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ORIGINAL

PSYCHOLOGICAL WELL-BEING IN DANCERS: A SOCIAL COGNITIVE ANALYSIS

BIENESTAR PSICOLÓGICO EN BAILARINES: UN ANÁLISIS SOCIAL COGNITIVO

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ABSTRACT

This study analysed the following variables: motivational climate, need satisfaction, motivation and satisfaction/interest, as predictors of psychological well-being of 303 dancers. Four scales were translated to Spanish and adapted to dance: PMCSQ (Perception of Motivational Climate in Sport Questionnaire), SMS (Sport Motivation Scale), SSI (Sport Satisfaction and Interest Scale), (PGWB (Perceived General Well-Being Scale); and five items were specifically created to measure self-determinant climate. A structural model with the following sequence: performance and mastery climates → self-determinant climate → need satisfaction → motivation → satisfaction/interest → psychological well-being, was proposed. The model also studied the following relationships: performance and mastery climates → motivation; and need satisfaction and motivation → psychological well-being. Model was analysed with SEM (Structural Equation Modelling). Results verified the hypothesized relationships, and fit indexes of the model were acceptable. Theories of Achievement Motivation and Self-Determination were supported.

KEY WORDS: Motivation, self-determination, need satisfaction, climate, achievement, structural equations.

RESUMEN

Este estudio analizó el clima motivacional, la satisfacción de necesidades, la motivación autodeterminada y la satisfacción/interés como predictores del bienestar psicológico de 303 bailarines. Se utilizaron escalas traducidas al castellano y adaptadas a la danza: PMCSQ (Perception of Motivational Climate Sport Questionnaire), SMS (Sport Motivation Scale), SSI (Sport Satisfaction and Interest Scale) y PGWB (Perceived General Well-Being Scale); y cinco ítems elaborados en el estudio para medir el clima autodeterminante. Se planteó un modelo de relaciones causales con la siguiente secuencia: clima rendimiento y maestría → clima autodeterminante → satisfacción necesidades → motivación → satisfacción/interés → bienestar psicológico. Adicionalmente el modelo contemplaba las relaciones: Clima rendimiento y clima maestría → motivación; y satisfacción de necesidades y motivación → bienestar psicológico. El modelo se analizó mediante SEM y mostró significación para las relaciones hipotetizadas e índices de ajuste aceptables, apoyando los postulados de la Teoría de las Metas de Logro y la Teoría de la Autodeterminación.

PALABRAS CLAVE: Motivación, autodeterminación, satisfacción de necesidades, clima, logro, ecuaciones estructurales.

INTRODUCTION

Dance may be intrinsically rewarding, but dancers are involved in an educational environment, regulated as formal education and taught in the conservatories, which determines the cognitions and emotions that they experience as well as their behaviour. This environment is created largely by teachers through the methodology they use in their classes and how they relate to dancers. Therefore, knowing the characteristics of teachers' training programmes and styles of behaviour as well as checking the processes that mediate the effects of them on dancers' behaviours and emotions is a key to ensure that they enjoy the activity, strive and persist in their practice.

Sport has great similarities with dance by its driving character. Several studies in this area have shown that the perception that athletes have of their coaches play an important role in its formation, determining in part the experience, motivation and well-being they experience from their participation in sport (Mageau & Vallerand, 2003). For example, research with children and adolescents suggests that when athletes perceive excessive pressure from coaches and other significant adults suffer from low self-esteem, increased affective disorders such as anxiety, depression and fatigue, and increased number of behavioral problems such as eating disorders (Fraser -Thomas & Coté, 2009; Gould, Finch & Jackson, 1993; Scanlan, Stein & Ravizza, 1991; Sundgot - Borgen & Torstveit, 2004; Udry, Gould, Bridges & Tuffey, 1997) . Moreover, while the stimuli and reinforcement provided by the coach have been associated with athletes' enjoyment and self-esteem, punishment has been associated with low perceived competence, effort, and persistence (Smoll & Smith, 2002).

Achievement Goals Theory (Nicholls, 1984, 1989), together with Self-Determination Theory (Deci & Ryan, 1985a, b, 2000, Ryan & Deci, 2007), have been showing their usefulness in explaining the processes that mediate between psychological climate created by teachers and coaches and students and athletes' motivational, affective, and behavioural processes. Self-Determination Theory proposes that people often have multiple reasons to practice one activity, determining the overall quality of motivation (Ryan & Connell, 1989), which can be differentiated according to their degree of internalization or self-determination. The higher level of internalization is associated with intrinsic motivation (IM), which reflects a commitment to the activity for personal enjoyment because it is perceived as interesting and fun (Deci & Ryan, 1985a, b, 2000; Ryan & Deci, 2007), being possible to differentiate between IM of knowledge, IM of achievement and IM of stimulation (Vallerand, Pelletier, Blais, Brière, Sénécal & Vallières, 1992).

Extrinsic motivation reflects a commitment to the activity by the external results that are intended or expected to get (Deci & Ryan, 1985a, b, 2000; Ryan & Deci, 2007). However, extrinsic motives can be distinguished according to their

degree of internalization (Deci & Ryan, 1985a, b, 2000), which is the process by which people assimilate extrinsic motives as important or valuable to their own development or well-being (Deci & Ryan, 2000). From high to low internalization it has been distinguished the following external motivations: integrated, identified, introjected and external regulation, so that while in the first three reasons there is some degree of internalization, extrinsic motivation is driven by the desire to receive prizes or rewards (Deci & Ryan, 2000, 2007). Finally, there is one last way of motivation, amotivation, which is defined as lack of self-determination or the absence of intent or energy directed toward action (Ryan & Deci, 2007). The amotivation has been associated with emotional, cognitive and behavioural adverse effects (Pelletier, Fortier, Vallerand, Tuson, Briere & Blais, 1995; Vallerand & Bissonette, 1992).

In sports, several studies have examined the relationship between the different motivations and consequences on practitioners, as dropout (Luckwu & Guzmán, 2011a; Pelletier, Fortier, Vallerand & Briere, 2001; Sarrazin, Vallerand, Guillet, Pelletier & Cury, 2002), burnout (Cresswell & Eklund, 2005; Lemyre, Treasure & Roberts, 2006), intention to practice sports (Guzmán & Kingston, 2011), self-esteem (Lopez - Walle, Balaguer, Castillo & Tristan, 2011), sportsmanship (Chantal Robin, Vernat & Bernache - Assollant, 2005; Donahue et al, 2006, Luckwu & Guzmán, 2011b) and performance (Mouratidis, Vansteenkiste, Lens & Sideridis, 2008). Results of these studies suggest that the use of internalized or intrinsic motives is associated with positive consequences, while amotivation is related to negative outcomes.

Self-Determination Theory and Achievement Goals Theory share the idea that the characteristics of the social context created by the coach influence athletes' motivation (Vallerand, 1997; Vallerand & Losier, 1999), being the motivational climate one of those characteristics (Ames, 1992a, b). It is defined as the type of goals that coaches emphasize to be adopted by athletes. It may be a mastery climate when coach promotes the athlete seeking of self-improvement and self-referential goals, or a performance climate when coach encourages the seeking of compared performance goals, which requires beating others. Several studies have shown that the athlete's perception of a mastery climate is positively related to perceptions of: competence (Boixadós, Cruz, Torregrosa & Valiente, 2004; Reinboth, Duda & Ntoumanis, 2004), team cohesion (Balaguer, Castillo & Duda, 2003), social support provided by the coach (Smith, Fry, Ethington & Li, 2005), and the perception of positive social relationships (Ommundsen, Roberts, Lemyre & Miller, 2005). It is considered that while the mastery climate is self-determining, since it promotes the satisfaction of basic psychological needs proposed by Self-Determination Theory, performance climate it is not.

Self-Determination Theory posits three essential needs for individuals' psychological well-being and growth, the needs for autonomy, competence and relatedness. Autonomy refers to the need to feel that their own behaviour and its results are self-determined, resulting from the person, as opposed to feeling influenced or controlled by external forces (Deci & Ryan, 2000). In other words, it refers to the need to feel an internal locus of causality in the actions

performed by oneself. Competence refers to the need to feel competent or able to perform tasks of varying levels of difficulty (Harter, 1978; Ryan & Deci, 2002; White, 1959). Finally, relatedness refers to the need to feel connected, supported, or cared for others (Baumeister & Leary, 1995; Richer & Vallerand, 1998, Ryan & Deci, 2002). The theory states that the three requirements must be met for developing a self-determined motivation (Deci & Ryan, 1985a, 2000; Ryan & Deci, 2000a) and experiencing psychological well-being (Deci & Ryan, 2000).

There are numerous studies that have analyzed the satisfaction of basic needs and its relationship with other variables, being positively associated with well-being (Reis, Sheldon, Gable, Roscoe & Ryan, 2000; Sheldon & Niemiec, 2006), satisfaction with life (Meyer, Enstrom, Harstveit, Bowles & Beevers, 2007), aspirations (Niemiec, Ryan & Deci, 2009), and self-esteem (Thøgersen - Ntoumani & Ntoumanis, 2007), and negatively with depression (Wei, Shaffer, Young & Zakalik, 2005) and anxiety (Deci et al., 2001). In the sports context, studies have supported the effects of perceived autonomy and competence on psychological well-being (Reinboth, Duda & Ntoumanis, 2004; Standage, Duda & Ntoumanis, 2003; Vallerand, 2001). Other studies have proposed an index of satisfaction of basic needs, which has shown to be predictive of self-determined motivation in educational settings (Ntoumanis, 2005; Taylor, Ntoumanis & Standage, 2008) and sport (Lukwu & Guzmán, 2011; Guzmán & Kingston, 2011), which also has been associated with the intention to practice and sport commitment (Lukwu & Guzmán, 2011; Guzmán & Kingston, 2011).

Recently Núñez, León, González & Martín-Albo (2011) reported a study that analyzed a predictive causal model of psychological well-being in a sample of 281 athletes. In this study it was proposed the following causal sequence: mastery climate → task orientation → intrinsic motivation → well-being. It also included relationships of perceived emotional intelligence with mastery climate, task orientation and well-being. All relationships were significant and the adjustment of the model acceptable. In the study that now it is presented it was analysed a structural model that emphasizes the role of need satisfaction as a key aspect in the causal sequence, which was not included in this previous work.

Regarding the studies that analysed psychological variables in dance, Carter (2004) conducted a study whose purpose was to examine differences in perceived well-being, self-concept and self-efficacy among high school students practicing dance and others that did not. Students participating in a programme of education through dance gained greater self-concept and perception of well-being than those who did not. However, this study did not analyse the relationship between the various predictors of psychological well-being.

The present study aimed to analyse how various motivational variables contribute to predicting dancers' psychological well-being, following the relevant contributions of Achievement Goals Theory (Nicholls, 1984, 1989) and Self-

Determination Theory (Deci & Ryan, 1985a, b, 1991, 2000). It was hypothesized that performance climate would negatively predict the perception of a self-determining climate; meanwhile mastery climate would predict it positively. Self-determined climate would predict need satisfaction, which in turn would predict self-determined motivation, which would predict satisfaction/interest in dance, which finally would predict psychological well-being. Additionally other relationships were hypothesized: performance climate and mastery negatively would predict self-determined motivation, first negatively and second positively, and both need satisfaction and self-determined motivation would predict positive psychological well-being (see Figure 1 for results).

METHOD

Participants

303 dancers aged between 13 and 46 years (M age = 18.99, SD = 6.96) of both sexes (251 women and 52 men) participated in the study. Of these, 93 were studying Intermediate Professional Degree, 154 Higher Degree, and 56 Master or PhD.

Procedure

In this study it was used a selective approach, with a retrospective ex post facto design. The scales were administered by researchers and before participants completed them, they were informed the data would not be disclosed or used for other use than research purposes and that participation in this study was completely voluntary. Completion was performed in the presence of the researchers who helped participants in the case there was any problem in understanding any item. The participants had no time limitations to answer the items.

Measuring instruments

Scale of perceived motivational climate in dance. It was used the translation into Spanish by Carratalá (2004) of the PMCSQ (Perception of Motivational Climate Questionnaire Sport) (Seifriz, Duda & Chi, 1992; Walling, Duda & Chi, 1993; Duda & Whitehead, 1998). The 19 items were adapted to the dance replacing the terms athlete, coach and team by dancer, teacher, and dance classes. Participants answered on a 5-point Likert scale. The internal consistency of the subscales was adequate: alpha (mastery climate) = .73, and alpha (performance climate) = .78.

Scale of self-determining climate in dance. It was developed a specific scale composed by 5 items that measured the dancers' perception of teachers as promoters of expertise or competence (My teachers teach me to improve in activities), providers of social support (My teachers value me positively),

promoters of good relationships between the dancers (My teachers encourage me to know better my peers), stimulants of students autonomy (My teachers encourage me to act independently), and promoters of the appreciation of dance as something useful for dancers, for their growth as individuals (My teachers make me see I'm preparing for life). They answered on 7-point Likert scale. The internal consistency of the scale was adequate: $\alpha = .73$.

Scale of basic need satisfaction in dance. It was used the ESANPD (Scale of Psychological Needs Satisfaction in Sport) (Guzmán & Kingston, 2011; Guzmán & Luckwu, 2008; Luckwu & Guzmán 2011a, b). There were considered the 15 items corresponding to the dimensions of perceived competence, autonomy and relatedness. The items were adapted to dance and were answered on a 7-point Likert scale. The internal consistency of the subscales was acceptable: α (competence) = .84, α (relatedness) = .79, and α (autonomy) = .63. Index of need satisfactions was calculated by the arithmetic mean of the scores on the needs.

Scale of motivation to dance. It was employed the translation into Spanish (Guzmán, Carratalá, Garcia Ferriol & Carratalá, 2006) of the SMS (Sport Motivation Scale) (Pelletier et al., 1995). Scale was shortened and formulation of the items was adapted to dance. It was composed finally by 20 items grouped into four dimensions: intrinsic motivation (IM), internalized extrinsic motivation (IEM), extrinsic motivation of external regulation (EMER) and amotivation. They were answered on a 7 points Likert scale. The internal consistency of the subscales was acceptable: α (IM) = .70; α (IEM) = .77; α (EMER) = .77; and α (amotivation) = .73. Self-determined motivation was calculated through self-determination index (SDI) following, as recommended by Vallerand (2007), the following expression: $SDI = (IM \times 2) + IEM - EMER - (Amotivation \times 2)$.

Scale of Satisfaction/Interest in dance. It was employed a translation to Spanish of the Scale of Intrinsic Satisfaction used by Duda and Nicholls (1992). It was composed by 8 items measured in a 7-point Likert. α (satisfaction/interest) = .81 was acceptable.

Scale of Psychological Well-Being in the dance. It was used the Spanish translation (González, 1996) of PGWB (Perceived General Well-being) (Dupuy, 1984), composed of 22 items. For each item there were 5 options, receiving a score of 1 to 5. The internal consistency of the subscales was acceptable: α (anxiety) = .85; α (vitality) = .75; α (self-control) = .67; α (overall health) = .76; α (good psychophysical condition) = .74; α (depressed mood) = .85. Psychological well-being was calculated from the sum of the items of the questionnaire, given that the items of the subscales of anxiety and depressed mood used reverse score.

RESULTS

Descriptive analysis

In Table 1 the descriptive (mean, standard deviation, skewness and kurtosis) and bivariate correlations of the variables are shown. The skewness and kurtosis rated were below 2, which according Bollen and Long (1993) indicates an adequate fit to the standard curve. With regard to the mean scores of the variables the results showed that perceived mastery climate (M = 6.42) was higher than performance (M = 4.30). For the self-determining climate, need satisfaction and satisfaction/interest scores were still elevated, above five. The motivation was above zero, showing that scores in the most self-determined motivations were higher than in the least self-determined. Finally, the psychological well-being was high as was above the average level since scored an average of 79,67; out of a possible 110.

Correlational analysis

The analysis showed positive correlations between the studied parameters, except in the case of performance climate, which either showed negative relationships (with self-determining climate, self-determined motivation and psychological well-being) or they were not significant (with mastery climate, need satisfaction and satisfaction/interest). The highest correlation was between satisfaction/interest and psychological well-being ($r = .44$; $p < .01$).

Table 1. Descriptive statistics and bivariate correlations.

| Variables | M | DT | S | K | 2 | 3 | 4 | 5 | 6 | 7 |
|-------------------------------|-------|-------|-------|------|-------|---------|--------|---------|--------|---------|
| 1. Mastery climate | 6.42 | .48 | -.71 | -.17 | -.022 | .329** | .198** | .371** | .342** | .149** |
| 2. Performance climate | 4.30 | 1.01 | -.34 | -.17 | | -.152** | .008 | -.271** | -.109 | -.202** |
| 3. Self-determining climate | 5.27 | 1.03 | -.69 | .75 | | | .610** | .298** | .366** | .298** |
| 4. Need Satisfaction | 5.19 | .79 | -.06 | -.50 | | | | .290** | .307** | .269** |
| 5. Self-determined motivation | 8.86 | 3.71 | -.41 | .00 | | | | | .445** | .325** |
| 6. Satisfaction/interest | 6.10 | .78 | -1.22 | 1.77 | | | | | | .437** |
| 7. Psychological well-being | 79.69 | 13.56 | -.40 | -.42 | | | | | | |

(* $p < .05$; ** $p < .01$; S: skewness; K: kurtosis)

Analysis of structural equation

The proposed model was analysed using SEM (Structural Equation Modelling). It was performed the technique of maximum likelihood and bootstrapping with 500 samples to prevent a possible lack of multivariate normality with AMOS and SPSS 19.0 programmes. In Figure 1, the results obtained are presented.

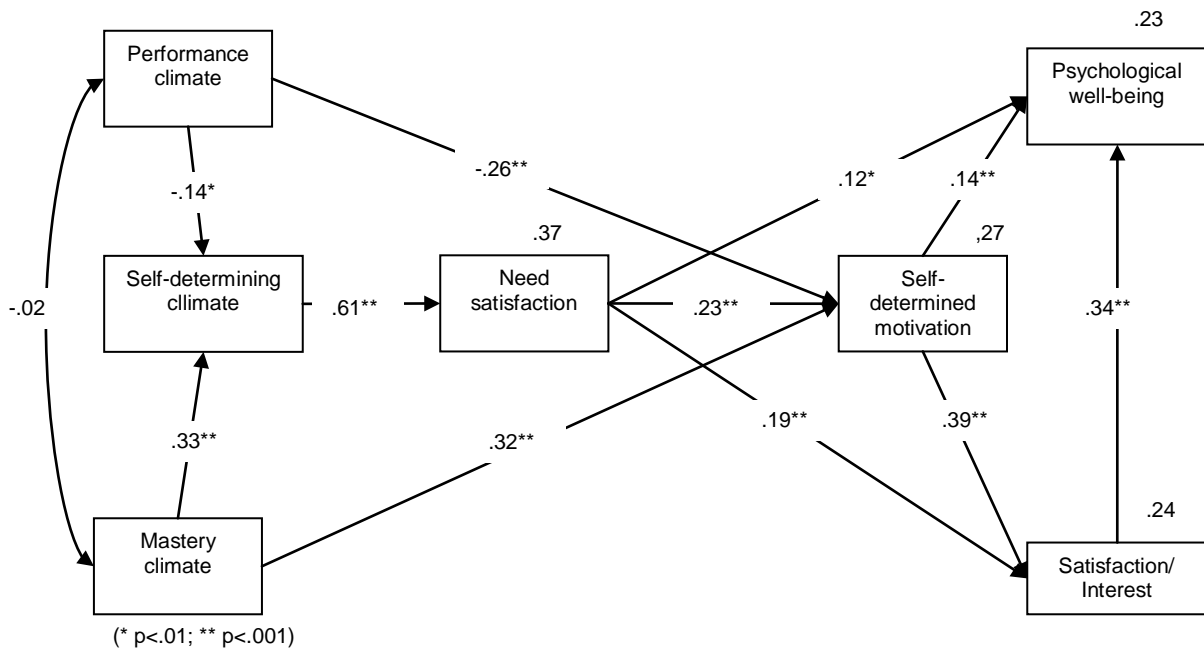


Figure 1. Standardized coefficients and explained variances

As it was hypothesized in the model, performance climate negatively predicted self-determining climate and self-determined motivation, while mastery climate positively did it. Perceived self-determining climate positively predicted need satisfaction, which in turn directly predicted psychological well-being and also positively correlated with two other variables that showed a direct and positive relationship with psychological well-being, self-determined motivation and satisfaction/interest in the activity. Finally, self-determined motivation positively predicted satisfaction/interest in classes.

As for the model fit indexes, χ^2/df was 3.73 (less than 5), indicating an adequate fit (Wheaton, Muthén, Alwin & Summers, 1977). In incremental indexes values above .90; and in RMSEA below .08 were considered as acceptable (Hu & Bentler, 1995; Jöreskog & Sörbom, 1996). The rates obtained were as follows: Comparative Fit Index (CFI) = .95; Tucker-Lewis Index (TLI) = .87; Incremental Fit Index (IFI) = .95; Normative Fit Index (NFI) = .93; Root Means Square Error of Approximation (RMSEA) = .09. Reliability of the model was considered adequate given that fit was adequate to more indexes that it was not. To complete the analysis, it was checked the mediating role of the different variables considered in the model.

Analysis of the mediating role of self-determined motivation between need satisfaction and psychological well-being. To test the mediating role of a variable the recommendations of Baron and Kenny (1986) were followed by testing four steps: the direct relationship of the predictor on the result was

tested first, secondly the relationship between the predictor and the mediator was tested, thirdly the relationship between the mediator and the result was tested and finally, fourth it was analysed if the relationship between the predictor on the result was significantly reduced when the mediator was incorporated. In this case first the direct relationship of the need satisfaction (predictor) on psychological well-being (result), which indicated a positive and significant relationship ($\beta = .27$; $p < .001$) was tested. Secondly it was proved that need satisfaction (predictor) had a relationship with self-determined motivation (mediator) positive and significant ($\beta = .29$; $p < .001$). The third step was to demonstrate that there was a relationship between self-determined motivation (mediator) and psychological well-being (result), which was positive and significant ($\beta = .32$; $p < .01$). Finally, the fourth step showed that the direct effect of need satisfaction decreased when self-determined motivation was incorporated, changing from $\beta = .27$ to $\beta = .19$ ($p < .001$). Thus, results supported the mediating role of self-determination between need satisfaction and psychological well-being.

Analysis of the mediating role of self-determined motivation between need satisfaction and satisfaction/interest in the activity. First, the direct relationship between need satisfaction (predictor) on satisfaction/interest in the activity (result) indicated a significant positive relationship ($\beta = .31$; $p < .001$). Second, as it was saw in the previous analysis, need satisfaction (predictor) had a positive and meaningful relationship with self-determined motivation (mediator) ($\beta = .29$; $p < .001$). Third, the relationship between self-determined motivation (mediator) and satisfaction/interest in the activity (result) was positive and significant ($\beta = .45$; $p < .001$). Fourth, the relationship between need satisfaction and satisfaction/interest was reduced when self-determined motivation was incorporated, from $\beta = .31$ to $\beta = .19$ ($p < .001$).

Analysis of the mediating role of satisfaction/interest in the activity between self-determined motivation and psychological well-being. First, the direct relationship of self-determined motivation (predictor) on psychological well-being (results indicated a significant and positive relationship ($\beta = .32$; $p < .001$). Second, self-determined motivation (predictor) had a relationship with satisfaction/interest in the activity (mediator) positive and significant ($\beta = .45$; $p < .001$). Third, the relationship between satisfaction/interest in the activity (mediator) and psychological well-being (result) was positive and significant ($\beta = .44$; $p < .001$). Fourth, the relationship between self-determined motivation and psychological well-being was reduced when satisfaction/interest in the activity was incorporated, from $\beta = .32$ to $\beta = .16$ ($p < .001$).

DISCUSSION

It was verified that the dancers' perception of mastery climate positively predicted their perception of self-determining climate created by teachers in their classes, while the perception of performance climate predicted it negatively. These results agree with previous studies that showed positive

relationships of mastery climate and negative of performance climate with autonomy promotion climate (Standage, Duda & Ntoumanis, 2003). The results of our study suggest that mastery and performance climates contribute to creating a self-determining climate, which also considers the degree of empowerment by the teacher and the promotion of social relations, which have effects on need satisfaction. The fact that the perception of self-determining climate positively predicted need satisfaction is fully consistent with the principles of Self-Determination Theory. In this line, several studies have verified the predictive ability of the perception of a promotion of autonomy climate on need satisfaction in the context of sport and physical education (Cadorette, Blanchard & Vallerand, 1996; Gagné, Ryan & Bargman, 2003; Pelletier et al., 2001; Standage, Duda & Ntoumanis, 2003), obtaining similar results to this study. However, our study went further than previous ones since the measure of climate not only measured autonomy but also included items relating to the teachers' promotion of competition and relatedness and their provision of social support.

In our understanding of the most important contributions of this study it was the identification of three predictive relations between need satisfaction and psychological well-being, one direct and two other indirect, mediated by self-determined motivation and satisfaction/interest in the activity. Thus, need satisfaction would become an essential variable between perception of context and cognitive effects, as motivation, general satisfaction with activity and psychological well-being. Finally, the relationship between self-determined motivation and psychological well-being agrees with the predictions of Self-Determination Theory and the results of recent studies such as Núñez et al. (2011). Other studies could analyse in more homogeneous or bigger samples if the model is equally valid or if any relationship is different depending on the age or sex.

CONCLUSION

The results of the study allow verifying a structural model that articulate the contributions of the Achievement Goals Theory and Self-Determination Theory, showing that need satisfaction is a central variable between the context perception and person cognition. It also proposes the possibility of using a general measure of self-determining climate that integrates the general perception that the person has of the endorsement by the teacher or coach of autonomy, social relationships, and competence of their students, as well as the provision of social support to them.

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