-Indiscipline.* Although the authors had reported  $\alpha$  values of 0,78 for the Discipline factor and .77 for Indiscipline factor, however, we carried out a CFA with our sample, obtaining reasonable fit indices to the model ( $\chi^2_{134} = 418,53$ ,  $p < 0,001$ ; CFI = 0,971; GFI = 0,912; AGFI = 0,888; SRMR = 0,098; RMSEA = 0,031), and internal consistency of  $\alpha = 0,75$  for the Discipline factor, and  $\alpha = 0,85$  for Indiscipline factor (Gutiérrez and López, 2012), confirming the factorial structure proposed by Cervelló et al. (2004).

### Descriptive results and correlations among variables

From the results shown in Table 3, it is remarkable the high perception that students have about Learning Climate ( $M = 4,02$ ) and the average level of Comparison Climate ( $M = 3,06$ ). It is also notable the low level of Indiscipline ( $M = 1,96$ ) reported by the students and the value close to notable ( $M = 6,93$ ) of students' Behavior in PE class reported by their teachers.

**Table 3.** Means, standard deviations, Cronbach's alpha coefficients and Pearson correlations among Motivational Climate, Reasons for Discipline and Pupils' Behavior in PE lessons

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Learn.Climate	1										
2. Comp.Climate	.05*	1									
3. Intrinsic Reas.	.52 <sup>+</sup>	-.07 <sup>+</sup>	1								
4. External Reas.	.07 <sup>+</sup>	.28 <sup>+</sup>	.09 <sup>+</sup>	1							
5. No Reasons	-.16 <sup>+</sup>	.24 <sup>+</sup>	-.17 <sup>+</sup>	.24 <sup>+</sup>	1						
6. Introject. Reas.	.29 <sup>+</sup>	.15 <sup>+</sup>	.32 <sup>+</sup>	.24 <sup>+</sup>	.05*	1					
7. Respons. Reas	.46 <sup>+</sup>	.05*	.50 <sup>+</sup>	.18 <sup>+</sup>	-.17 <sup>+</sup>	.33 <sup>+</sup>	1				
8. Caring Reas.	.39 <sup>+</sup>	.08 <sup>+</sup>	.43 <sup>+</sup>	.23 <sup>+</sup>	-.06 <sup>+</sup>	.38 <sup>+</sup>	.56 <sup>+</sup>	1			
9. Discipline	.47 <sup>+</sup>	.02	.51 <sup>+</sup>	.08 <sup>+</sup>	-.21 <sup>+</sup>	.26 <sup>+</sup>	.55 <sup>+</sup>	.48 <sup>+</sup>	1		
10. Indiscipline	-.25 <sup>+</sup>	.27 <sup>+</sup>	-.20 <sup>+</sup>	.18 <sup>+</sup>	.44 <sup>+</sup>	.06 <sup>+</sup>	-.27 <sup>+</sup>	-.12 <sup>+</sup>	-.41 <sup>+</sup>	1	
11. Behavior	.13 <sup>+</sup>	-.12 <sup>+</sup>	.21 <sup>+</sup>	-.10 <sup>+</sup>	-.19 <sup>+</sup>	.01	.18 <sup>+</sup>	.11 <sup>+</sup>	.26 <sup>+</sup>	-.28 <sup>+</sup>	1
Alpha	.87	.76	.81	.72	.77	.70	.72	.76	.75	.85	
Mean	4.02	3.06	3.89	2.97	2.17	3.17	3.81	3.38	3.82	1.96	6.93
S.D.	0.62	0.63	0.75	0.89	0.87	0.64	0.61	0.79	0.58	0.76	1.81

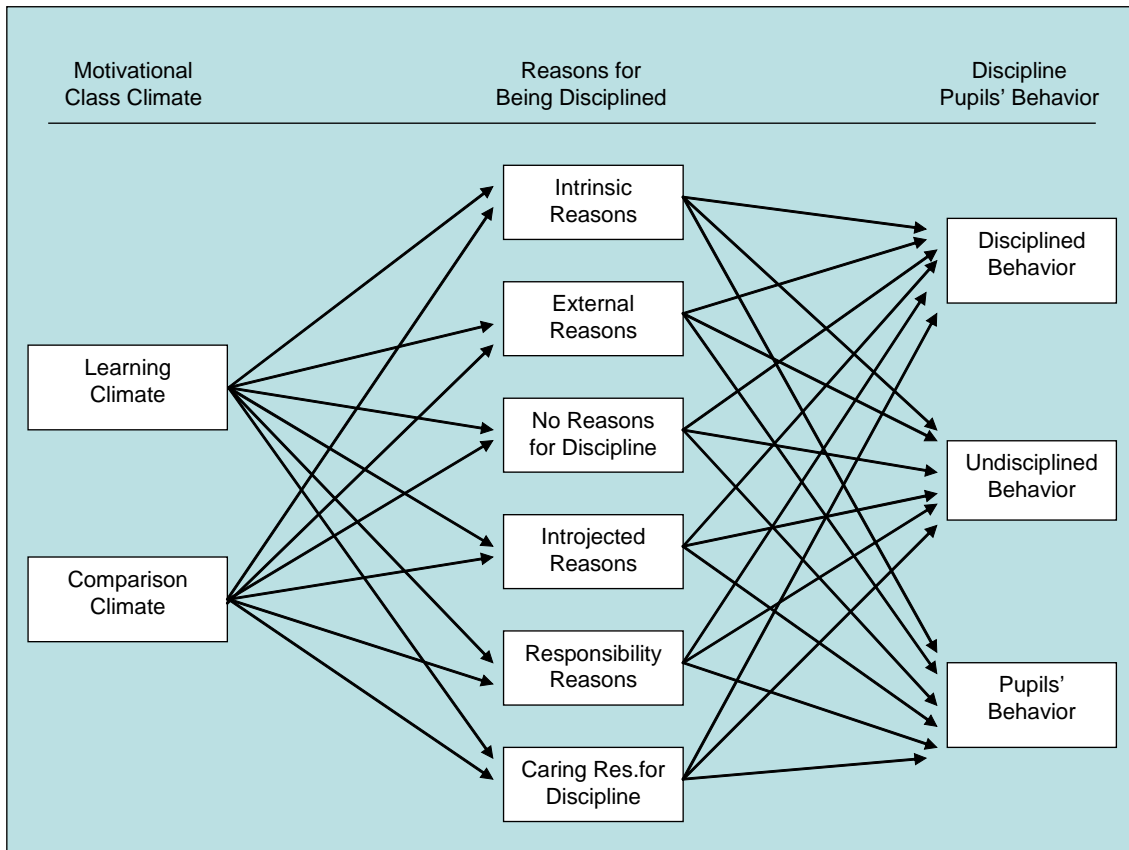
\* $p < .05$ ; <sup>+</sup> $p < .01$ .

Regarding the correlations among variables, the most relevant are those that relate the Learning Climate with the positive factors of Reasons for Discipline (Intrinsic:  $r = .52$ ; Responsibility:  $r = .46$ ; Caring Reasons:  $r = .39$ ), and with Discipline ( $r = .47$ ). Also noteworthy is the relationship between Intrinsic Reasons and Discipline ( $r = .51$ ), Responsible Reasons and Discipline ( $r = .55$ ), Caring Reasons and Discipline ( $r = .48$ ), and No Reasons with Indiscipline ( $r = .44$ ). All listed relationships are statistically significant with  $p < .01$ . Regarding the reliability of the instruments used, the internal consistency coefficients were satisfactory for all factors ( $\alpha$  values between .70 and .87).

### **Prediction of pupils' behavior from the perceived motivational climate and the reasons for being disciplined**

It was proposed a hypothetical model to predict the students' behavior in PE (Figure 1).

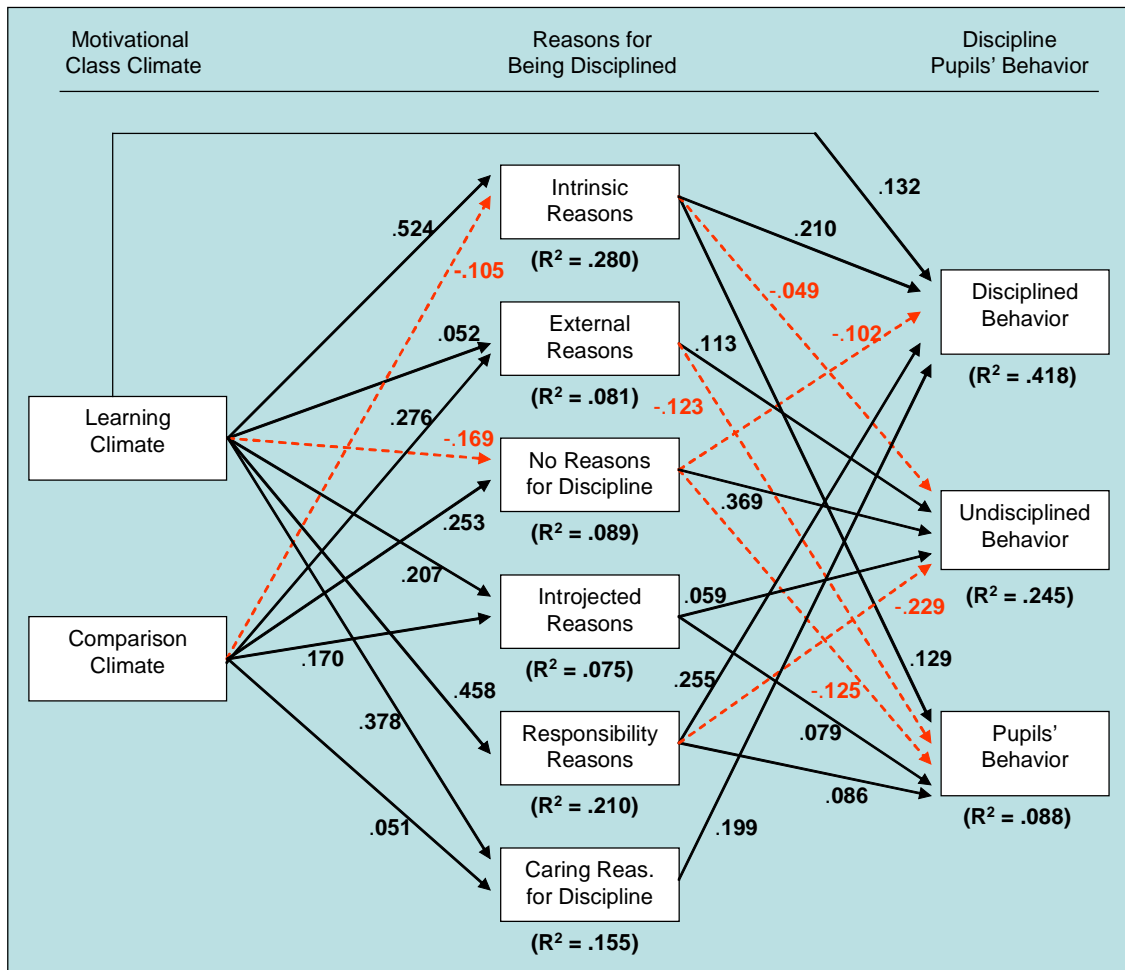
**Figure 1.** Hypothetical model of the relationship between motivational climate, reasons for discipline and behavior in PE classes



The initial model proposed that the perception of motivational class climate would be able to predict the students' reasons for being disciplined which in turn influence their behavior in class (Figure 1). This *a-priori* model was tested in a confirmatory way and it was found a reasonably satisfactory fit indices ( $\chi^2_{19} = 270.24$ ,  $p < .001$ , CFI = .93, GFI = .96, AGFI = .89; RMSEA = .08, SRMR = .05).

The results of this model (Figure 2) shown that "Learning Climate" directly predicts "Discipline" and has positive relationships with all factors of the Reasons for Discipline, except for the factor "No Reasons". The "Comparison Climate" is related negatively with the "Intrinsic Reasons" and positively with all other variables of the Reasons for Discipline. On the other hand, "Intrinsic Reasons" predicts positively "Discipline" and "pupils' Behavior" and negatively "Indiscipline". The "External Reasons" have a direct relationship with "Indiscipline" and reverse with "Behavior" in class. The factor "No Reasons" shows an inverse relation with "Discipline" and "Behavior" and direct to "Indiscipline". "Introjected Reasons" are directly related with "Indiscipline" and "Behavior". "Responsible Reasons" shows positive relationships with "Discipline" and "Behavior" and negative with "Indiscipline". Finally, "Caring Reasons" directly predicts the "students' Discipline" in PE lessons.

**Figure 2.** Standardized solution for the proposed model of the relationship between motivational climate, reasons for discipline and behavior in PE lessons



Note. All structural relationships are statistically significant ( $p < .01$ ). For the sake of clarity, correlations among exogenous variables and errors are not shown.

As shown in Figure 2, the perception of Motivational Class Climate predicts 28% of the factor “Intrinsic Reasons”, 8.1% of the “External Reasons”, 8.9% of the factor “No Reasons”, 7.5% of the “Introjected Reasons”, 21% of “Responsible Reasons” and 15.5% of “Caring reasons” to be disciplined. In addition, Motivational Climate and Reasons for Discipline, predicts 41.8% of the “Discipline” and 24.5% of the “Indiscipline” informed by students and also a 8.8% of the valuation of the “pupils’ Behavior” informed by their teachers. The variables with higher contribution to the prediction of the “Discipline” are “Intrinsic Reasons” ( $\beta = 0.210$ ), the “Responsible Reasons” ( $\beta = .255$ ), the “Caring Reasons” ( $\beta = .199$ ), and the perception of the “Learning Climate” ( $\beta = 0.132$ ). The variables that most contribute to the prediction of “Indiscipline” is the factor “No Reasons” ( $\beta = 0.369$ ) and “Responsible Reasons” in negative ( $\beta = -.229$ ). Finally, the “Classroom Behavior” (as assessed by teachers) is predicted mainly by the “Intrinsic Reasons” ( $\beta = 0.129$ ), the “External Reasons” ( $\beta = -.123$ ) and “Introjected Reason” ( $\beta = -.125$ ).

#### 4. DISCUSSION AND CONCLUSIONS

The aim of this study was twofold: First, to calculate the psychometric properties of the Reasons for Discipline Scale, and secondly, to analyze the relationships among the motivational class climate, the students' reasons for being disciplined and their behavior in PE. We hypothesize that the perception of a learning-oriented climate (or mastery) would be able to positively predict the students' behavior in the classroom mediated by their reasons for being disciplined, while the perception of a comparison-oriented climate (or performance) would be negatively related to students' behavior in PE class.

The results of this study have provided evidence of factorial validity, obtained by CFA, of the Reasons for Discipline Scale in Spanish version, largely coinciding with the structure proposed by Papaioannou (1998). At the same time, these results have allowed verifying the hypothesis proposed on the prediction of the Discipline and Students' Behavior in PE classes. It should be mentioned, however, that the relationship between the perception of learning climate and students' discipline is direct and not mediated by the reasons for discipline, as we stated at the hypothetical model. It suggests the intensity with which classroom climate can influence, in agreement with the results reported by Papaioannou (1998) and Spray and Wang (2001).

Moreover, there is worthy to mention the moderate relationship found (although statistically significant) between the Discipline-Indiscipline reported by students and the assessment that made the teachers about their Behavior in PE class, something that had also highlighted in their researches Sproule, Wang, Morgan, McNeill and McMorris (2007) and Cox and Williams (2008). This highlights once again the gap between students' perceptions and the perceptions and values made by their teachers, results that are in line with those found in other studies (Gutiérrez et al., 2009, Gutiérrez et al., 2011; Martínez-Galindo et al., 2009).

Facing the applied side, our results provide evidence about the importance of creating class environments for learning purposes because this environment, apart from the disposition for the discipline, are able to make students feeling positive discipline oriented, due to the high predictive ability that has shown this type of climate in the tested model. Alongside this, the PE teachers should use strategies to facilitate students' self-determination, leading to the reasons for being disciplined is based more on intrinsic and responsible reasons than in reasons related to feelings about guilty, punishment or external reasons and indifferent to the discipline, results that support those obtained by Cervelló et al. (2004) and Martínez-Galindo et al. (2009). Note that, as indicated by Lewis, Romi, Qui and Katz (2005), the issue of classroom discipline is important not only for the good they can provide, but also the damage that can lead to an inappropriate discipline, since students who receive a reasoned discipline behave less disruptive and more responsible than those who interpret the discipline applied by the teacher more coercive, or absent of reasons of charged of indifference. At the same time, if they perceive a rational discipline, they will also find reasons to be disciplined in class oriented to a better personal development.

Finally, although not directly obtained in this investigation, these results suggest that a proper motivational class climate as also a discipline based on intrinsic and responsible reasons encourage for students' predisposition to the physical practice both in and outside the school context. Do not forget that these class environment conditions has a favorable impact on the students' attitudes, both to teachers and to the overall PE (Gutiérrez and Pilsa, 2006, Gutiérrez and Ruiz, 2009; Stuntz and Weiss, 2009) which undoubtedly generate more positive attitudes toward the practice of regular physical activity (Nuviala et al., 2009) and help to adopt healthier lifestyles (Ortega et al., 2010).

### **Limitations and prospective**

Like all the studies, this also has its limitations. For example, the data were gathered within a convenience sample, which could have incorporated some bias in the population representation. Furthermore, these data are based on students' self-reports, with the subjectivity that this may entail. Future research should include not only the students' perceptions and assessments of their teachers, but also direct observation of classroom climate and students' behavior, taking another step towards the objective assessment of teaching/learning process. Moreover, future researches should also contrast the results obtained in PE with other school subjects. Finally, it seems desirable to develop more research to determine the factorial structure of the Reasons for Discipline Scale, due to the different results obtained into different studies in Spanish context.

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