

## Prediction Model of Satisfaction with Physical Education and School

Antonio Baena-Extremera\* and Antonio Granero-Gallegos\*\*

\*Faculty of Sports Sciences, University of Murcia,

\*\*Consejery of Education, Culture and Sport, Junta of Andalusia

### Abstract

The aim was to analyze a model to predict the orientations of goals on satisfaction with physical education and school. The sample consisted of 202 men and 208 women of secondary education in public schools in the Region of Murcia, aged between 13 and 16 ( $M = 15.14$ ;  $SD = .96$ ). It was used a questionnaire composed of *Achievement Goal Questionnaire 2x2*, *Satisfaction Physical Education Instrument* and *Intrinsic Satisfaction Classroom Scale*. Descriptive and structural equation modeling analyzes were conducted. Stresses the score-master approach over other goals, also satisfaction/fun is higher in physical education at satisfaction in school. In the model equations, it is to highlight the importance of mastery-approach in predicting satisfaction/fun in physical education and this satisfaction/fun in school, while the reverse is negative.

*Keywords:* Physical education, structural regression model, achievement goal.

### Resumen

El objetivo fue analizar un modelo de predicción de las orientaciones de metas sobre la satisfacción con la educación física y la escuela. La muestra fue de 202 hombres y 208 mujeres de educación secundaria de centros públicos de Murcia, con edades entre 13 y 16 años ( $M = 15.14$ ;  $DT = .96$ ). Se utilizó un cuestionario compuesto por la escala de *Metas de Logro 2x2*, y las escalas de *Satisfacción con la Educación Física* y de *Satisfacción Intrínseca a la Escuela*. Se realizaron análisis descriptivos y modelos de regresión estructurales. Destacan los altos valores de aproximación-maestría y de satisfacción/diversión, siendo mayor en educación física que en la satisfacción en la escuela. En el modelo estructural, la aproximación-maestría es el único predictor de la satisfacción/diversión en la educación física, siendo ésta predictora de la satisfacción/diversión en la escuela, pero no a la inversa.

*Palabras clave:* Educación física, modelo de regresión estructural, metas de logro.

Correspondence concerning this article should addressed to Antonio Baena-Extremera, Departamento de Actividad Física y Deporte, Universidad de Murcia, C/ Argentina s/n, Santiago de la Ribera (Murcia) 30720 E-mail: abaenaextrem@um.es

## Introduction

Research on school issues has had and continues to have an important focus on those variables which can potentially affect students' academic performance and personal growth. As will be seen later, numerous authors have attempted to demonstrate the impact of a series of influences on students' performance and learning in terms of the context of schools (Moloi, 2010), students' well-being at schools (Danielsen, Samdal, Hetland, & Wold, 2009), and even the level of students' satisfaction with their schools and hence the importance of students being satisfied, entertained and at ease in class. The question is, what exactly does students' satisfaction with their school mean?

The theory of subjective well-being can be of great assistance when it comes to finding an answer to that question. According to Diener (2009), this theory speaks of two components, a cognitive component (*satisfaction with life*) and an affective component (*affective balance*). In terms of these two components, satisfaction with life would be the compendium of a student's whole life and the affective balance would specifically be the result of their immediate and continuing reactions to the events they experience (Rodríguez & Goñi, 2011).

Thus, bearing in mind all of the above, satisfaction with school would entail a cognitive-affective assessment of a student's overall

satisfaction with their schooling experience (Huebner, Ash, & Laughlin, 2001). Therefore, a student will have a significant level of subjective well-being if they express satisfaction with their life and frequent positive emotions in relation to their school environment. However, regular attendance at classes by students of their own free will is not enough on its own, it would also be necessary to improve the educational experiences offered to students by teachers. Therefore, schools as institutions have an important effect on students' wellbeing and their personal and academic growth.

Satisfaction with schools has been proved to be a determinant variable in students' development and it is even related to students' level of stress (Hui & Sun, 2010), with their social relations (Danielsen et al., 2009), and obviously with their academic performance (Danielsen et al., 2009), and it affects students' commitment with their school work as well (Danielsen, Breivik, & Wold, 2011).

On the other hand, lack of satisfaction with schools is associated with a series of negative behaviors such as school absenteeism and depression (Luopa, Pietikäinen, & Jokela, 2006), and it even has an impact on dropout rates (Takakura, Wake, & Kobayashi, 2010). Furthermore, different studies suggest that these negative behaviors also affect teachers, generating high levels of stress (Tsouloupas, Carson, Matthews, Grawitch, & Barber,

2010) and considerably increasing the amount of sick leave (Ervasti et al., 2011). All this shows the importance of the whole educational system becoming aware of these effects and accordingly working with the aim of achieving good levels of students' satisfaction.

In the case of Physical Education, satisfaction or a lack thereof produces the same effects in the system and amongst students. Grano, Baena, Pérez, Ortiz, and Bracho (2012), for instance, found that Physical Education students with a *satisfaction/fun* profile were also students with a self-determined profile in class, students who valued efforts and hard work to become better and who attributed a high level of importance to the subject. Thus, it is possible to establish that there are mutually affecting relations between Physical Education.

Achievement goal theory (Nicholls, 1989), for instance, has shown that *satisfaction with Physical Education* has significant positive and negative relations with other variables such as goal orientations (Ames, 1984, 1992a, b; Nicholls, 1989). This theory analyzes how dispositional and environmental factors affect people acting within achievement environments (such as schools) whose motivation is attaining success. According to this theoretical framework, students can have two goal orientations: mastery, a task oriented one in which students base their performance in class on efforts and on

improving task realization or a performance goal, more ego oriented, in which students aim at obtaining academic results and showing superiority in relation to their classmates (Ames, 1992a; Nicholls, 1989).

Based on this theory, Elliot (1999) and Elliot and McGregor (2001) found competition to be the central element of achievement goals and that this theory should bear in mind the value of this competition rather than just its form, which was the case up to that moment. Based on this idea, these authors created the 2x2 model, which took into account the value of competition and included a total of four potential goals: mastery-approach goals (which would be the absolute and intrapersonal definition of competition and positive valence), performance-approach goals (normative definition and positive valence), mastery-avoidance goals (absolute and intrapersonal definition of competition and negative valence), and performance-avoidance goals (normative definition and negative valence).

Mastery-approach goals have been found to relate positively with students who seek to improve their skills, with the perception of competition, with high intrinsic motivation and with a mastery climate and negatively with students' state of anxiety and demotivation (Conroy, Kaye, & Coatsworth, 2006). Performance-approach goals have positive relations with fixed skills levels, with perceived performance

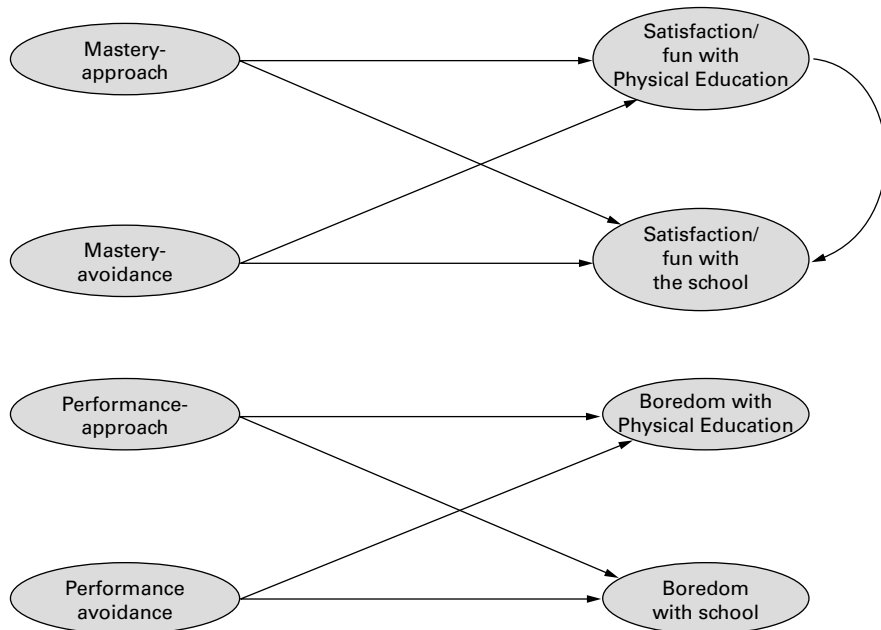


Figure 1. Hypothesized structural regression model.

and competition climates and with extrinsic motivation and negative relations with states of anxiety (Smith, Duda, Allen, & Hall, 2002). Avoidance goals tend to correlate with a series of negative results such as a disadaptative approach to learning, demotivation and certain states of anxiety (Conroy et al., 2006). Despite this individual impact of each goal on factors which can affect the academic work of students, Méndez, Fernández, Cecchini, and González (2013) conclude that Physical Education teachers need to promote a combination of motivational orientations

which prioritizes mastery goals but without neglecting both approach and avoidance performance goals.

Having reviewed the evidence presented in the works cited in relation to the impact of satisfaction with schools (Danielsen et al., 2009; Danielsen et al., 2011; Hui & Sun, 2010) and with Physical Education in students (Granero et al., 2012), and bearing in mind that satisfaction with the latter is related to goal orientations (Cuevas, García, & Contreras, 2013), this study aims at analyzing a model to predict goal orientations in terms of satisfaction with Physical Education and

the school. The initial hypothesis is that mastery goals will predict satisfaction both with Physical Education and with the school and that performance goals, mainly avoidance-performance ones, will predict boredom on both scales. Furthermore, it is hypothesized that satisfaction with Physical Education can predict satisfaction with the school (Figure 1).

## Method

### Participants

We used a non-probabilistic convenience sample from the students' access to whom could be obtained. A total of 410 state high school students (202 boys = 49.3%; 208 girls = 50.7%) of Compulsory Secondary Education (ESO) of public centers from the region of Murcia participated in the study. The age range was 13-16 years old ( $M = 15.14$ ;  $SD = .96$ ), the median age for boys being 15.11 ( $SD = .98$ ) and 15.17 for girls ( $SD = .94$ ). Class distribution was 136 students in the 2<sup>nd</sup> year of ESO (33.2%), 131 in the 3<sup>rd</sup> year of ESO (32%) and 143 in the 4<sup>th</sup> year of ESO (34.8%).

### Instruments

**Achievement goals.** The *Cuestionario de Metas de Logro 2x2* (AGQ) was used (Moreno, González, & Sicilia, 2008), the Spanish version adapted to Phys-

ical Education (AGQ-EF; Guan, Xiang, McBride, & Bruene, 2006) of the Achievement Goal Questionnaire (AGQ) by Elliot and McGregor (2001). This instrument was created to measure achievement goal orientations in Physical Education students. The original instrument has 12 items and features four scales (three items per factor): *mastery-approach*, *mastery-avoidance*, *performance-approach* and *performance-avoidance*. The scale was preceded by the phrase "In my Physical Education classes..." The answers were collected using a Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). Méndez et al. (2013) found the following internal consistency values: *performance-approach*,  $\alpha = .88$ ; *mastery-approach*,  $\alpha = .78$ ; *performance-avoidance*,  $\alpha = .78$ ; *mastery-avoidance*,  $\alpha = .65$ .

**Satisfaction with Physical Education.** The *Satisfacción con la Educación Física*, was used, a version of the *Sport Satisfaction Instrument* (SSI) validated for the Spanish context and adapted to Physical Education (SSI-EF) by Baena, Granero, Bracho and Pérez (2012) from original *Sport Satisfaction Instrument* (SSI) (Duda & Nicholls, 1992). This instrument features eight items to measure the level of satisfaction with sports activities and two subscales to measure *satisfaction/fun* (five items) and *boredom* (three items). The scale was preceded by the phrase "State your level of agreement or disagreement with the

following statements related to your Physical Education classes". The answers were collected using a Likert-type scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Baena, Granero, Bracho et al. (2012), found the following internal consistency values: *satisfaction/fun*,  $\alpha = .92$ ; *boredom*,  $\alpha = .79$ .

#### **Satisfaction with the school.**

The *Cuestionario de Satisfacción Intrínseca en la Escuela* (ISC) was used, *Intrinsic Satisfaction Classroom Scale* by Nicholls, Patashnick and Nolen (1985), Nicholls (1989) and Duda and Nicholls (1992), adapted to Spanish by Castillo, Balaguer and Duda (2001). This instrument features eight items to measure the level of satisfaction with the school with two

sub-scales to measure *satisfaction/fun* (five items) and *boredom* at the school (three items). The scale was preceded by the phrase "*state your level of disagreement or agreement in relation to the following statements referring to all your school classes*". The answers were collected using a Likert-type scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Baena, Granero and Ortiz (2012) found the following internal consistency values: *satisfaction/fun*:  $\alpha = .73$  (pre-test) and  $\alpha = .71$  (post-test); *boredom*:  $\alpha = .76$  (pre-test) and  $\alpha = .75$  (post-test).

In this study composite reliability and mean variance were used as reliability and validity indices; Table 1 shows these values.

Table 1

#### *Internal Consistency and Validity of the Studied Dimensions*

	Composite reliability	Mean Variance
<b>AGQ</b>		
mastery-approach	.86	.76
mastery-avoidance	.86	.68
performance-approach	.89	.72
performance-avoidance	.80	.58
<b>SSI-EF</b>		
satisfaction/fun with Physical Education	.92	.69
boredom with Physical Education	.77	.54
<b>ISC</b>		
satisfaction/fun with the school	.85	.53
boredom with school	.77	.53

## Design and procedure

Following Hernández, Fernández and Baptista (2010), the design of this study is transversal, non-experimental and correlational-causal. In terms of procedure, permission was obtained from the competent bodies, both the secondary schools and universities, to carry out the research. Parents, tutors and students were briefed about the protocol and object of study in detail. The signing of informed consent by both parents and students was a prerequisite to participate in the study. The instruments to measure the different variables were administered in the classrooms by the researchers themselves and without the presence of teachers. All participants were informed on the object of the study and the voluntary and confidential nature of the answers and data management and on the fact that there were no correct or incorrect answers. Students were asked to answer with the maximum possibility sincerity and honesty.

## Data analysis

The medians, standards deviations, asymmetries and kurtosis were calculated with SPSS 22.0. Composite reliability and mean variance were estimated for the internal consistency analysis. Furthermore, multivariate normal distribution was estimated through the Mardia-Based-Kappa coefficient. A confirmatory factor analysis (CFA)

was performed with LISREL 8.80 (Jöreskog & Sörbom, 2003) to assess the factor structure of each instrument. Finally, a series of structural regression models was carried out to assess prediction of satisfaction with schools based on 2x2 achievement goals and satisfaction with Physical Education.

## Results

### Preliminary analysis

First, we estimated the descriptive statistics of the variables used. In terms of goals, it is worth noting the mean score obtained in *mastery-approach* ( $M = 5.00$ ,  $SD = 1.37$ ), with values higher than avoidance, both in *performance* ( $M = 4.75$ ,  $SD = 1.38$ ) and in *mastery* ( $M = 4.55$ ,  $SD = 1.48$ ), and *performance-approach* ( $M = 4.25$ ,  $SD = 1.58$ ), which obtained the lowest score. *Satisfaction/fun with Physical Education* ( $M = 3.89$ ,  $SD = .88$ ) scored much higher than *boredom with Physical Education* ( $M = 2.18$ ,  $SD = .96$ ), whereas *boredom with the school* ( $M = 3.02$ ,  $SD = .97$ ) obtained a mean score higher than *satisfaction/fun with the school* ( $M = 2.77$ ,  $SD = .81$ ).

Next, the multivariate normality of each of the scales was analyzed based on the PRELIS/LISREL Relative Multivariate Kurtosis test. The *multivariate normal kurtosis* values for the instruments were the following: *AGP*, 27.465 (*Mardia-Based-*

Table 2

*Models Fit Indices*

	$\chi^2$	$gl$	$p$	$\chi^2/gl$	NFI	NNFI	CFI	RMSEA
AGQ	133.95	48	.001	2.79	.92	.93	.95	.06
SSI-EF	48.14	19	.001	2.53	.96	.96	.97	.06
ISC	72.54	19	.001	3.82	.90	.89	.93	.08

Note.  $\chi^2$  = squared Chi;  $df$  = degrees of freedom; NFI = normed fit index; NNFI = not-normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

*Kappa* = .296); *SSI-EF*, 27.707 (*Mardia-Based-Kappa* = .339); *ISC*, 8.004 (*Mardia-Based-Kappa* = .125). The test critical value was 1.96 (5%). The test results for each scale showed that multivariate normality cannot be accepted, which implies the use of robust estimators. Therefore, we used the LISREL 8.80 *weighted least squares (WLS)* method developed by Jöreskog and Sörbom (2003). The polychoric correlations matrix and the asymptotic covariances matrix were used as input for data analysis. A measurement model consisting of a factor model which assumed the existence of the latent variables according to the original methods described before was hypothesized for each scale.

The assessment of the models was estimated through absolute and relative fit indices: The associated  $p$  value with the Chi square statistic ( $\chi^2$ ), the *ratio* between  $\chi^2$  and degrees of freedom ( $gl$ ) ( $\chi^2/gl$ ), NFI (*normed fit index*), NNFI (*non-normed fit index*), CFI (*comparative fit index*) y RMSEA (*Root Mean Square Error of Approximation*).

The estimated parameters are considered significant when the value associated with the  $t$  value is higher than 1.96 ( $p < .05$ ). The fit indices obtained are shown in Table 2 and are in line with the established parameters. Therefore, the models proposed are fit and can be accepted.

### Structural equations model

We proceeded to assess the multivariate normality of the structural model taking into account the previous results (Figure 2). Here we also carried out the *RKM normality test*. The estimated value in *RKM* was 29.05 and the *Mardia-Based-Kappa* coefficient was .140. The test critical value was 1.96 (5%). The test results showed that multivariate normality cannot be accepted. This data again suggested the use of the LISREL WLS estimation method for ordinal variables (Jöreskog & Sörbom, 2003). Therefore, the polychoric correlations matrix and the asymptotic covariances matrix were used as input for data analysis.

Following that, and in order to analyze the existing relations and



interactions between the cited theories, we used the structural regression model. Levy and Hancock (2007), recommend formulating and analyzing various models when data suggests this path and then report the most relevant results, so different models of structural equations were verified. First, following our initial hypothesis, we estimated the model in which approach achievement goals predict *satisfaction/fun with Physical Education and with the school*, the latter being also predicted by the second variable. At the same time, avoidance goals would seek to predict boredom both with Physical Education and with the school. Both the *t-value* and the fit indices obtained suggested they should be revised; the *t* values were generally too low (< 1.96) or not significant. For instance, the *t-value* between *mastery-avoidance* and *satisfaction/fun with Physical Education* were negative (-3.09) and low in the case of *satisfaction/fun with the school* (.17). As to the remaining goals, the *t-values* obtained were below .45, except for *mastery-approach* with *satisfaction/fun with Physical Education* (3.56,  $p < .05$ ). In view of these results, we decided to estimate a new model leaving only *mastery-approach* in the prediction of satisfaction and boredom both with Physical Education and the school. In this case, the model presented values close to the acceptance threshold. In order to improve this model we took into account the *Modification Indices* proposed

by the program in the *output*. With these indicators, the model improved remarkably if *boredom with Physical Education* was predicted by *satisfaction with the school* and at the same time it would predict *satisfaction with Physical Education* whereas *boredom with the school* would predict *satisfaction/fun with the school*. As a final improvement, the program suggested predicting exclusively *satisfaction/fun with school* based on *satisfaction/fun with Physical Education*. Once the model in Figure 2 was adjusted and the estimations were carried out, the results obtained were acceptable:  $\chi^2 = 1130.46$ ;  $gl = 336$ ;  $p < .001$ ;  $\chi^2/gl = 3.36$ ; NFI = .94; NNFI = .97; CFI = .97; RMSEA = .05.

Figure 2 shows that *mastery-approach* positively predicts *satisfaction/fun with Physical Education* (.41) and negatively predicts *boredom with Physical Education* (-.63). *Satisfaction/fun* with this subject significantly predicts *satisfaction/fun with the school*, whereas the predictive power of *boredom with Physical Education* on *boredom with the school* is lower but worth noting nonetheless. *Boredom with Physical Education* negatively predicts *satisfaction/fun with Physical Education* (-.67), which is positively predicted by *satisfaction with the school* (.89). Likewise, *boredom with the school* negatively predicts *satisfaction/fun with the school* (-.62). Finally, the latter is a low predictor of *satisfaction/fun with Physical Education*.

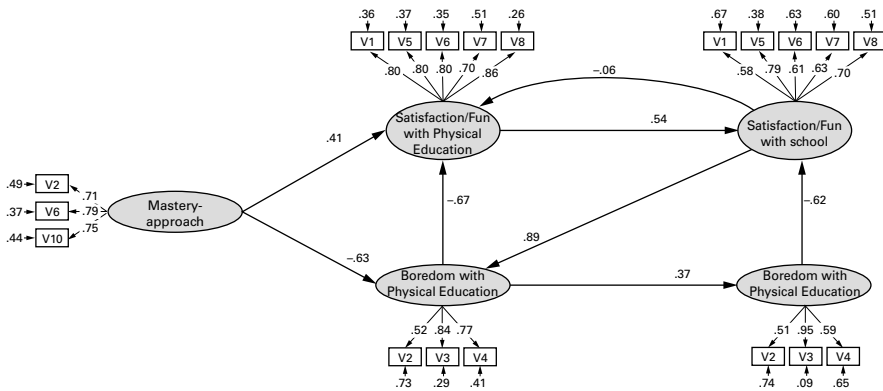


Figure 2. Structural regression model.

Note. All the parameters are standardized and significant in  $p < .05$ .

### Discussion

The object of this study was to analyze a model for the prediction of orientation goals of satisfaction with the school and with Physical Education. Our initial hypothesis expected mastery goals would act as predictors of satisfaction both with Physical Education and the school and that performance goals would predict boredom in both instruments.

In response to our expectations, it is remarkable how *mastery-approach* is the sole predictor of *satisfaction*, in this case with Physical Education and not with the school, which leaves the remaining achievement goals out of the model. In relation to this, Ferriz, Sicilia and Sáenz (2013) and Sicilia found that certain less intrinsic values were also predictors of satisfaction with Physical Education, although they concluded

that more motivated forms were undoubtedly the best predictors. This contribution and our results provide relevant information regarding a potential combination of goals (previously discussed) aiming at obtaining positive effects in students, in this case satisfaction and fun with Physical Education. Furthermore, *mastery-approach* goals negatively predict *boredom* with this subject, which corroborates existing contributions in the literature (Duda & Nicholls, 1992; Fernández, Méndez, Cecchini, & González, 2012; Nicholls, 1989). Moreover, authors such as Cuevas et al. (2013), admit that in Physical Education students' orientation towards mastery is related to satisfaction and joy, to high levels of effort, persistence in learning, group cohesion and other positive variables. There is even empirical evidence proving that *mastery-approach* goals are related

with more positive consequences in students than the rest of the goals and that these goals are associated with high self-determined motivation and low levels of boredom and demotivation (Méndez et al., 2013).

An interesting contribution of this study is the fact that *satisfaction/fun with Physical Education* positively predicts *satisfaction/fun with the school*, a prediction which does not occur inversely. This shows the important contribution of Physical Education to the Spanish curriculum given that it remarkably enhances students' satisfaction with their school, which has an impact in the educational system as a whole. This result is also highly significant as it might promote the elimination of existing stereotypes in terms of this subject, which tends to be referred to as "the easy subject" at schools and amongst parents.

By contrast, the school generally does not contribute to *satisfaction/fun with Physical Education*; quite the opposite, it negatively predicts it. Here it is worth recalling Hammelsbeck (in Grupe, 1976, p. 50), who stated that "education is more than Physical Education, but little it is without it". This result has to do perhaps with the different value students attribute to the school in general and to Physical Education in particular. A number of recent studies (Baena, Granero, Pérez, Bracho, & Sánchez, 2013; Granero et al., 2012), show that Physical Education is highly valued by students and this is likely to be because of

the interesting and motivating contents they acquire, the diversity of methodologies used in class (which allow more interaction and socialization amongst students), the psychological and physical benefits of exercise, etc.; all this contributes to improving students' subjective well-being. These differences probably mark a notable distance between this subject and the others subjects in the curriculum.

There are further contributions in this study; the path diagram shows that *boredom with Physical Education* positively predicts *boredom with the school* but besides this, both dimensions of *boredom* predict, and with similar values, *satisfaction/fun with Physical Education* and with the school respectively and *boredom* in this subject is predicted by *satisfaction/fun with the school*. These results should be a cause for concern for Physical Education teachers, who need to work hard in order to provide, as outlined in the Introduction, high quality educational experiences for their students so as to facilitate their subjective well-being. To this aim, Education Physical Education classes have to move away from monotony (Mowling, Brock, Eiler, & Rudisill, 2004), and focus on students' interests (MacPhail, Kirk, & Eley, 2003), and on proper planning so that teachers can empower students (Calderón, Martínez, & Martínez, 2013), which should in turn improve motivation (Baena, Granero, Sánchez, & Martínez, 2013). In short, Physical Ed-

ucation classes require successful educational activities (Aubert, Bizkarra, & Calvo, 2014) which will have an impact in the school and in teachers. In relation to this, Hui and Sun (2010) and Danielsen et al. (2009), claim that teaching activities are crucial for students' satisfaction at school, even more so in primary school, when students feel more attached to their teachers. Likewise, school climate, especially in the case of Physical Education classes, where it is usually good, will affect students —both in terms of behavior and learning— and will lead them to feeling either more or less satisfied (Zullig, Huebner, & Patton, 2011), or more or less bored. Thus, the results here show again the importance of Physical Education teachers' good work when it comes to contributing to students' satisfaction with the school.

To conclude, it is worth highlighting that the initial hypothesis has not been wholly verified given that the two mastery goals are not predictors of *satisfaction* in both instruments nor do performance goals predict *boredom*. It is also worth noting the importance of *mastery-approach* goals in the prediction of *satisfaction/fun with Physical Education* and of the latter on *satisfaction/fun with the school*. This result is perhaps more significant if we take as a reference point the previously mentioned benefits of satisfied students, such as a fall in dropout rates (Elmore & Huebner, 2010), which are quite high in Spain, and

the improvement of grades as proposed by the Program for International Student Assessment (PISA). Ames (1992a) proposed a series of motivation strategies (TARGET) in order to help students achieve mastery and which teachers have to use in order to obtain more involvement in tasks e.g. facilitate students' autonomy, promote intrinsic rewards, use flexible groupings, value personal progress and give enough time for students' practice.

One of the limitations of this research is the type of design. Given it is a cross-sectional study, these results could change depending on different values such as, for instance, the type of contents taught in class or type of sample. Therefore, a perspective for future work could be the comparison of this structural model with a pre-post-test design after receiving different teaching units in Physical Education and in different populations. Moreover, the estimated regression model is but one of a potential number of valid models in relation to the variables analyzed. According to Hershberger (2006), this is due to the problem of the equivalent models inherent to the structural equations model. Thus, future research could focus on analyzing this model again but starting from the representativeness of a sample in a given population and even from comparison with different kinds of schools, educational stages or types of populations (comparisons across communities and even countries).

## References

- Ames, C. (1984). Competitive, cooperative and individualistic goal structures: A cognitive motivational analysis. In R. Ames & C. Ames (Eds.), *Research on motivation in education: Student motivation* (pp. 177-208). New York: Academic Press.
- Ames, C. (1992a). Achievement goals, motivational climate, and motivational processes. In G. Roberts (Ed.), *Motivation in sport and exercise* (pp. 161-176). Champaign, IL: Human Kinetics.
- Ames, C. (1992b). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84, 261-271.
- Aubert, A., Bizkarra, M., & Calvo, J. (2014). Actuaciones educativas de éxito desde la educación física. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 25, 144-148.
- Baena, A., Granero, A., Bracho, C., & Pérez, F. J. (2012). Versión española del Sport Satisfaction Instrument (SSI) adaptado a la educación física. *Revista de Psicodidáctica*, 17(2), 377-396. doi: 10.1387/Rev.Psicodidact.4037
- Baena, A., Granero, A., Pérez, F. J., Bracho, C., & Sánchez, J. (2013). Motivation and motivational climate as predictors of perceived importance of physical education in Spain. *South African Journal for Research in Sport Physical Education and Recreation*, 35(2), 1-13.
- Baena, A., Granero, A., Sánchez, J. A., & Martínez, M. (2013). Apoyo a la autonomía en educación física: Antecedentes, diseño, metodología y análisis de la relación con la motivación en estudiantes adolescentes. *Retos. Nuevas tendencias en Educación Física, Deportes y Recreación*, 24, 46-49.
- Baena, A., Granero, A., & Ortiz, M. M. (2012). Quasi-experimental study of the effect of an adventure education programme on classroom satisfaction, physical self-concept and social goals in physical education. *Psycologica Belgica*, 52(4), 386-396.
- Calderón, A., Martínez, D., & Martínez, I. (2013). Influencia de la habilidad física percibida sobre la actitud del alumnado tras una unidad didáctica basada en educación deportiva. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 24, 16-20.
- Castillo, I., Balaguer, I., & Duda, J. L. (2001). Las perspectivas de meta de los adolescentes en el contexto deportivo. *Psicothema*, 14(2), 280-287.
- Conroy, D. E., Kaye, M. P., & Coatsworth, J. D. (2006). Coaching climates and the destructive effects of mastery-avoidance achievement goals on situational motivation. *Journal of Sport and Exercise Psychology*, 28, 69-92.
- Cuevas, R., García, T., & Contreras, O. (2013). Perfiles motivacionales en educación física: Una aproximación desde la teoría de las Metas de Logro 2x2. *Anales de Psicología*, 29(3), 685-692. doi: 10.6018/analesps.29.3.175821
- Danielsen, A. G., Breivik, K., & Wold, B. (2011). Do perceived academic competence and school satisfaction mediate the relationships between perceived support provided by teach-

- ers and classmates, and academic initiative? *Scandinavian Journal of Educational Research*, 55(4), 379-401. doi: 10.1080/00313831.2011.587322
- Danielsen, A. G., Samdal, O., Hetland, J., & Wold, B. (2009). School-related social support and students' perceived life satisfaction. *Journal of Education Research*, 102(4), 303-318.
- Diener, E. (2009). Assessing well-being: Progress and opportunities. In E. Diener (Ed.), *Assessing well-being. The collected works of Ed Diener* (pp. 25-65). New York: Springer (Social Indicators Research Series, 39).
- Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology*, 84(3), 290-299. doi: 10.1037/0022-0663.84.3.290
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, 34, 169-189. doi: 10.1207/s15326985ep3403\_3
- Elliot, A. J., & McGregor, H. A. (2001). A 2x2 achievement goal framework. *Journal of Personality and Social Psychology*, 80, 501-519. doi: 10.1037/0022-3514.80.3.501
- Elmore, G. M., & Huebner, E. S. (2010). Adolescents satisfaction with school experiences: Relationships with demographics, attachment relationships, and school engagement behavior. *Psychology in the Schools*, 47(6), 525-537. doi: 10.1002/pits.20488
- Ervasti, J., Kivima, M., Puusniekka, R., Luopa, P., Pentti, J., Suominen, S., ... & Virtanen, M. (2011). Students' school satisfaction as predictor of teachers' sickness absence: A prospective cohort study. *The European Journal of Public Health*, 22(2), 215-219. doi: 10.1093/eurpub/ckr043.
- Fernández, F., Méndez, A., Cecchini, J. A., & González, C. (2012). Achievement goals and social goals' influence on physical education students' fair play. *Revista de Psicodidáctica*, 17(1), 73-91. doi: 10.1387/RevPsicodidact.1816
- Ferriz, R., Sicilia, A., & Sáenz, P. (2013). Predicting satisfaction in physical education classes: A study based on self-determination theory. *The Open Education Journal*, 6, 1-7.
- Granero, A., Baena, A., Pérez, F. J., Ortiz, M. M., & Bracho, C. (2012). Analysis of motivational profiles of satisfaction and importance of physical education in high school adolescents. *Journal of Sports Science & Medicine*, 11, 614-623.
- Grupe, O. (1976). *Estudios sobre una teoría pedagógica de la educación física*. Madrid: Instituto Nacional de Educación Física.
- Guan, J., Xiang, P., McBride, R., & Bruene, A. (2006). Achievement goals, social goals and students' reported persistence and effort in high school physical education. *Journal of Teaching in Physical Education*, 25, 58-74.
- Hernández, R., Fernández, C., & Baptista, P. (2010). *Metodología de la investigación (5ª Ed.)*. México: McGrawHill.
- Hershberger, S. L. (2006). The problem of equivalent structural models. In G. R. Hancock and R. O. Mueller (Eds.), *Structural equation modeling: A second course* (pp. 13-42). Greenwich, CT: Information Age Publishing.
- Huebner, E. S., Ash, C., & Laughlin, J. E. (2001). Life experiences, locus

- of control, and school satisfaction in adolescence. *Social Indicators Research*, 55, 167-183. doi: 10.1023/A:1010939912548
- Hui, E. K. P., & Sun, R. C. F. (2010). Chinese children's perceived school satisfaction: The role of contextual and intrapersonal factors. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 30(2), 155-172. doi: 10.1080/01443410903494452
- Jöreskog, K. G., & Sörbom, D. (2003). *Structural equation modeling with the SIMPLIS command language*. Chicago: Scientific Software International.
- Levy, R., & Hancock, G. R. (2007). A framework of statistical tests for comparing mean and covariance structure models. *Multivariate Behavioral Research*, 42, 33-66.
- Luopa, P., Pietikänen, M., & Jokela, J. (2006). *Mistä tukea? Depression, bullying, and truancy among adolescents in Helsinki 1996-2006 (in Finnish)*. Helsinki: National Institute for Health and Welfare
- MacPhail, A., Kirk, D., & Eley, D. (2003). Listening to young people's voices: Youth sports leaders' advice on facilitating participation in sport. *European Physical Education Review*, 9, 57-73. doi: 10.1177/1356336X03009001180
- Méndez, A., Fernández, J., Cecchini, J. A., & González, C. (2013). Perfiles motivacionales y sus consecuencias en educación física. Un estudio complementario de metas de logro 2x2 y autodeterminación. *Revista de Psicología del Deporte*, 22(1), 29-38.
- Moloi, K. C. (2010). How can schools build learning organizations in difficult education contexts? *South African Journal of Education*, 30(4), 621-633.
- Moreno, J. A., González, D., & Sicilia, A. (2008). Metas de logro 2x2 en estudiantes españoles de educación física. *Revista de Educación*, 347, 299-317.
- Mowling, C. M., Brock, S. J., Eiler, K. K., & Rudisill, M. E. (2004). Student motivation in physical education: Breaking down barriers. *Journal of Physical Education, Recreation and Dance*, 75, 40-51. doi: 10.1080/07303084.2004.10607256
- Nicholls, J. G., Patashnick, M., & Nolen, S. B. (1985). Adolescents' theories of education. *Journal of Educational Psychology*, 77, 683-692. doi: 10.1037//0022-0663.77.6.683
- Nicholls, J. G. (1989). *The competitive ethos and democratic education*. Cambridge, MASS: Harvard University Press.
- Rodríguez, A., & Goñi, A. (2011). La estructura tridimensional del bienestar subjetivo. *Anales de Psicología*, 27(2), 327-332.
- Smith, M., Duda, J. L., Allen, J., & Hall, H. K. (2002). Contemporary measures of approach and avoidance goal orientations: Similarities and differences. *British Journal of Educational Psychology*, 72, 155-190. doi: 10.1348/000709902158838
- Takakura, M., Wake, N., & Kobayashi, M. (2010). The contextual effect of school satisfaction on health-risk behaviors in Japanese high school students. *Journal of School Health*, 80(11), 544-551. doi: 10.1111/j.1746-1561.2010.00540.x
- Tsoulopas C. N., Carson, R. L., Matthews, R., Grawitch, M. J., & Barber, L. K. (2010). Exploring the association between teachers' per-

ceived student misbehaviour and emotional exhaustion: The importance of teacher efficacy beliefs and emotion regulation. *Educational Psychology*, 30, 173-189. doi: 10.1080/01443410903494460

Zullig, K. J., Huebner, E. S., & Patton, J. M. (2011). Relationships among school climate domains and school satisfaction. *Psychology in the Schools*, 48(2), 133-145. doi: 10.1002/pits.20532

Antonio Baena Extremera, Ph.D. Titular Professor at the Faculty of Sport Sciences of the University of Murcia. Civil servant of the body of Teachers of Secondary and Primary Education. His main lines of research focus on teaching Physical Education, as well as Physical Activities in Natural Settings and Adventure Sports. His most relevant works were published in prestigious national and international journals such as the *International Journal of Morphology*, *Journal of Science and Technology of the Americas*, *Journal of Psychodidactic*, *Psychologica Belgica*, *Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte*, among others.

Antonio Granero-Gallegos, Ph.D. and Graduate in Physical Education. Group member Research "E0B5-02 Physical Activity Sport and Quality of Life" at the University of Murcia. Civil servant of the body of Teachers of Secondary Education. Subdirector of the Teachers' Center Almería 03, Consejería of Education, Junta of Andalusia. His main lines of research focus on aspects related to teaching Physical Education, as well as Physical Activities in Natural Settings. His findings were published in prestigious national and international journals: *Adicciones*, *Collegium Antropolologicum*, *Journal of Sports Science and Medicine*, *Journal of Science and Technology of the Americas*, *Psychologica Belgica*, *Journal of Psychodidactic*, *Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte*, *Revista Latinoamericana de Psicología*, among others.

Received date: 13-04-2014

Review date: 15-09-2014

Accepted date: 04-11-2014