

1 **Running Head:** Motivation and involvement in physical activity

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3 Goal orientations, motivational climate and dispositional flow of high school students

4 engaging in extracurricular involvement in physical activity<sup>1</sup>

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1            *Summary.* The purpose of this study was to examine the role of goal orientations,  
2 motivational climates and dispositional flows in physical education lessons on  
3 extracurricular involvement in physical activity. Questionnaires were administered to  
4 1103 (athletes  $N = 792$ ; non-athletes  $N = 311$ ) secondary school students ( $M$  age = 14.3  
5 yr.,  $SD = 0.7$ ). Data analysis showed significant differences between athletes and non-  
6 athletes in goal orientations and dispositional flows in physical education lessons. No  
7 differences were found in the perception of motivational climates. These findings  
8 suggest that dispositional variables are related to extracurricular involvement in physical  
9 activity.

10            *Key Words:* Involvement in physical activity, goals orientations, motivational  
11 climate, flow.

1           A recent study developed by Bagøien and Halvari (2005) suggested that  
2 involvement in physical activity mediated between motivation and perceived sports  
3 competence. These authors found involvement in physical activity can be related to  
4 psychological variables. Research has demonstrated that motivational regulations can  
5 influence involvement in physical activity in different ways. Some investigations (e.g.,  
6 Wankel, 1993) have shown links between intrinsic motivation and exercise adherence.  
7 Nevertheless, it is not clear if motivation influences involvement in physical activity, or  
8 if involvement in physical activity influences motivation. Another issue is the possible  
9 role played by contextual variables. Past research has indicated that external rewards  
10 have less influence upon participation in sports. The work of Bagøien and Halvari  
11 (2005) also showed that external variables such as controlled motivation do not have  
12 relationships with involvement in physical activity.

13           Achievement goal theory (Nicholls, 1989) has been applied to research on  
14 motivation in sport and exercise in order to explain how dispositional and contextual  
15 variables affect performance and involvement in physical activities (Duda, 2001;  
16 Roberts, 2001). However, relatively few investigations have been conducted that have  
17 assessed the interrelationships among individuals' personal motivational characteristics,  
18 perceived situational variables and participation in physical activities (Duda 1989). A  
19 key component of achievement goal theory involves the individual differences that exist  
20 among people in the criteria that they use to judge their competence in achievement  
21 settings, and the differential effects of using these success criteria upon subsequent  
22 behavior in achievement settings. When individuals evaluate their own ability in  
23 relation to the ability of others, in such a way that they feel success when they  
24 demonstrate greater ability than others, this orientation is known as an "ego

1 orientation". However, when individuals assess their success according to self-  
2 referenced criteria that reflect feelings of personal improvement, effort, and task  
3 mastery, the person is considered to have a "task orientation" toward achievement.

4 In addition to a personal disposition, or tendency, to prefer the use of one type of  
5 success criteria as opposed to another, the social environment can also have  
6 considerable impact upon the success criteria that are used in any given moment (Ames,  
7 1992). The achievement environment or motivational climate is multidimensional in  
8 nature. As Duda and Hall (2000) commented, "differential structures such as the  
9 standards, methods, and criteria underlying evaluation, the nature of recognition and the  
10 manner in which it is expressed, the source of authority, the way tasks are structured,  
11 and the manner in which individuals are grouped are held to constitute the overriding  
12 climate operating in achievement settings" (p. 419). Research suggests that the  
13 perceptions of ego-involving or task-involving motivational climates affect motivation  
14 in a different manner. In general, results showed that perceptions of task-involving  
15 motivational climates in sport settings, are linked to more enjoyment and levels of  
16 involvement in sport activities (Duda, 2001).

17 Finally, some investigations have showed the relevance of flow in the study of  
18 motivation to practice sport and physical activities. Flow is defined how and optimal  
19 psychological state (Jackson, 1996). When in flow, a person becomes totally involved in  
20 the activity and undergoes a number of positive experiences, including freedom for self-  
21 consciousness, enjoyment, concentration, clarity of goals, feelings of control and sense  
22 of being totally in tune with the activity (Marsh & Jackson, 1999). Research in flow also  
23 suggest the possibility of and autotelic personality to explain in part why some people  
24 experience flow more frequently than others. Some investigators suggest that this trait

1 of personality can be explaining differences on involvement on sport and exercise  
2 activities (Jackson, Thomas, Marsh, & Smethurst, 2001).

3 To extend previous research, the objective of this investigation was to analyze the  
4 relationships between goal orientations, perception of motivational climate and  
5 disposition to flow in high school students, and the differences between students  
6 involved or non-involved in extracurricular sports or exercise activities.

## 7 METHOD

### 8 *Participants and procedure*

9 1103 secondary school students (athletes  $N = 792$ ; non-athletes  $N = 311$ )  
10 participated in the study. The age for participants was 14 ( $M$  age = 14.3 yr.,  $SD = 0.7$ ).

11 Permission to participate in the study was previously obtained from the students'  
12 parents, their teachers, and from the students themselves. The students were informed of  
13 the general purpose of the research, their rights as study participants and signed a  
14 consent form. The questionnaires were completed during a physical education class.

### 15 *Measures*

16 Goal orientations. A Spanish version of the Perception of Success Questionnaire  
17 (POSQ: Cervelló, Escartí, & Balagué, 1999; Roberts, Treasure, & Balagué, 1998) was  
18 used to measure dispositional goal orientations. This 12-item inventory consists of two  
19 factors measuring Task Orientation (e.g., "I feel successful when I reach a personal  
20 goal"), and Ego Orientation (e.g., "I feel successful when I am the best").

21 Motivational Climate. The Learning and Performance Orientations in Physical  
22 Education Classes Questionnaire (LAPOPECQ) was employed (Papaioannou, 1994).  
23 This instrument consists in a pool of 27 items. With five first-order factors (teacher  
24 initiated-learning orientation, students' learning orientation, students' competitive

1 orientation, students' worries about mistakes and outcome orientation without effort)  
2 and a structure of two higher-order factors (performance and learning/mastery). For this  
3 investigation, only the two higher-order factors (Perception of Performance Climate and  
4 Perception of Learning Climate) solution was employed. In a previous work, the  
5 Spanish version of this scale showed good validity and reliability (Jiménez, 2004).

6 Dispositional Flow. The Spanish version (Santos-Rosa, 2003) of the Flow Trait  
7 Scale (Jackson, Kimiecik, Ford, & Marsh, 1998) was employed in this investigation.  
8 This instrument consists in a set of 36 items grouped in a nine first-order factor  
9 distribution and a higher-order factor (Dispositional Flow) including the 36 items. The  
10 higher-order Spanish version of this instrument has demonstrated high levels of  
11 reliability (Cronbach Alpha > .90).

12 The scoring format for each of the scales was the same and was structured to  
13 conform to the manner of evaluation in the Spanish academic context. In this context,  
14 all evaluations of pupils' academic performance range from 0 to 10. Since the subjects  
15 were all currently in school and familiar with this system, the same 11-point system was  
16 employed using Likert scales that were anchored by strongly disagree (0) to strongly  
17 agree (10).

18 Complementary, subjects indicated if they participated in some extracurricular  
19 sport or physical activity.

## 20 RESULTS

21 Descriptive statistics and Cronbach Alphas for all measures were obtained and  
22 simple correlations were calculated to test the relationships between variables (Table 1).  
23 To asses the differences on goal orientations, perception of motivational climate and

1 dispositional flow between the students, a MANOVA was calculated to explore group  
2 differences in terms of extracurricular involvement in physical activity.

3 The descriptive statistics and correlations for the study variables for the full  
4 sample of students, are presented in table 1. In an absolute sense, the students reported  
5 moderate to high scores on all study variables, excepting the Perception of Performance  
6 Climate, that shows moderate lower scores. The Cronbach Alpha shows that all  
7 coefficients were above the minimum criterion of .70 (Nunnally, 1978), indicating that  
8 measures reliability assessed the constructs of interest.

9 Further, there were significant positive relationships between Task Orientation,  
10 Perception of Learning Climate and Dispositional Flow. Additionally, Ego Orientation  
11 was positively related to Perception of Performance Climate and Dispositional Flow.  
12 The two dimensions of motivational climate were positively related to Dispositional  
13 Flow, but the relation between Dispositional Flow and the Perception of Performance  
14 Climate can be interpreted with caution, due the lower correlation value.

15 **\*\*\*\* INSERT TABLE 1 ABOUT HERE, PLEASE \*\*\*\***

16 A MANOVA was conducted to explore group differences in terms of  
17 extracurricular involvement in physical activity. MANOVA revealed a significant  
18 involvement effect, Wilk's = .95,  $p < .001$ . Univariate  $F$  Values indicated that athletes  
19 and non-athletes differed on Task Orientation ( $F = 20.39, p < .001$ ), Ego Orientation ( $F$   
20 = 19.13,  $p < .001$ ) and Dispositional Flow ( $F = 38.82, p < .001$ ). Specifically, compared  
21 to non-athletes, athletes were found to report a higher Task orientation ( $M = 7.96$  vs.  
22 7.30), Ego Orientation ( $M = 5.27$  vs. 4.34) and Dispositional Flow ( $M = 6.68$  vs. 6.02)

## DISCUSSION

The purpose of this investigation was to test whether goal orientations, motivational climate and dispositional flow, mediate the involvement on extracurricular physical activity. The findings suggest that dispositional variables such as goal orientations and dispositional flows can influence decisions regarding participation in extracurricular physical activity. These results are in accordance with the results obtained by others investigators that remark the relevance of the motivational variables in the involvement in physical activities (Bagøien & Halvari, 2005; Wankel, 1993). Our results showed that the perception of competence (independently of the orientation of this sense of competence) and the dispositional flow, differences the athletes and the non-athletes. Further, some investigations indicate that the predisposition to be in flow can be a predictor of the subject's approximation to sport and physical activities (Jackson et al., 2001). Our results indicate that Dispositional Flow was a "motivational difference" between athletes and non-athletes. However, contrary to the hypotheses and to previous research, results indicates that perception of learning climates are related to more levels of participation and enjoyment in sport and physical activities (Duda, 2001). Perception of a learning-involving motivational climate was not a relevant variable for explaining involvement in out of school physical activity.

Moreover, the inspection of the correlational results, shows stronger relationships between perception of learning motivational climate, and task orientation and disposition to flow. More research is needed to determine if the effect of the perception of motivational climate on involvement is mediated for the task orientation and the dispositional flow. To conclude, this research has showed the relevance of the motivational variables in the involvement on extracurricular physical activity in

1 adolescent students. Clearly, other variables are likely to affect student's motivation to  
2 sport involvement, but, generally speaking, adolescent's motivation influence the  
3 decision making related to involvement in extracurricular physical activity.

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## TABLE 1.

2

DESCRIPTIVE STATISTICS, CRONBACH ALPHAS AND CORRELATIONS OF ALL

3

## VARIABLES

	M	SD	$\alpha$	1	2	3	4	5
1. Ego Orientation	6.72	2.72	.91	-	.32*	.00	.34*	.26*
2. Task Orientation	8.67	1.48	.84	-	-	.35*	-.11*	.38*
3. Learning Climate	7.78	1.34	.85	-	-	-	-.05	.43*
4. Performance climate	4.32	2.32	.91	-	-	-	-	.15*
5. Dispositional Flow	7.19	1.28	.91	-	-	-	-	-

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\* $p < .01$