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# Predictive power of task orientation, general self-efficacy and self-determined motivation on fun and boredom

Lorena Ruiz-González
Antonio Videra
*Universidad de Málaga, Málaga, Spain*

Juan Antonio Moreno-Murcia
*Universidad Miguel Hernández de Elche, Elche, Spain*

**Abstract**—The aim of this study was to test the predictive power of dispositional orientations, general self-efficacy and self-determined motivation on fun and boredom in physical education classes, with a sample of 459 adolescents between 13 and 18 with a mean age of 15 years (*SD* = 0.88). The adolescents responded to four Likert scales: Perceptions of Success Questionnaire, General Self-Efficacy Scale, Sport Motivation Scale and Intrinsic Satisfaction Questionnaire in Sport. The results showed the structural regression model showed that task orientation and general self-efficacy positively predicted self-determined motivation and this in turn positively predicted more fun and less boredom in physical education classes. Consequently, the promotion of an educational task-oriented environment where learners perceive their progress and make them feel more competent, will allow them to overcome the intrinsically motivated tasks, and therefore they will have more fun. Pedagogical implications for less boredom and more fun in physical education classes are discussed.

Keywords: self-determination, self-efficacy, achievement goals, satisfaction

**Resumo**—"Poder preditivo da orientação para a tarefa, a autoeficácia geral e motivação autodeterminada sobre diversão e tédio." O objetivo desse estudo foi comprovar a predição das orientações disposicionais, autoeficácia geral e a motivação autodeterminada sobre a diversão e o aborrecimento nas aulas de educação física, com uma amostra composta por 459 adolescentes de 13 a 18 anos com uma média de idade de 15 anos (*DP*= 0.88). Os adolescentes responderam a quatro escalas do tipo Likert: Questionário de Percepção do Êxito, Escala Geral da Auto-eficácia, Escala de Motivação no Esporte e Questionário de Satisfação Intrínseca no Esporte. Os resultados do modelo de regressão estrutural mostraram que a orientação para a tarefa e a autoeficácia geral prediziam positivamente a motivação autodeterminada, e esta última predizia positivamente a mais diversão e menos ao aborrecimento nas aulas de educação física. Promover um ambiente educativo orientado à tarefa, onde os discentes percebam seus progressos e que se sintam mais competentes permitirá que eles possam superar tarefas com uma motivação intrínseca, portanto, se divertirão mais. Indaga-se sobre as diferentes pedagogias para diminuir o aborrecimento em aula.

Palavras-chave: autodeterminação, autoeficácia, metas de realização, satisfação

**Resumen**—"Poder predictivo de la orientación tarea, la autoeficacia general y la motivación autodeterminada sobre la diversión y el aburrimiento." El objetivo de este estudio fue comprobar el poder de predicción de las orientaciones disposicionales, la autoeficacia general y la motivación autodeterminada sobre la diversión y el aburrimiento en clases de educación física, con una muestra compuesta por 459 adolescentes de entre 13 y 18 años con una media de edad de 15 años (*DS* = 0.88). Los adolescentes contestaron a cuatro escalas tipo Likert: Cuestionario de Percepción de Éxito, Escala de Autoeficacia General, Escala de Motivación en el Deporte y Cuestionario de Satisfacción Intrínseca en el Deporte. Los resultados revelan que el modelo de regresión estructural mostró que la orientación hacia la tarea y la autoeficacia general predecían positivamente la motivación autodeterminada, y ésta a su vez, predecía positivamente una mayor diversión y un menor aburrimiento en las clases de educación física. El fomento de un entorno educativo orientado a la tarea, donde los discentes perciban sus progresos y les hagan sentir más competentes, les permitirán superar las tareas motivados intrínsecamente, y por tanto, se divertirán más. Se discuten las implicaciones pedagógicas para un menor aburrimiento.

Palabras claves: autodeterminación, autoeficacia, metas de logro, satisfacción

## Introduction

One of the main concerns of teachers when choosing the content to be taught has to be motivating and novel (Robles, Giménez, & Abad, 2010). Moreover, Cecchini (2006) states that at sport school age should have a clear orientation to promote the recreational participation, self-improvement, fun, friendship, relaxation and an active lifestyle in order to improve health and physical and mental wellbeing. Moreover, this desire for fun is one of the main reasons given by youngsters to engage in physical activities (Almagro, Saénz-López, González-Cutre, & Moreno-Murcia, 2011; Castillo & Balaguer, 2001; Martínez *et al.*, 2012; Pavón & Moreno, 2006), being positive and significant their relationships (Balaguer, 2000; Stucky-Ropp & DiLorenzo, 1993). Despite the benefits that regular physical activity has, both physical health and psychological health, a large proportion of adolescents maintain a suboptimal level of physical activity, offering evidence that physical inactivity during adolescence increases with advancing age (Balaguer & Castillo, 2002; King, Wold, Tudor-Smith, & Harel, 1996; Mendoza, Sagrera, & Batista, 1994; Nilsson *et al.*, 2009). This phenomenon can have detrimental effects on the health of adolescents and be the genesis of the establishment of sedentary lifestyles (Garn & Sun, 2009). The physical education classes should help solve this problem by creating habits that will last a lifetime. In this line, the motivational regulation of students during physical education classes has been identified as a contributory factor on promoting healthy lifestyle (Barkoukis, Hagger, Lambropoulos, & Tsorbatzoudis, 2010; Hagger *et al.*, 2009).

In the field of the study of motivation, Achievement Goal theory (Nicholls, 1989) notes that there are at least two independent achievement goals that reflect the criterion that young people follow to judge their level of competence in the sporting context and subjectively defined by success and failure: task and ego orientation. From this context, one of the theories that has been more associated with the goal theory has been the Self-efficacy theory (Bandura, 1987). Typically, self-efficacy is a construct that has been understood in specific contexts, such as physical and sporting activities (Balaguer, Escartí, & Villamarín, 1995). However, this construct has also been understood in a comprehensive manner, as a general self-efficacy (Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002), which makes reference to the stable belief that a person has about his ability to properly handle a wide range of stressing situations in everyday life (Sanjuán Pérez, & Bermúdez, 2000; Schwarwer & Jerusalem, 1995).

In this regard, in relation to goal orientation, the involvement in the task encourages people perceptions in their ability in sports contexts, as opposed to ego oriented people (Duda, 1995). That is, affects the motivation of people to a certain action, so that a perception of higher efficacy will increase effort and persistence with which it faces. On the other hand, a poor perception decreases the possibility of undertaking a task and will cease in the effort if this is considered difficult (Bandura, 1997).

Both constructs have outlined a path in understanding the motivations of human beings. Therefore, for more clarification in their study, we have used one of the most popular theoretical bases, as is the theory of Self-determination (Deci & Ryan, 1985; Ryan & Deci, 2000), based on the analysis of the extent to that people perform their actions on a voluntary basis, by choice. This perspective describes the internalization of behavior across a continuum, where the grounds for practice vary depending on the degree of self-determination, which goes from more to less, so there would be intrinsic motivation, defined as voluntary participation in an activity by interest, satisfaction and pleasure you get on the development with this and extrinsic motivation, which is determined by external rewards or agents. Demotivation is the lowest degree of self-determination and that corresponds to the lack of motivation.

From the point of view of the perspective of Achievement Goal of Nicholls (1989) and Dweck (1985), they consider that task orientation would have a positive association with intrinsic motivation, given that the commitment with a goal task would conceive sport as an end in itself, focusing the person in the process of improving the task rather than the consequences of the outcome (social approval or rewards). On the other hand, the commitment to an ego-oriented goal would decrease intrinsic motivation, so sport is seen as a way to get other purposes, such as content the teacher or parent, obtain social prestige or other reasons unrelated to the task itself . Most researches that have examined the relations that exist between intrinsic motivation and goal theory, show that the purposes of the task orientation are more intrinsic and prosocial unlike ego orientation, that are more extrinsic. This relationship has been found both in education (Cervelló & Santos-Rosa, 2000; Goudas, Biddle, & Fox, 1994; Gutiérrez & Escartí, 2006) and sports (Cervelló & Santos-Rosa, 2001; Duda, 1989; Duda, Fox, Biddle & Armstrong, 1992; Roberts & Ommundsen, 1996; Treasure, Carpenter, & Power, 2000).

Furthermore, McAyley, Wraith, and Duncan (1991) concluded that higher self-efficacy perceived by the young athlete leads to greater intrinsic motivation. Later, Chase (2001), analyzing different sports skills in 8 and 14 year old children, found that self-efficacy beliefs before carrying out a task would have an impact on self-efficacy beliefs after these. The author adds that it can be predicted that self-efficacy beliefs influence motivational intentions, which are involved in self-efficacy and so on.

There are numerous studies that point out that indicators of discomfort as demotivation and boredom are greater as one moves from primary to secondary education (Gómez, Gámez, & Martínez, 2011; Moreno, Rodríguez, & Gutiérrez, 2003), so there is a need for research to understand the functioning of these variables in order to be able to establish appropriate preventive measures in schools. In this line, an experimental study (Moreno-Murcia, Huéscar, & Parra, 2013) showed that promotion of a task motivational climate significantly increases self-determined motivation and reduces boredom. Other correlational studies confirm that task-involving motivational climate is positively related to intrinsic motivation (Moreno-Murcia & Conte, 2011), while the ego-involving motivational climate is not related or negatively related to this variable and other exercise adaptive consequences (see Ntoumanis & Biddle, 1999). Also, Grastén, Jaakkola, Liukkonen, Watt, and Yli- Piipari (2012) found that task-involving motivational climate was

positively related to enjoyment. In this sense, analyzing studies to assess the relationship between self-determination theory and the fun and boredom in physical education, they all go hand in hand (Krzysztof, 2008; Wang & Liu, 2007; Yli- Piipari, Watt, Jaakkola, Liukkonen, & Nurmi,2009), which showed positive relationships between practical reasons more self-determined and enjoyment in the activity.

Based on these theories aforementioned, encouraging an educational climate towards the task is essential by the teacher in order to ensure that students are able to observe their own progressions. In short, to ensure they feel more self-efficacious beating intrinsically motivated tasks leading to greater enjoyment in the learners. The main objective of this study was to test the predictive power of dispositional orientations, general self-efficacy and self-determined motivation on fun and boredom. Considering the research results mentioned, we expect to find a predictive model where task orientation and self-efficacy positively will predict self-determined motivation, which in turn positively and negatively will predict fun and boredom that teenage student perceives in physical education classes.

## Method

### *Sample*

The sample consisted of 459 students (246 boys and 213 girls) from the 3rd and 4th years, 10 were public secondary schools and 3 were private secondary schools, with a mean age of 15 years (*SD* = 0.88) .The selection of the sample is done by a selection of centers according to a cluster random sampling.

### *Instruments*

*Dispositional orientation.* The Spanish version was used (Cervelló, Escartí, & Balagué, 1999; Martínez-Galindo, Alonso & Moreno, 2006) of the *Perception of Success Questionnaire* (Roberts & Balagué, 1991; Roberts, Treasure, & Balagué, 1998) to measure goal orientations. The questionnaire is a 12-item scale composed of six task (e.g. "When I show clear personal improvement") and six ego (e.g. "When I am clearly superior") items. In the present study, each participant responded to the stem 'When participating in physical education, I feel most successful when . . .' Each item was rated on a 10-point Likert scale anchored by 0 '*strongly disagree*' to 10 '*strongly agree*'. This questionnaire demonstrated good internal reliability in the present study with Cronbach alpha values of .78 for the task subscale and .88 for the ego subscale.

*Self-Efficacy.* To measure the self-efficacy of the student the *General Self-Efficacy Scale* (GSE) of Bäessler and Schwarcer (1996) was used in the Spanish version (Schwarcer, Bäessler, Kwiatek, Schröder, & Zhang, 1997). The scale was created to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. The scale is designed to the general adult population, including adolescents. It consists of 10 items (e.g. "I can always manage to solve difficult problems if I try hard enough.") and respond according to a Likert scale with a response range from 1 (*strongly disagree*) to 4 (*strongly agree*). The Spanish adaptation of this scale includes the following psychometric data: internal consistency/reliability = .87 and split-half correlation = .88 (Sanjuán *et al.*, 2000). Cronbach's alpha of .82 was obtained in the present study.

*Motivation.* The validated version to Spanish by Núñez, Martín-Albo, Navarro and González (2006) and adapted physical education version was used. The original scale was called *Échelle de Motivation dans les Sports* (ÉMS ; Brière, Vallerand, Blais, & Pelletier, 1995) and was translated into English by Pelletier *et al.* (1995) and renamed *Sport Motivation Scale* (SMS). It consists of 28 items, 4 items for each scale, led by the statement "I take part and exert myself in the practice of my physical education classes..." which are answered with a Likert scale ranging from 1 (strongly disagree) to 7 (*strongly agree*). Consists of 7 subscales that measure three types of intrinsic motivation: toward knowledge (e.g., "For the pleasure it gives me to know more about the sport that I practice"), accomplishment (e.g., "I feel a lot of personal satisfaction while mastering certain difficult training physical-sports activities") and stimulation (e.g., "For the pleasure I feel in living exciting experiences."); and the three forms of regulation for extrinsic motivation: identified (e.g., "Because it is one of the best ways I have chosen to develop other aspects of myself"), introjected (e.g., "Because it is absolutely necessary to do sports if one wants to be in shape"), external (e.g., "Because people around me think it is important to be in shape."), amotivation (e.g., "I often ask myself, I can't seem to achieve the goals that I set for myself"). Alpha values of .69 for the intrinsic motivation to know, .70 for the intrinsic motivation to experience stimulation, .70 for the intrinsic motivation to accomplish, .64 for identified regulation, .64 for introjected regulation, .69 for external regulation and .73 for and amotivation were found in this study. As noted, not all factors have obtained a recommended .70 internal consistency (Nunnally, 1978), but given the small number of items composing the subfactor, the observed internal consistency may be marginally acceptable (Hair, Anderson, Tatham & Black, 1998; Nunnally & Bernstein, 1994). Jointly, the seven factors have achieved a .75 internal consistency.

*Fun and boredom.* The Spanish version adapted to physical education context (SSI-PE) (Baena-Extremera, Granero-Gallegos, Bracho-Amador, & Pérez-Quero, 2012) of the original Sport Satisfaction Instrument (Balaguer, Atienza, Castillo, Moreno, & Duda, 1997; Castillo, Balaguer, & Duda, 2002) was used to measure the satisfaction. This instrument consists of 8 items measuring intrinsic satisfaction in PE classes by two subscales: satisfaction / fun (e.g., "I usually have fun in the physical education classes") and boredom (e.g., "In physical education, I usually wish the class would end quickly"). Participants were requested to rate their degree of agreement with the items that reflect fun or boredom on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The value of internal consistency obtained in this study was .87 for fun and .84 for boredom.

### *Procedure*

We contacted the directors of the various secondary schools to inform them of the purpose of the research and request their co-operation. For underage students to participate in the study, written consent from their parents was required, which also informed them of the purpose of the research. . The questionnaires were administered by the same person during tutoring or physical education periods, according to the availability of the center in a counterbalanced manner. Students were asked to fill out the questionnaire individually and taking into account also the explanation of the research, took approximately 30 minutes to be completed. Participation was anonymous and voluntary. The University of Málaga ethics' committee approved the study.

### *Data analysis*

Descriptive statistics for all the variables under study (means and standard deviations) were calculated, the internal consistency of each factor was analyzed using Cronbach's alpha coefficient and bivariate correlations for all variables. To test the model, firstly, a measurement model was performed and, later on its subsequent analysis was made using the structural regression model .Data were analyzed using SPSS 21.0 and AMOS 21.0.

## Results

### *Descriptive and correlation analysis of all variables*

The task orientation was more valued than ego orientation. The general self-efficacy showed a mean of 2.96 and 5.02 self-determined motivation. The fun was better valued than boredom. All variables used in the study, and positively correlated with each other, except boredom correlated negatively with task orientation, self-determined motivation and fun, while not correlated with ego orientation or the general self-efficacy (Table 1).

Table 1. Descriptives and correlations among study variables.

| | M | ST | α | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Task orientation | 6.05 | 0.56 | .78 | - | .41** | .23** | .19** | .26** | - .18** |
| 2. Ego orientation | 4.21 | 1.05 | .68 | - | - | .20** | .10* | .11* | .09 |
| 3. General self-efficacy | 2.96 | 0.43 | .88 | - | - | - | .34** | .37** | -.06 |
| 4. Self-determined motivation | 5.02 | 5.69 | .75 | - | - | - | - | .58** | -.51** |
| 5. Fun | 4.05 | 0.90 | .87 | - | - | - | - | - | -.57** |
| 6. Boredom | 1.95 | 1.20 | .84 | - | - | - | - | - | - |

Notes: * $p < .05$ ** $p < .001$

### *Analysis of the measurement model*

To be able to perform the analysis of the measurement model and test the structural regression model number of latent variables was reduced by factor, this is especially recommended when the sample size is not particularly large compared to the number of variables model (Marsh, Richards, Johnson, Roche, & Tremayne, 1994; Vallerand, 2001, 2007) . This reduction may be achieved by the combination of the items in pairs. Thus, half first items of each subscale were averaged to be part of the first set of items and the second half of items were averaged to be part of the second set of items, and so on until the last one. Marsh *et al.* (1994) proposed the use of pairs of items because the results of these are more reliable, tend to be distributed more normally and because it halved the ratio of the number of measured variables in the model and the number of study participants.

Thus, on the perception of success scale, both task orientation and ego factor were composed of two groups of three items, the general self-efficacy scale was formed by two groups of five items on the motivation sports scale, each of the seven factors were divided into two groups of two items and the scale used to measure the fun and boredom they were composed of two groups of two and items respectively. For the scale of motivation in physical education classes on self-determination index (SDI) was calculated. This index is calculated with the following formula: ((2 x (intrinsic motivation toward knowledge + intrinsic motivation toward execution + intrinsic motivation toward stimulation)/3) + identified regulation) - ((external regulation + introjection) / 2) + (2 x demotivation) (Vallerand, 1997). In this study the index ranged between -11.17 and 13.75 (M = 5.02, SD = 4.57). Two indexes of self-determination were obtained due to the division into two groups of the items that composed the SMS factors. This factor was calculated by dividing each into two sub-factors of two items each, and then the formula SDI was reapplied.

So, once divided the items making up the latent factors into two groups, an approach in two steps was used, as Anderson and Gerbing (1988) recommend, firstly doing a measurement model, which allowed to give construct validity to scales and corresponded to a confirmatory factor analysis (CFA) based on 12 observed measures and the six latent constructs (see Figure 1). As Anderson and Gerbing (1988) recommended, the latent

factors will allow one to correlate freely during the assessment of the measurement submodels.

Because the Mardia coefficient was high (39.90), the estimation method of maximum likelihood was used together with the bootstrapping procedure that allowed to assume that the data were robust by the lack of non-normality (Byrne, 2001).The skewness and kurtosis rates were close to zero and below the value two as Bollen and Long (1993) recommends, which denotes similarity to the normal curve in univariate data. Likewise, we considered a number of fit coefficients to assess the goodness of fit of the measurement models with empirical data. So, based on contributions from different authors (Bentler, 1990; Bollen & Long, 1993; McDonald & Marsh, 1990), the fit indexes or goodness of fit indexes that were considered to evaluate the goodness of the measurement model were the following ones: $\chi 2$, $\chi 2$/d.f., RMSEA (Root Mean Square Error of Aproximation), RMSR (Root Mean Square Residual) and incremental indexes (CFI, IFI and TLI). These goodness of fit indices are considered acceptable when the $\chi 2$/df is less than 5, the incremental indexes (CFI, IFI and TLI) are greater than .90 and error rates (RMSEA and RMSR) are less than .08 (Browne & Cudeck, 1993; Hu & Bentler, 1999). The rates obtained were adequate: $\chi 2$ (39, N = 459) = 78.85, $p$ = .00; $\chi 2$/df = 2.60; CFI = .98; NFI = .97; TLI = .97; RMSEA = .05; RMSR = .03.

### *Analysis of structural regression model*

The second step of the method (structural equation model) was to simultaneously test the structural model and measurement, allowing us to focus on the conceptual interactions between goal orientations, self-efficacy, motivation, fun and boredom. As can be seen in Figure 1, goal orientations and self-efficacy appear as exogenous variables and other variables that made the model acted as endogenous variables. Thus, the model offered goal orientations and self-efficacy as predictor variables of self-determination index and this one as predictor of fun and boredom. The method of maximum likelihood estimation and the covariance matrix between items as input to data analysis was used. The results of the hypothesized model were acceptable: $\chi 2$ (46, N = 459) = 165.93, $p$ = .00; $\chi 2$/df = 3.61; CFI = .95; NFI = .93; TLI = .93; RMSEA = .07; RMSR = .06. All relationships were significant.

So, you can see that the task orientation and self-efficacy positively predicted self-determined motivation, however, ego orientation negatively predicted self-determination index and this in turn positively predicted fun (61 % explained variance) and negatively boredom (52 % explained variance).

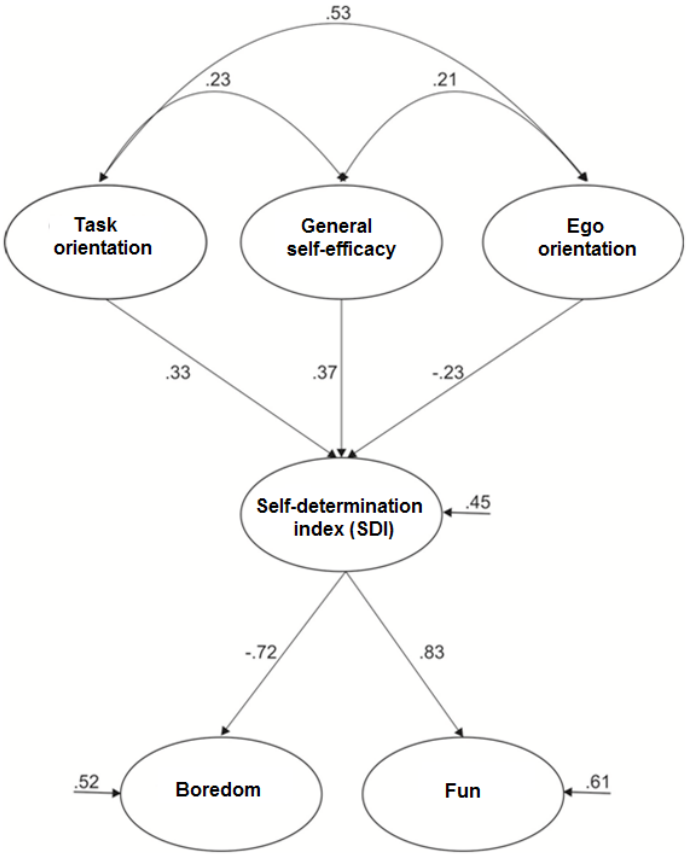


Figure 1. Structural regression model to analyze the relations between goal orientations, self-efficacy and satisfaction in sport (fun and boredom). All parameters are standardized and are significant at $p < .05$.

## Discussion

This study tested the predictive power of dispositional orientations, general self-efficacy and self-determined motivation on the fun and boredom in physical education classes. So far, according to the review carried out, most studies analyzing the relationship between goal orientations and general self-efficacy has been focused in other contexts, so this research is a first approach to the study of these variables together with teenagers in physical education classes. As hypothesized, it is confirmed that both task orientation and self-efficacy positively predicts self-determined motivation, which in turn positively predicts fun and negatively boredom that teenage students perceived in physical education classes.

After analysis of the data, there is a greater task orientation than ego, as Cervelló and Santos-Rosa (2000) indicated these results differ from those referred to competitive sport, possibly due to the objectives pursued in classes physical education in the classrooms or that classroom teachers do not emphasize competitiveness (Fry, 2001) and promotes participatory, cooperative activities and in which the effort is valued more than the result. In agreement with previous studies (Fernández, 2008; García-Fernández *et al.*, 2010; Pajares, Britner, & Valiante, 2000), which analyze different aspects within the school environment, the positive relationship between task orientation is confirmed and self-efficacy. This finding is consistent with the proposed theory, for being self-efficacy evaluative cognitive aspect of one's ability to properly handle different situations of daily life (Bandura, 1986) and being task orientation intrinsic motivational aspect that drives students to improve their own skills (Nicholls, 1989), both constructs bring to the internal field of the participant, share a similar conceptual axis and reinforce each other.

In regard to the relationship between task orientation and self-determined motivation, both constructs establish a positive and significant relationship. These results are consistent with those found in other studies (Gutiérrez & Escartí, 2006). Similarly, it has been found that the higher the level of self-efficacy the higher the level of intrinsic motivation will be, as guarantee extensive research in other contexts (Boyd & Yin, 1999; McAuley, 1992; McAuley & Jacobson, 1991; Sallis *et al.*, 1986; Weigand & Broadhurst, 1998).

Similarly, it has been proved the important correlation between self-determined motivation and fun. It is confirmed that the most self-determined students are those who enjoy physical and sporting activities (Krzysztof, 2008; Yli- Piipari *et al*., 2009), thus, highlighting the importance of fun, considered an excellent predictor of participation in physical activities (Gómez *et al.*, 2011).

In light of obtained results, it is important to emphasize the role of physical educational teachers in the design of their classes. Therefore, providing an educational environment where the climate is mainly task-oriented, in that effort and personal growth is prioritized, you can get the students to focus more on mastery. This is achieved by giving importance to aspects of personal improvement and learning, contributing to perceive their personal progress more effectively, feeling autonomous, competent and assuming a modifiable belief of their ability. These factors will enable them to overcome the tasks motivated intrinsically, resulting in a positive psychological balance that can generate greater enjoyment and less boredom by students, for the fun experienced in physical education classes may be an important variable for the adolescents continuing sports outside school hours (Mandigo & Thompson, 1998).

Finally, we note a limitation of this study as a correlational methodology used and experimental studies would be needed to analyze relations of cause and effect with respect to the variables studied, so that the common method bias is controlled (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Regarding the analysis of structural equations, the suggested model is the one which presented the best adjustment, but due to the problem of equivalent models that presents structural equation technical (Hershberger, 2006) assumes that the model proposed would be only one of the possible ones.

## Conclusion

It is deduced that these three theories are emerging as a useful basis to explain how dispositional orientations (task orientation) and self-efficacy act as triggers for increased levels of self-determined motivation, and thus turn the perceived sense of fun and less boredom in physical education classes. The key to ensure fun in classes by teachers lie in the way they transmit their knowledge. Task-oriented climate must be provided to make students aware of their progress and self-efficacy. Finally, this would lead students to enjoy both the process and outcome of the activities carried out in physical education classes.

## References

Almagro, B. J., Saénz-López, P., González-Cutre., D., & Moreno-Murcia, J. A. (2011). Clima motivacional percibido, necesidades psicológicas y motivación intrínseca como predictores del compromiso deportivo en adolescentes (Perceived motivational climate, psychological needs and intrinsic motivation as predictors of adolescent sport commitment). *RICYDE. Revista Internacional de Ciencias del Deporte, 25*(7), 250-265.

Anderson, J.C., & Gerbing, D.W. (1988). Structural Equation Modeling in Practice: A review and recommended two-step approach. *Psychological Bulletin, 103*, 411-423.

Baena-Extremera, A., Granero-Gallegos, A., Bracho-Amador, C., & Pérez-Quero, F.J. (2012). Spanish Version of "Sport Satisfaction Instrument (SSI)" adapted to physical education. *Journal of Psychodidactics*, *17*, 375-395.

Bäessler, J., & Schwarcer, R. (1996). Evaluación de la autoeficacia: Adaptación española de la escala de Autoeficacia General. *Ansiedad y Estrés, 2*, 1-8.

Balaguer, I. (2000). *Un estudio sobre los predictores de los estilos de vida saludables de los adolescentes valencianos (A study on predictors of healthy lifestyles of Valencian teens)*. Direcció General

de Salut Pública (I.V.E.S.P., 011/1999). Valencia: Conselleria de Sanitat de la Generalitat Valenciana.

Balaguer, I., & Castillo, I. (2002). Actividad física, ejercicio físico y deporte en la adolescencia temprana (Physical activity, physical exercise and sport in early adolescence). En I. Balaguer (Ed.), *Estilos de vida en la adolescencia* (*Lifestyle in adolescence)* (pp. 37-64). Valencia: Promolibro.

Balaguer, I., Atienza, F.L., Castillo, I., Moreno, Y., & Duda, J.L. (1997). Factorial structure of measures of satisfaction/interest in sport and classroom in the case of Spanish adolescents. *Abstracts of 4*th. *European Conference of Psychological Assessment* (p. 76). Lisbon: Portugal.

Balaguer, I., Escartí, A. & Villamarín, F. (1995). Autoeficacia en el deporte y en la actividad física: estado actual de la investigación (Self-efficacy in sport and physical activity: current status of research). *Revista de Psicología General y Aplicada, 48*(1-2), 139-159.

Bandura, A. (1986) Social foundation of thought and action: A social cogntive theory. Englewood Cliffs, NJ: Prentice-Hill.

Bandura, A. (1987). *Pensamiento y acción (Thought and action)*. Barcelona: Martínez Roca.

Bandura, A. (1997). *Self-efficacy: The exercise of Control. New York:* Freeman.

Barkoukis, V., Hagger, M.S., Lambropoulos, G., & Tsorbatzoudis, H. (2010). Extending the trans-contextual model in physical education and leisure-time contexts: examining the role of basic psychological need satisfaction. *The British Journal of Educational Psychology*, *80*, 647-670.

Bentler, P.M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*, 238-246.

Bollen, D.A., & Long, J S. (1993). *Testing Structural Equation Models*. Sage: Newbury Park, CA.

Boyd, M., & Yin, Z. (1999). Cognitive-affective and behavioral correlates of self-schemata in sport. *Journal of Sport Behavior*, *22*, 288-302.

Brière, N., Vallerand, R., Blais, N., & Pelletier, L. (1995). Développement et validation d'une mesure de motivation intrinsèque, extrinsèque et d'amotivation en contexte sportif: l'Échelle de motivation dans les sports (ÉMS) (Development and validation of a measure of intrinsic, extrinsic motivation, and amotivation in sports context: the scale of motivation in sports). *International Journal of Sport Psychology*, *26*, 465-489.

Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen and J. S. Long (Eds.). *Testing structural equation models (*pp. 136-162). Newbury Park, CA: Sage.

Byrne, B.M. (2001). Structural equation modeling with Amos: basic concepts, applications, and programming. Mahwah, N. J: Erlbaum.

Castillo, I., Balaguer, I., & Duda, J.L. (2002). Las perspectivas de meta de los adolescentes en el contexto deportivo (Prospects for goal of adolescents in the sports context). *Psicothema, 14*(2), 280-287.

Castillo. I., & Balaguer, I. (2001). Dimensiones de los motivos de práctica deportiva de los adolescentes valencianos escolarizados (Dimensions of the Valencian adolescents attending school sports grounds). *Apuntes: Educación Física y Deportes, 63*, 22-29.

Cecchini, J. A. (2006). Motivación, Educación física y deporte escolar (Motivation, physical education and school sport). In M.A. González; J.A. Sánchez and A. Areces (Eds.). Actas del IV Congreso de la Asociación Española de Ciencias del Deporte. La Coruña: Consejería de Cultura y Deporte de la Xunta de Galicia. 25-29.

Cervelló, E.M., & Santos-Rosa, F.J. (2000). Motivación en las clases de educación física: un estudio de las perspectivas de las metas de logro en el contexto educativo (Motivation in physical education classes: a study of the prospects for the goals of achievement in the educational context). *Revista de Psicología del Deporte*, *9*(1-2), 51-70.

Cervelló, E.M., & Santos-Rosa, F.J. (2001). Motivation in Sport: and achievement goal perspective in young Spanish recreational athletes. *Perceptual and Motor Skills*, *92*(2), 527-534.

Cervelló, E.M., Escartí, A., & Balagué, G. (1999). Relaciones entre la orientación de metas disposicional y la satisfacción con los resultados deportivos, las creencias sobre las cusas de éxito en deporte y la diversión con la práctica deportiva (Relationship between dispositional goals orientation and satisfaction with sports results, beliefs about wedges them success in sport and fun with sports). *Revista de Psicología del Deporte*, *8*,7-19.

Chase, M. (2001). Children's self-efficacy, motivational intentions, and attributions in physical education and sport. *Research Quarterly for Exercise and Sport*, *72*(1), 47-54.

Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E.L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, *11*, 227-268.

Duda, J. (1995). Motivación en los escenarios deportivos: Un planteamiento de perspectivas de meta (Motivation in the sporting arenas: an approach to target prospects). In Roberts (Ed.) *Motivación en el deporte del ejercicio (Motivation in sport exercise)* (*pp* 85-122). España: Desclée de Brouwer.

Duda, J.L. (1989). Relationship between task and ego orientation and the perceived purpose of sport among high school athletes. *Journal of Sport and Exercise Psychology*, *11*, 318-335.

Duda, J.L., & Nicholls, J.G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology*, *84*, 1-10.

Duda, J.L., Fox, K.R., Biddle, S., & Armstrong, N. (1992). Children´s achievement goals and beliefs about success in sport. *British Journal of Educational Psychology*, *62*, 313-323.

Dweck, C.S. (1985). Intrinsic motivation, perceived control and self-evaluation maintenance: An achievement goals analysis. In C. Ames, y R. Ames (Eds.).

Fernández, J. (2008). Desempeño docente y su relación con orientación a la meta, estrategias de aprendizaje y autoeficacia: un estudio con maestros peruanos de Lima (Performance teaching and its relation with orientation to the goal, strategies for learning and self-efficacy: a study with Peruvian teachers from Lima). *Universitas Psychologica*, *7*(2), 385-401.

Fry, M.D. (2001). The development of motivation in children. In G.C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 51-78). Champaing, IL: Human Kinetics.

García-Fernández, J.M., Inglés, C.J., Torregrosa, M.S., Ruiz-Esteban, C., Díaz, A., Pérez-Fernández, E., & Martínez-Montegaudo, M.C.

(2010). Propiedades psicométricas de la Escala de Autoeficacia Percibida Específica de Situaciones Académicas en una muestra de estudiantes españoles de Educación Secundaria Obligatoria (Psychometric properties of the scale of self-efficacy perceived specific academic situations in a sample of Spanish students of compulsory secondary education). *European Journal of Education and Psychology, 3*, 61-74.

Garn, A., & Sun, H. (2009). Approach-Avoidance motivational profiles in early adolescents to the PACER Fitness Test. *Journal of Teaching in Physical Education*, *28*, 400-421.

Gómez, A., Gámez, S., & Martínez, I. (2011). Efectos del género y la etapa educativa del estudiante sobre la satisfacción y la desmotivación en Educación Física durante la educación obligatoria (Effects of gender and educational stage student satisfaction and the lack of motivation in physical education during compulsory education). Ágora para la Educación Física y el deporte, *13*, 183-196.

Goudas, M., Biddle, S.J.H., & Fox, K.R. (1994). Achievement goal orientations and intrinsic motivation in physical fitness testing with children. *Pediatric Exercise Science, 6,* 159-167.

Grastén, A., Jaakkola, T., Liukkonen, J., Watt, A., & Yli-Piipari, S. (2012). Prediction of enjoyment in school physical education. *Journal of Sports Science and Medicine, 11,* 260-269.

Gutiérrez, M., & Escartí, A. (2006). Influencia de padres y profesores sobre las orientaciones de meta de los adolescentes y su motivación intrínseca en educación física (Influence of parents and teachers on the guidelines of target teens and their intrinsic motivation in physical education). *Revista de Psicología del Deporte*, *15*, 23-35.

Hagger, M.S., Chatzisarantis, N.L.D., Hein, V., Soós, I., Karsai, I., Lintunen, T., & Leemans, S. (2009). Teacher, peer and parent autonomy support in physical education and leisure-time physical activity: A trans-contextual model of motivation in four nations. *Psychology and Health*, *24*, 689-711.

Hair, J.F., Anderson, R.E., Tatham, R.L. & Black, W.C. (1998). *Multivariate Data Analysis*. Upper Saddle River, NJ: Prentice-Hall.

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.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1-55.

King, A., Wold, B., Tudor-Smith, C., & Harel, Y. (1996). *The Health of Youth. A eross-national survey.* WHO. Canada.

Krzysztof , S. (2008). Participation of Youth in Physical Education from the Perspective of Self-Determination Theory. *Human Movement*, *9*, 134–141.

Mandigo, J.L., & Thompson, L. (1998). Go with their flow: How flow theory can help practitioners to intrinsically motivate children to be physically active. *Physical Educator*, *55*, 145-159.

Marsh, H.W., Richard, G.E., Johnson, S., Roche, L., & Tremayne, P. (1994). Physical self-decription questionnaire: Psychometric properties and a nultitrait-multimethod analysis of relations to existing instruments. *Journal of Sport and Exercise Psychology, 16,* 270-305.

Martínez A., Chillón P., Martín-Matillas M., Pérez I., Castillo R., … Zapatera B. (2012). Motivos de práctica de actividad físico-deportiva en adolescentes españoles: estudio AVENA (Reasons for the practice of physical activity in Spanish adolescents: AVENA study). *Profesorado, 16*, 391-398.

Martínez-Galindo, C., Alonso, N., & Moreno, J.A. (2006). Análisis factorial confirmatorio del "Cuestionario de Percepción de Éxito (POSQ)" en alumnos adolescentes de Educación Física (Confirmatory factor analysis of the "questionnaire of perception of success (POSQ)" in adolescent students of physical education). In M.A. González, J.A. Sánchez, and A. Areces (Eds.), *IV Congreso de la Asociación Española de Ciencias del Deporte*(pp. 757-761). A Coruña: Xunta de Galicia.

McAuley, E. (1992). Understanding ecercise bejaviour: a self-efficacy perspective. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 107-127). Champaign: Human Kinetics Books.

McAuley, E., & Jacobson, L. (1991). Self-efficacy and exercise participation in sedentary adult females. *American Journalof Health Promotion*, *5*, 185-191.

McAyley, E., Wraith, S., & Duncan. T.E., (1991). Self-efficacy, perceptions of success, and intrinsic motivation for exercice. *Journal of Applied Social Psychology*, *21*, 139-155.

McDonald, R.P., & Marsh, H.W. (1990). Choosing a multivariate model: Noncentrality and goodness of fit. *Psychological Bulleting*, *107*, 247-255.

Mendoza, R., Sagrera, M.R. & Batista, J.M. (1994). *Conductas de los escolares españoles relacionadas con la salud (1986-1990) [Behavior of Spanish schoolchildren related to health (1986-1990)]*. Madrid: C.S.I.C.

Moreno, J.A., Rodríguez, P.L., & Gutiérrez, M. (2003). Intereses y actitudes hacia la educación física (Interests and attitudes towards physical education). *Revista Española de Educación Física*, *9*, 14-28.

Moreno-Murcia, J.A., & Conte, L. (2011). Predicción del miedo a equivocarse en jugadores de baloncesto a través del clima tarea de los iguales y la motivación intrínseca (Prediction of the fear to be wrong in basketball players through the same task climate and intrinsic motivation). *Revista Mexicana de Psicología*, *28*, 43-52

Moreno-Murcia, J.A., Huéscar, E., & Parra, N. (2013). Manipulación del clima motivacional en educación física para evitar el aburrimiento (Manipulation of motivational climate in physical education to avoid boredom). *Revista Mexicana de Psicología*, *30*, 108-114.

Nicholls, J.G. (1989). *The competitive ethos and democratic education*. Cambridge, MA, US: Harvard University Press.

Nilsson A., Anderssen S., Andersen L., Froberg, K., Riddoch C., …Sardinha L. (2009). Between and within day variability in physical activity and inactivity in 9 and 15 year old European children. *Scandinavian journal of medicine and science in sports, 19*, 10-18.

Ntoumanis, N., & Biddle, S. (1999). Affect and achievement goals in physical activity: A meta-analysis. *Scandinavian Journal of Medicine and Science in Sports, 9*, 315-332.

Núñez, J.L., Martín-Albo, J., Navarro, J.G., & González, V.M. (2006). Preliminary validation of a Spanish version of the Sport Motivation Scale. *Perceptual and Motor Skills*, *102*, 919-930.

Nunnally, J.C. (1978). *Psychometric theory*. Nueva York: McGraw-Hill.

Nunnally, J.C., & Bernstein, I.H. (1994). Psychometric theory (3rd ed.). New York: McGrawHill.

Pajares, F., Britner, S., & Valiante, G. (2000). Relation between Achievement Goals and Self-Beliefs of Middle School Students in Writing and Science. *Contemporary Educational Psychology*, *25*, 406–422.

Pavón, A. & Moreno, J. A. (2006). Diferencias por edad en el análisis de la práctica físico-deportiva de los universitarios (Age differences in the analysis of the physical practice of University students). *Cuadernos de Psicología del Deporte*, *6*, 53-67.

Pelletier, L.G., Fortier, M.S., Vallerand, R.J., Tuson, K.M., Brière, N.M., & Blais, M.R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: the Sport Motivation Scale (SMS). *Journal of Sport and Exercise Psychology*, *17*, 35-53.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 8*8, 879-903.

*Research on motivation in education: The classroom milieu*, Vol. 2, (pp. 289-305). Orlando, FL: Academic Press.

Roberts, G.C. & Ommundsen, Y. (1996). Effect of goal orientations on achievement beliefs, cognitions and strategies in team sport. *Scandinavian Journal of Medicine and Science in Sport*, *6*, 46-56.

Roberts, G.C., & Balagué, G. (1991). *The development and validation of the Perception of Success Questionnaire*. Paper presented at the FEPSAC Congress, Cologne, Germany.

Roberts, G.C., Treasure, D.C., & Balagué, G. (1998). Achievement goals in sport: The development and validation of the Perception of Success Questionnaire. *Journal of Sport Sciences*, *16*, 337-347.

Robles, J., Giménez, F., & Abad, M. (2010). Motivos que llevan a los profesores de Educación Física a elegir los contenidos deportivos en la E.S.O. Retos (Reasons leading to physical education teachers to choose sports content in the secondary education challenges). *Nuevas tendencias en Educación Física, Deporte y Recreación*, *18*, 5-8.

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, socialdevelopment and well-being. *American Psychologist*, *55*, 68-78.

Sallis, J.F., Haskell, W.L., Fortmann, S.P., Vranizan, K.M., Taylor, C.B., & Solomon, D.S. (1986). Predictors of adoption and maintenance of physical activity in a community sample. *Preventive Medicine*, *15*, 331-341.

Sanjuán, P., Pérez, A.M., & Bermúdez, J. (2000). Escala de autoeficacia general: Datos psicométricos de la adaptación para población española (General self-efficacy scale: data psychometric adaptation for Spanish population). *Psichothema*, *12*, 509-513.

Sanjuan, P., Pérez, A. & Bermúdez, J. (2000). Escala de autoeficacia general: datos Psicométricos de la adaptación para población española. *Psicothema*, *12*(2), 509-513.

Scholz, U., Gutiérrez-Doña, B., Sud, S., & Schwarzer, R. (2002). Is general self- efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18*, 242-251.

Schwarcer, R., Bäessler, J., Kwiatek, P., Schröder, K., & Zhang, J.X. (1997). The assessment of optimistic self-beliefs: comparison of the German, Spanish, and Chinese versions of the General self-efficacy scale. Applied psychology: *An international review, 46*, 69-88.

Schwarzer, R., & Jerusalem, M. (1995).Generalized Self-Efficacy scale. In J. Weinman, S. Wright, and M. Johnston (Eds), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.

Stucky-Ropp, R.C., & DiLorenzo, T.M. (1993). Detenninants of exercise in children. *Preventive Medicine*, *22*, 880-889.

Treasure, D., Carpenter, P., & Power, K. (2000). Relationship between achievement goal orientations and the perceived purposes of playing rugby union for professional and amateur players. *Journal of Sports Sciences*, *18*, 571-577

Vallerand, R.J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 271-360). New York: Academic Press.

Vallerand, R.J. (2001). A hierarchical model of intrinsic and extrinsic motivation in sport and exercise. In G.C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 263-319). Champaign, IL: Human Kinetics.

Vallerand, R.J. (2007). Intrinsic and extrinsic motivation in sport and physical activity. A review and a look at the future. In G. Tenenbaum and R.C. Eklund (Eds.), *Handbook of Sport Psychology* (3rd ed., pp. 59-83). Nueva York: John Wiley.

Wang, C.K., & Liu, W.C. (2007). Promoting enjoyment in girls' physical education: The impact of goals, beliefs, and self-determination. *European Physical Education Review*, *13*, 145-164.

Weigand, D.A., & Broadhurst, C.J. (1998). The relationship among competence, intrinsic motivation and control perceptions in youth soccer. *International Journal of Sport Pychology, 29,* 324-338.

Yli-Piipari, S., Watt, A., Jaakkola, T., Liukkonen, J., & Nurmi, J.E. (2009). Relationships between physical education students' motivational profiles, enjoyment, state anxiety, and self-reported physical activity. *Journal of Sports Science and Medicine*, *8*, 327-336.

## Authors' note

### *Corresponding author*

Lorena Ruiz González
C/Guillén de Pina nº1 4b, 30800 Lorca (Murcia) Spain
E-mail: ruizlork@gmail.com
Tel: +34 660 59 52 45

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