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ORIGINAL

MOTIVATIONAL ANTECEDENTS OF PROSOCIAL AND ANTISOCIAL BEHAVIORS IN THE SPORT CONTEXT

ANTECEDENTES MOTIVACIONALES DE LOS COMPORTAMIENTOS PROSOCIALES Y ANTISOCIALES EN EL CONTEXTO DEPORTIVO

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ABSTRACT

Through this work we achieved to test the Hierarchical Model of Intrinsic and Extrinsic Motivation by Vallerand (1997) with the aim to measure the relationship between perception of motivational climate regarding self-determined motivation, and how these self-determination levels could predict prosocial and antisocial behaviors in young participants. However, 216 football players from infantile and cadet categories were recruited, whom showed that mastery climate was a positive predictor of perception of autonomy, competence and relatedness, whereas performance climate positively predicted pressure feelings. Furthermore, perception of autonomy and relatedness were positive predictors of higher levels of self-determination, whereas this variable positively predicted prosocial behaviors and negatively predicted antisocial behaviors.

KEYWORDS: Motivational Climate, self-determined motivation, Sportperonship, adolescents.

RESUMEN

A través del presente estudio se pretendió testar el modelo de la motivación intrínseca y extrínseca de Vallerand (1997), con el objetivo de comprobar en qué medida la percepción del clima motivacional se relacionaba con la motivación autodeterminada, y cómo estos niveles de autodeterminación podían predecir los comportamientos prosociales y antisociales de los jóvenes deportistas. Para ello, se seleccionaron 216 jugadores de fútbol de categoría infantil y cadete, donde se ha podido comprobar cómo el clima que implica a la tarea predice positivamente la percepción de autonomía, competencia y relaciones sociales, mientras que el clima que implica al ego predice los sentimientos de presión. Asimismo, la percepción de autonomía y relaciones sociales predicen positivamente los niveles altos de autodeterminación, mientras que ésta variable predice positivamente los comportamientos prosociales y negativamente los comportamientos antisociales.

PALABRAS CLAVE: Clima motivacional, motivación autodeterminada, deportividad, adolescentes.

INTRODUCTION

Traditionally, it is known that sport is an excellent tool to develop values and moral aspects (Kavussanu & Boardley, 2009), taking into account sport competition as a great determinant in participants' behaviors (Kavussanu, Seal & Phillips, 2006). However, sport contributes to the promotion of morality when is focused under an educative perspective, because it is located in the whole life aspects, developing a very important role in the human conduct (Sage, 2006). Thus, the influence of the motivational processes on morality in sport has been one of the most studied topics in the last years (Kavussanu, 2008), determining the degree of these variables to promote certain prosocial and antisocial behaviors.

According to Hierarchical Model of Intrinsic and Extrinsic Motivation by Vallerand (2001), the explanation of the motivational processes in the sport context revolves around Cognitive Evaluation Theory (Deci & Ryan, 2000; Ryan & Deci, 2000), where a continuum motivational is considered, and refers to different types of motivation with regard to self-determination level. The highest self-determination level is intrinsic motivation, and refers to those circumstances in which individuals freely engage in activities for their own sake and for the pleasure, fun and satisfaction inherent in their participation. A second type of motivation is called extrinsic motivation in which individuals engage in activities because they value the associated outcomes, that is to say, there have not a purpose on its own, and is divided in identified regulation, introjected regulation and external regulation. Finally, amotivation is the lowest self-determination level, and constitutes a psychological state in which people lack either a sense of efficacy or a sense of control with respect to attaining a desired outcome.

Moreover, Vallerand (2001) indicates that these types of motivation will be influenced by social factors, differencing among situational, contextual and global determinants. In this case, we will analyze the importance of one of the most studied contextual factors in the sport domain, motivational climate created by coach. This concept was defined by Ames (1992) to describe the situational goal structure created by coach in the sport context, differencing between mastery climate, where enjoyment, satisfaction, interest or intrinsic motivation are encouraged (Leo, García-Calvo, Sánchez-Miguel, Gómez & Sánchez-Oliva, 2008; Theodosiou, Mantis & Papaioannou, 2008), and performance motivational climate, which is negative related with negative affective and feeling of pressure, and reinforcements are public and based on outperforming or gaining superiority over others (Leo et al., 2008; Theodosiou et al., 2008).

Following with the model, this theory proposes that humans have three fundamental needs that must be satisfied in the social context to reach any type of regulation. Thus, players' perception of autonomy (the belief that one is the origin and regulator of his or her actions), competence (the belief that one can efficaciously interact with the environment) and relatedness (the seeking and development of secure and connected relationships with others in one social's context) and they underlie perceived motivational climate and self-determined

motivation in the sporting practice (Vallerand, 2007). Furthermore, as was indicated by other authors (Hagger, Anderson, Kyriakaki & Darkings, 2007; Hagger, Chatzisarantis, Barkoukis, Wang & Baranowski, 2005), we also decided to examine players' pressure when they perform sport skills, and assess how this variable might also underlie as mediator between perceived motivational climate and type of regulation.

Lastly, as was pointed out by Vallerand (2001), this model indicates that motivational regulation will promote the appearance of different behavioral, cognitive and affective consequences. In this study, we will focus on the assessment of well-known variables currently, prosocial and antisocial behaviors in youth athletes. According to these variables, Kavussanu (2006) based on Eisenberg and Mussen (1989), defined "prosocial behavior" acts intended to help or benefit another person and lead positive consequences, whereas "antisocial behavior" are acts intended to harm or disadvantage another individual.

Taking into account previously indications, it is noteworthy to enhance in the study of motivational processes that might explain the performance of prosocial and antisocial behaviors with the aim to determine possible motivational antecedents that promote adolescents' conducts, as well as provide guidelines to decrease desadaptive behaviors in participants. In this regard, numerous studies have used motivational model to explain different behaviors, thoughts and emotions in athletes, such as vitality, self-esteem, satisfaction with life or intention to be physically active (Almagro, Saénz-López, González-Cutre and Moreno-Murcia, 2011; Balaguer, Castillo and Duda, 2008; Ommundsen, Lemyre, Abrahamsen and Roberts, 2010), testing motivational climate influence on motivation through satisfaction of the three basic psychological needs.

For example, Balaguer et al., (2008) carried out a study with players from different sports and found that autonomy support predicted satisfaction of autonomy and relatedness, whereas these two variables, as well as satisfaction with competence, were associated with a more self-determined motivation. In accordance to this finding, Ommundsen et al. (2010) used a sample formed by football adolescents' players to examine how task-involving motivational climate predicted intrinsic motivation through satisfaction of the needs for competence and autonomy. On the other hand, Almagro et al., (2011) tested a structural equation modeling to predict intention to be physically active with a sample size comprised of different sports' players. In the analysis results, authors showed the prediction of task-involving climate on satisfaction of needs for autonomy, competence and relatedness, and how these variables were positive predictors of intrinsic motivation in athletes. Finally, Sánchez-Oliva, Sánchez-Miguel, Leo, Amado, González-Ponce y Chamorro (2011) used motivation model to predict sport commitment in 958 athletes belonged to different team sports (football, basketball, handball and volleyball), demonstrating that task-involving climate positive predicted satisfaction of autonomy, competence and relatedness, showing these variables a positive prediction of intrinsic motivation in athletes.

Moreover, there are few studies that have included aspects related with players' sportsmanlike behaviors in the model as a consequence. In this regard, Ntoumanis and Standage (2009) developed a study with sample from different

individual and team sports, testing a positive prediction between coach's perception of autonomy support and satisfaction of needs of autonomy, competence and relatedness. Furthermore, these authors showed the predictive capacity of basic psychological needs on athletes' type of motivation, found a positive relationship regarding more self-determined motivation and a negative association with respect to the self-determined motivation. Likewise, the study highlighted that self-determined motivation positive predicted sportsmanlike behaviors and negative predicted antisocial conducts, and contrariwise, non self-determined motivation positive predicted antisocial behaviors and negative predicted sportsmanlike conducts. Finally, Luckwü and Guzmán (2011) analyzed the importance of motivational antecedents to predict sportsmanlike behaviors in handball adolescents' players. Structural equation model revealed the predictive capacity of task-involving climate on needs of autonomy, competence and relatedness, being these variables a predictor of self-determination index, which positive predicted respect to rules and social conventions.

However, the main aim of the current study was to test Vallerand (2001) motivational model to measure players' perceived motivational climate influence on self-determination motivation through the satisfaction of the basic psychological needs, and how self-determination index was related with perception of prosocial and antisocial behaviors in youth football players. Moreover, and taking into account results obtained in similar studies (Almagro et al., 2011; Balaguer et al., 2008; Luckwü and Guzmán, 2011; Ntoumanis and Standage, 2009; Ommundsen et al., 2010), it was hypothesized that: 1) task-involving climate would positive predict satisfaction of needs for competence, autonomy and relatedness, and ego-involving climate positive would predict feeling of pressure; 2) satisfaction of the basic psychological needs would positive predict self-determination index; 3) self-determined motivation emerged as a strong positive predictor of prosocial behaviors and negative predict antisocial behaviors.

METHOD

Participants

The sample of this study was formed by 216 football players from infantile ($n = 114$) and cadet ($n = 102$) categories. Individuals were male ($n = 202$) and female ($n = 14$), ranging in age from 13 to 16 years old ($M = 15.2$; $SD = 1.28$). All the players who made up the sample belonged to the 19 federated teams that played in the Infantile and Cadet Autonomy Second Division in the province of Cáceres, and each participant held a federative card with his personal and sports data.

Measures

Perceived motivational climate. The Spanish language version translated by Balaguer, Guivernau, Duda and Crespo (1997) of the Perception of Motivational Climate in Sport Questionnaire-2 (Newton and Duda, 1993; Newton, Duda and Yin, 2000) was used. The scale starts with an introductory sentence as follows ("Your coach..."), following by 21 items, where we focused on second order factors, such as ego-involving climate (9 items, i.e.: "Motivates players when they play better than others teammates") and task-involving climate (12 items, i.e.: "Encourages players to help each other in trainings and games"). The scale yielded Cronbach alpha values of .87 for ego-involving climate and .76 for task-involving climate.

Self-determined motivation. An adapted version by Núñez, Martín-Albo, Navarro and González (2006) of the Sport Motivation Scale (SMS; Pelletier, Fortier, Tuson, Brière, & Blais, 1995) was used in this study. The SMS starts with an introductory sentence ("I play football...") following by 28-item inventory comprised of the multifaceted dimensions inherent within self-determination theory. The questionnaire is divided into 5 factors; the first one is intrinsic motivation (13 items, e.g., "for the pleasure it gives me to know new skills about the sport I play"). There are other 3 factors refer to extrinsic motivation, divided in identified regulation (3 items, e.g., "because it is one of the best ways to have good relationships with my friends"); introjected regulation (4 items, e.g., "because I feel bad if I do not spend enough time to play it"); external regulation (4 items, e.g., "because it allows me to be well regarded by people that I know"). The last factor is formed by items that assess amotivation (4 items, e.g.; "I do not know; I have the sense that it is useless to go on playing sport"). To simplify results, we used a Self-Determination index (SDI), calculated through the following formula: $(2 \times \text{Intrinsic Regulation} + \text{Identified Regulation}) - (\text{Introjected Regulation} + \text{External Regulation}) / 2 + 2 \times \text{Amotivation}$ (Vallerand and Rosseau, 2001). Validity and reliability has been showed in several studies by this index (Moreno et al., 2007; Ntoumanis, 2005; Sarrazin et al., 2002). In this study, the index attained a value between -1.81 and 18.45 .

Basic psychological needs. Previous studies (Sarrazin, Vallerand, Guillet, Pelletier and Cury, 2002; Standage, Duda and Ntoumanis 2003; Reinboth and Duda, 2006) were used to adapt into Spanish the Motivational Mediators Scale

(EMM: García-Calvo, Sánchez-Miguel, Leo, Sánchez-Oliva and Gómez, 2009). This instrument is composed of 17 items, grouping in 3 factors: autonomy (6 items, e.g.; “When I play football, I feel free to express my ideas and opinions”), competence (5 items, e.g.; “I am satisfied with my performance in football”), and relatedness (6 items, e.g.; “Some of my best friends belong to this team”). This scale showed alpha values of .71 for perception of autonomy, .81 for perception of competence and .70 for perception of relatedness.

Pressure. An antagonist adaptation of the Perceived Autonomy Scale in Sport by Reinboth and Duda (2006) was used. Thus, we inversed the beginning of the items with the aim to assess youth players´ pressure during football practice. This instrument starts with the sentence “During football practice...” following by 5 items that evaluated feelings of pressure (E.g.: “I feel pressured and controlled when I play football”). Reliability of the scale was confirmed in previous researches (Sánchez-Oliva, 2009), attaining an alpha value of .71 in our study.

Responses to these questionnaires were closed and they were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Perceived prosocial and antisocial behaviors. *Prosocial and Antisocial factor of the adapted version of the Questionnaire About Antisocial Intentions and Behaviors in Football* (CICAF: García Calvo, 2006). This instrument is formed by 7 antisocial stages (Eg: “An opponent player elbowing/tackling you very hard during a game and you have the choice to “give him/her back later without being seen by the referee”) and four prosocial stages (Eg: “Throw the ball outside whether an opponent player is injured”). Responses to these stages were closed and they were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In both cases, Cronbach Alpha was adequate, attaining a value of .80 for antisocial behavior and .70 for prosocial behavior.

Procedures

To collect the data, we developed a protocol to ensure that data obtention would be similar in all the participants involved in the investigation. Coaches were informed about the aims of the study and permissions to parents were asked, indicating them the use of the results. The players were also informed about the goals of the investigation, emphasizing that their participation was voluntary and that their responses would be confidential. Completing the questionnaires took approximately 15-20 minutes before the training session; the main investigator was present at all times and emphasized that the players could ask for clarification of any doubts that might arise during the process.

RESULT

Data analysis

Data was analyzed using the SPSS 18.0 software for descriptive analysis, reliability analysis through Cronbach Alpha and bivariate analysis through

Pearson correlation coefficient. Later, a structural equation model with AMOS 6.0 software was used, using maximum likelihood method estimation. To evaluate the accuracy of the different models, following index were used: χ^2 (Chi-Square and his significance), χ^2/df (Chi-Square / degrees of freedom), CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), *IFI* (Incremental Fit Index) y RMSEA (Root Mean Square Error of Approximation).

Descriptive statistics and correlations among the study variables

Table 1 shows the descriptive statistics of the variables of the study. Regarding perception of motivational climate by players, task-involving climate showed a higher value than ego-involving climate. With respect to mediators, needs for autonomy and relatedness had the greatest scores, whereas feelings of pressure clearly had the lowest mean. Related to self-determination index, and taking into account the values this variable might range, high scores were obtained, whereas regarding sportsmanlike behaviors, perception of prosocial behaviors had a slightly higher mean than perception of antisocial behaviors.

Likewise, with the aim to assess the relationships between perception of motivational climate, basic psychological needs, type of motivation and prosocial and antisocial behaviors, a bivariate correlation was developed. The analysis showed a positive association between task-involving climate with perception of autonomy, competence and relatedness, whereas a positive relationship between ego-involving climate and feeling of pressure was found. Moreover, self-determination index was significant and positive associated with task-involving climate and significantly negative related with ego-involving climate. On the other hand, perception of autonomy and relatedness were significantly positive related with high self-determination levels, whereas feeling of pressure was significantly negative related with great self-determination index.

Regarding prosocial and antisocial behaviors, there was a significantly positive relationship between task-involving climate and prosocial behaviors, and a significantly negative association with respect to antisocial behaviors. On the contrary, ego-involving climate was only significantly positive correlated with antisocial conducts. Furthermore, self-determination index showed a significant association with sportsmanlike behaviors, appeared a positive association with prosocial behaviors and a negative relationship with respect to antisocial conducts. Finally, feeling of pressure was positively associated with antisocial behaviors, whereas only perception of autonomy had significantly positive relationships with prosocial behaviors.

Table 1. Descriptive statistics and correlations among motivational climate, psychological needs, self-determination index and sportsmanship behaviors

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Task motivational climate	4.10	.66	-							
2. Ego motivational climate	2.47	.77	-.21(**)	-						
3. Pressure	2.55	.96	-.12	.35(**)	-					
4. Autonomy	4.06	.61	.48(**)	-.01	-.11	-				
5. Competence	3.58	.75	.25(**)	.05	-.09	.45(**)	-			
6. Relatedness	4.01	.64	.49(**)	-.05	-.12	.51(**)	.36(**)	-		
7. SDI	9.78	2.40	.33(**)	-.33(**)	-.33(**)	.35(**)	.06	.27(**)	-	
8. Antisocial behavior	2.12	.72	-.25(**)	.20(**)	.24(**)	-.13	.08	-.07	-.26(**)	-
9. Prosocial behavior	3.83	.85	.23(**)	-.08	-.04	.26(**)	-.07	.11	.36(**)	-.36(**)

** $p < .01$; * $p < .05$. Note: SDI = Self-determination index.

Structural equation model analysis

With the aim to test motivation model by Vallerand (2001), a structural equation model to count a direction relationships prediction in the different variables was developed. To give estimators parameters to the model, maximum likelihood method and bootstrapping procedure (Mardia coefficient = 30.03) were used. In all cases, latent variables formed the model using means of the two homogeneous groups of items as indicators. Respecting self-determination index, two indicators were used, introducing the means of the obtained scores separately in the two groups of items into the SDI formula previously indicated.

Thus, we first introduced perception of motivational climate by players to assess the relationships regarding satisfaction of the basic psychological needs and how these variables predicted self-determination levels. Lastly, the model aimed to examine self-determination index level of prediction on perception of prosocial and antisocial behaviors. As can be seen in Figure 1, task-involving climate positive predicted satisfaction of the needs for autonomy, competence and relatedness, whereas ego-involving climate emerged as a positive predictor of feelings of pressure. On the other hand, perception of autonomy and relatedness positive predicted self-determination index. On the contrary, perception of competence and pressure emerged as negative predictors, although there were not significant predictions in both cases. Finally, model showed the positive prediction between self-determination index and prosocial behaviors, and the negative prediction between self-determination index and antisocial behaviors.

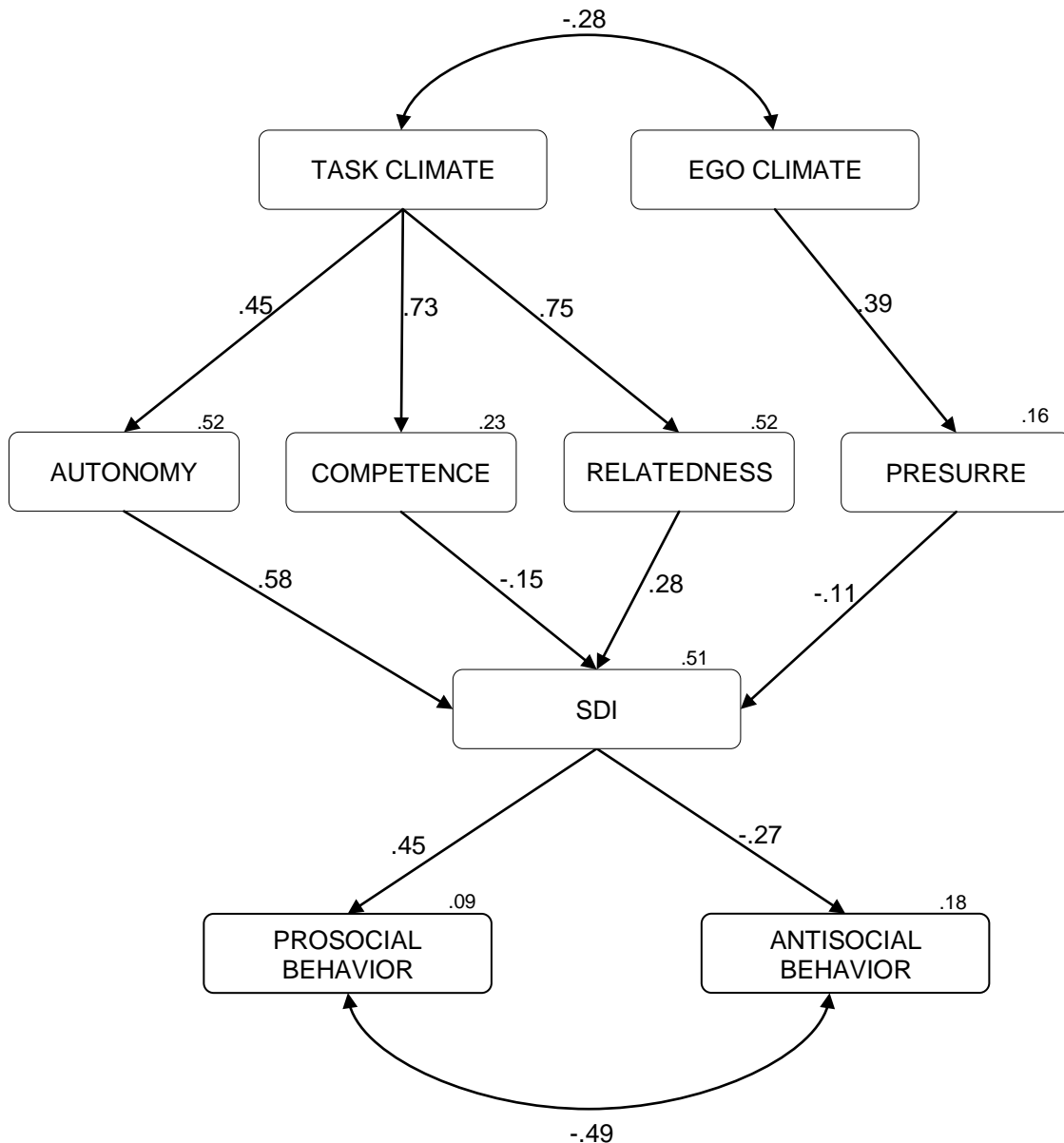


Figure 1. Structural equation model.

Table 2 shows how models' adjusted index were adequate, because CFI, TLI and IFI index were over .90, and RMSEA is lower .08.

Table 2. Structural equation model fit index.

	χ^2	d.f.	p	$\chi^2/d.f.$	CFI	TLI	IFI	RMSEA
Values	213.54	108	.00	1.98	.92	.90	.92	.06

In Table 3 standard weight of regression, critical ratios and their signification are showed, revealing that most of the relationships in the model are significant. Only obtained scores in the relationship between perception of competence and pressure and self-determination index did not reach significant values. On the

contrary, the greatest standards weights were obtained by the relationships between task-involving climate and perceptions of autonomy and relatedness.

Table 3. Weight of Standard Regression, Critical Ratios and their signification in the relationships in the Structural Equation Model.

	<i>Standard Weight</i>	<i>C. R.</i>	<i>P</i>
Task climate → Autonomy	.73	7.60	.00***
Task climate → Competence	.45	5.18	.00***
Task climate → Relatedness	.73	6.55	.00***
Ego climate → Pressure	.39	5.29	.00***
Autonomy → SDI	.58	-1.63	.00***
Competence → SDI	-.15	3.45	.10
Relatedness → SDI	.28	1.96	.05**
Pressure → SDI	-.11	-1.61	.11
SDI → Antisocial behavior	-.27	-2.84	.00***
SDI → Prosocial behavior	.45	4.88	.00***

** $p < .05$; *** $p < .01$

DISCUSSION

This study aims to test Vallerand's model (2001) with the purpose to examine motivational antecedents that might influence on perception to perform prosocial and antisocial behaviors in youth football players.

After results analysis, and according to the relationships between motivational climate and basic psychological needs, a positive prediction between task-involving climate and satisfaction of autonomy, competence and relatedness was found, whereas ego-involving climate predicted feeling of pressure, so first hypothesis was confirmed. Results related to task-involving climate were already shown by different authors (Almagro et al., 2011; Ommundsen et al., 2010), indicating the relevance to promote this motivational climate by coach, to reach more freedom in players' taking decisions, greater cohesion levels and a higher perception of competence, which will enhance the development of more adaptive behaviors. Nevertheless, none studies to corroborate our results regarding the relationship between ego-involving climate and feeling of pressure have been found, being essential more studies dealing with the assessment of those issues.

Furthermore, outcomes revealed that second hypothesis of the study was not confirmed, because only satisfaction of autonomy and relatedness were a positive predictors of high self-determination levels, whereas satisfaction of competence and feeling of pressure negative predicted self-determined motivation, although weights of regression were not significant in both cases. These results are partially consistent with several studies (Almagro et al., 2011; Balaguer et al., 2008; Blanchard, Amiot, Perreault, Vallerand and Provencher, 2009; Ntoumanis y Standage, 2009; Sánchez-Oliva et al., 2011), where the three basic psychological needs were a positive predictors of high self-determination levels, and contrary to Ommundsen et al. (2010) findings, where satisfaction of needs for competence and autonomy emerged as positive predictors of intrinsic motivation. In the current study, the negative relationship between satisfaction of competence and self-determined motivation might be

due to the sample characteristics, because participants in the study showed low skill levels, which lead to a low perception of competence, being possible to emerge players who had intrinsic reasons to practice, but they have a low perception of competence. With regard to feeling of pressure, it is reasonable that players with less autonomy in their performances showed lower enjoyment and satisfaction levels, so they will be extrinsically motivated to play football, inversing to players who showed a good perception of autonomy.

Finally, respecting the relationship between type of motivation and perceptions of sportsmanlike behaviors, the model showed a positive prediction between self-determination index and prosocial behaviors, and a negative association between self-determination index and antisocial conducts, confirming the third hypothesis. Particularly, athletes who revealed a more self-determined motivation will be those who perceived greater prosocial behaviors, which is consistent with previous studies (Chantal, Robin, Vernat and Bernache-Assollant, 2005; Donahue, Miquelon, Valois, Goulet, Buist and Vallerand, 2006; Ntoumanis and Standage, 2009; Luckwü and Guzmán, 2011; Sánchez-Oliva, Leo, Sánchez-Miguel, Gómez, and García-Calvo, 2011). This findings demonstrated the great importance to provide intrinsic motives in youth athletes, such as enjoyment, pleasure or satisfaction with the own activity, promoting the appearance of more adaptive behaviors and the decrease of antisocial behaviors. Regarding antisocial behaviors, results showed that high self-determination levels negative predicted antisocial behaviors, that is to say, athletes who showed self-determined motives to practice will have less desadaptive conducts. These results are consistent with Ntounmanis and Standage (2009) findings, who revealed that autonomous motivation (intrinsic and identified) negatively predicted antisocial behaviors.

To sum up, this study gives evidence of the model's efficacy by Vallerand (2001) to explain motivational processes in the scholar sport, indicating the great importance of the motivational climate on satisfaction of the basic psychological needs, and how these variables mediated between that motivational climate and type of motivational regulation. Likewise, type of motivation will determine the appearance of numerous consequences, such as perception of the development of prosocial and antisocial behaviors.

From our results analysis, the main conclusion we can reach is the essential to promote task-involving climate by coaches, with the aim to achieve more satisfaction of the needs for autonomy and relatedness in athletes, therefore, they will lead to the appearance of more intrinsic motives to practice and more prosocial behaviors and the decrease of antisocial conducts. To achieve a motivational climate based on learning, where autonomy and relatedness among athletes are encouraged, it is suggested the used of strategies like the ones by TARGET (Ames, 1992), where the author indicated six learning stages to promote task-involving climate in participants. Moreover, García-Calvo (2006) suggested the necessity to set aims adequately, not only in training sessions, but also in the whole environment that promotes the creation of an appropriate training climate. Furthermore, it is also noteworthy to carry out interventions programs with the main significatives in the youth athletes sport practice. Thus, we emphasized the program developed by García-Calvo, Sánchez-Oliva, Sánchez-Miguel, Leo and Amado (2012), where authors carried out teaching

activities with athletes, parents and coaches in the sport initiation context, with the aim to provide physical activity and sport positive values and decrease aggressive and antisocial behaviors.

The main limitation of the study is that the measurement of athletes' prosocial and antisocial behaviors has been employed through questionnaires. Nevertheless, it would be very useful the chance to contrast these results with the direct assessment of these behaviors, being possible to associate questionnaires' responses and real players behaviors, as have showed by other authors (Kavussanu, Stamp, Slade and Ring, 2009). Another limitation of the study might be related with coach's style of leadership, because in the current work we only included motivational climate created by coach as social factor. In this sense, the analysis of the coach's type of leadership might give us relevant information about antecedents that influence on motivational processes developed by youth athletes.

With regard to future researches prospective, it would be interesting to develop experimental studies based on interventions with coaches, where teaching programs focused on the development of motivational strategies to promote task-involving climate are employed (Conde, Sáenz-López and Moreno-Murcia, 2012), showing the effects on motivational processes, and consequently, with perception about the development of prosocial and antisocial behaviors. Furthermore, we consider essential to carry out a similar study using several sports sample and different ages, with the purpose to examine the applicability of Vallerand's model in different populations.

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