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Perceived Motivational Climate Determines Self-Confidence and Precompetitive Anxiety in Young Soccer Players: Analysis by Gender

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Abstract: The main objective of this study was to analyze whether the perception of the motivational climate in young soccer players determines the level of competitive anxiety and self-confidence. In addition, the results were explored according to gender, in order to observe if there were differences between the female and male categories. A total of 113 cadet and youth soccer players from six soccer teams in the provinces of Malaga and Granada, aged between 14 and 19 years, who competed in regional leagues, participated in the study. Of these, 50 were female and 63 were male. The Competitive Sport Anxiety (CSAI-2), Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2), and Self-Confidence in Sport Competition Questionnaire (CACD) were used to collect the information. Correlation, linear regression and cluster analyses were performed. The data analyses carried out affirmed the relationship between the study variables, observing that the perception of ego climate was positively related to cognitive anxiety ($p < 0.05$) and insecurity ($p < 0.01$), and inversely to self-confidence ($p < 0.05$). By gender, boys showed a higher perception of an ego-oriented ($p < 0.001$) and lower perception of a task-oriented climate ($p < 0.05$) than girls. However, girls showed a greater intensity in the relationships related to ego climate and lower scores in self-confidence ($p < 0.01$), as well as higher scores in insecurity ($p < 0.001$). The results have shown positive relationships between self-confidence and a task-oriented climate, as well as negative ones with an ego-oriented climate. It is also observed that ego orientation generates more insecurity and anxiety, which is more evident in girls.

Keywords: soccer; competitive anxiety; self-confidence; gender

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1. Introduction

Motivation in sport practice contexts has been the subject of study in numerous investigations [1,2]. The motivational processes of athletes have generated great interest because they have been associated, among others, with the adherence or abandonment of physical sports practice, to their well-being and satisfaction with the task performed, the precompetitive anxiety developed, as well as their own level of technical–tactical performance in competition [3–5]. The most widespread theoretical paradigms in the sports domain are Self-Determination Theory (SDT) and Achievement Goal Theory (ATT) [6–8]. Specifically, from the Achievement Goals Theory (TML) it is considered that coaches are social agents that can influence the behavior of athletes, among other factors, by creating certain motivational climates [9,10]. From this paradigm, coaches can foster two types of climates: ego-oriented or task-oriented [11,12]. Athletes perceive a task-oriented climate when the coach values effort and personal progress, gives an important role to each athlete, listens to them and attends to their needs, and tries to favor relationships between

them. However, when an ego-oriented climate is fostered, the coach focuses more on competitive aspects, penalizes and highlights mistakes, focuses more on the result than on the progress of each player, and is less concerned with promoting positive relationships among them [13,14].

Different research has highlighted that if athletes perceive that their coaches favor task-oriented motivational climates, there is a greater likelihood that they will experience greater satisfaction with the activity performed, increased self-esteem perception and well-being as an athlete, as well as a better adaptation to the demands of the sports task performed [4,5,15]. On the contrary, if coaches are perceived to foster ego-oriented motivational climates, there will be increased dissatisfaction during physical practice, greater feelings of pressure, worse adaptation to stressful situations, an increase in antisocial behaviors, as well as a higher probability of sport abandonment [16,17]. In sports, two variables are considered very important for the development of players and their level of performance, such as self-confidence and competitive anxiety [18,19]. Competitive anxiety would refer to a negative emotional state, characterized by high levels of apprehension and tension [20]. For its part, self-confidence refers to the athletes' perception of their ability to perform sports tasks successfully [21]. The multidimensional model of the state of competitive anxiety of Martens et al. [20] integrates these three variables, distinguishing two dimensions of anxiety—cognitive (thoughts of worry and uncertainty) and somatic (maladjusted physiological responses)—as well as the self-confidence factor (how confident a person is about their chances of success). The difficulty of the tasks to be performed, the perceived ability to perform them successfully, the pressure to achieve a result or the social support received could condition the levels of self-confidence and anxiety in athletes [4,22,23]. Previous studies have highlighted the inverse relationship between self-confidence and competitive anxiety, indicating that the lower the anxiety and the higher the self-confidence, the higher the probability of performing adequately in sport [24,25].

In relation to these aspects, the motivational climates that coaches generate in sports contexts could modulate the levels of anxiety or self-confidence [5]. Several studies claim that an ego-involving climate will generate higher anxiety and lower self-confidence, whereas a task-involving climate will lead athletes to experience higher levels of self-confidence and lower levels of competitive anxiety [26,27]. The behavior of coaches who foster ego-oriented motivational climates is more focused on valuing the outcome, which generates greater pressure in athletes to achieve a good sport performance and less enjoyment. This could cause athletes to focus more attention on not making mistakes, generating a negative emotional impact when they fail. On the contrary, task-oriented climates would help the athlete to focus on personal improvement and learning, promoting cooperation among team members and avoiding comparison among athletes. In addition, they would not be so pressured by the outcome, which would help them face the competition without a heightened fear of losing [28,29].

However, the values referring to the motivational climate generated by the coach may be affected by other variables. In this sense, depending on the gender of the athlete, the results have shown that, in both men and women, the perception of a task-oriented climate prevails over an ego-oriented climate, and that women showed significantly higher values than men of task-oriented climate perception [29–31]. Moreover, with respect to the age of the athlete, several authors found that younger athletes presented significantly lower scores on the perception of a task-oriented climate [31]. In contrast, Vazou et al. [29], in a sample of 493 collective sports athletes (124 females and 369 males) with an age range of 12 to 17 years, found no significant differences between ages, although in all age groups in their study higher scores were found for a task-oriented motivational climate. Thus, the main objective of the present study was to analyze whether the perception of the motivational climate in young soccer players determines the level of competitive anxiety and self-confidence. In addition, the results were explored in terms of gender, to observe whether there were differences between the female and male categories. The hypotheses of this research were: (1) The type of motivational climate perceived will determine the levels of competitive

anxiety and self-confidence; (2) There will be differences in the relationships between the perceived motivational climate, competitive anxiety and self-confidence, depending on gender.

2. Materials and Methods

2.1. Participants

A total of 113 cadet and youth soccer players from six soccer teams from the provinces of Malaga and Granada, aged between 14 and 19 years, who competed in regional leagues, participated. Of these, 50 were female and 63 were male. In addition, a non-probabilistic convenience sampling was carried out for the selection of participants. Moreover, the sample was selected if they belonged to cadet and youth categories, had been competing for more than five years and had been with the same coach for two seasons.

2.2. Instruments and Measurements

(a) Sociodemographic questionnaire (ad hoc). A questionnaire was prepared containing questions on age, province, category and club in which they participated, years of sports practice and belonging to the club, among others, in order to find out general aspects of interest for the research.

(b) Competition Anxiety State Inventory-2 (CSAI-2) [17,29]. This questionnaire allows the identification of anxiety symptoms perceived by players to a greater or lesser extent. It consists of a total of 27 items classified into three subscales: somatic anxiety, cognitive anxiety and self-confidence. In addition, the responses to these items are Likert-type from 1 to 5, being (1) almost never and (5) almost always. For this research, the reliability analysis (Cronbach's alpha) provides adequate scores mainly in the self-confidence (0.89) and somatic anxiety (0.84) subscales, while in the cognitive anxiety subscale the score is (0.73).

(c) Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2) [13]. This test proposes various situations to which the subjects respond according to their perception, these responses reflecting an approach to the motivational climates generated by the coach. It is composed of 29 items, of which 15 are oriented to the task-involvement climate and 14 of them in relation to ego involvement, with Likert-type questions from 1 to 5, being (1) strongly disagree and (5) strongly agree. For this research, the reliability analysis (Cronbach's alpha) shows high scores for both the task involvement subscale (0.87) and ego involvement (0.86).

(d) Self-confidence in Sport Competition Questionnaire (CACD) [32]. This consists of an approach to the level of self-confidence presented by athletes. It is composed of a total of 12 items on how players think and feel during competition, which are classified into two subscales: the insecurity facet and self-confidence facet. The responses are Likert type from 1 to 7, being (1) completely disagree and (7) completely agree. For this research, the reliability analysis (Cronbach's alpha) shows high scores for the self-confidence facet subscale (0.83) and lower scores for the insecurity facet (0.73).

2.3. Procedure

First, the coaches of the participating teams were contacted, explaining the objective of this research, as well as the transfer of essential information for the participants and their families. When the clubs accepted to participate in the research, the information was passed on to the families and players so that they could also participate. In order to be included, an informed consent form signed by parents/legal guardians and players was received. Additionally, the questionnaires were included in the request for consent so that parents were aware of them beforehand. After that, a link was sent to access a document built with Google Forms containing the questions under study. The athletes completed the questionnaires using a mobile phone, tablet or personal computer in a club room, in the presence of a collaborator from the research team.

When participants completed the form, the data were automatically downloaded into a database that was subsequently used to process them and extract the results. Contact details of the investigators were provided to answer any questions that might arise. Throughout the research process, the principles established in the Helsinki declaration [33] were respected and approval was obtained from the ethics committee of the University of Malaga (19-2015-H) for the conduct of the research.

2.4. Data Analysis

Descriptive and inferential analyses were performed. The mean, standard deviation, skewness and kurtosis of the data were calculated, as well as the Kolmogorov–Smirnov value. After verifying the normal distribution of the data, comparisons between groups were made using t-student. The correlation value between variables was obtained with Pearson's bivariate test and the predictive value of the perceived motivational climate on competitive anxiety and self-confidence was calculated with linear regression models (successive steps). In addition, cluster analyses were performed to generate clusters according to the variables ego-oriented and task-oriented motivational climate, with the aim of extracting groups with homogeneous characteristics. The data were processed using the IBM SPSS Statistics version 25.0 statistical package (SPSS Inc. v.25.0, Chicago, IL, USA). In addition, to understand the generalization capacity of the results obtained, variance component analysis was performed using SAS v.9.1 (SAS Institute Inc., Cary, NC, USA) [34,35], and generalizability analysis was performed using SAGT v.1.0 (University of Malaga, Malaga, Spain) [36]. A *p*-value less than 0.05 was considered statistically significant. For Pearson's bivariate test, the following cut-off levels were used: ±0.01 to ±0.19 = very weak correlation; ±0.20 to ±0.39 = weak correlation; ±0.40 to ±0.59 = moderate correlation; ±0.60 to ±0.79 = high correlation [37].

3. Results

3.1. Variance Component and Generalizability Analysis

A generalizability analysis was performed. Initially, a variance component analysis was performed using a Least Squares procedure (VARCOMP method = type1), and Maximum Likelihood through the GLM (Generalized Linear Model) procedure for a 3-facet model [y = p e g], where (p): participant; (e): age; and (g): gender. A similar error variance was obtained with both procedures for all the factors of the questionnaires used, so it can be assumed that the sample is normal and homoscedastic [38,39].

From the models estimated in the analysis of variance components, a generalizability analysis was performed using the SAGT statistical program [36]. The cross-facet designs for the different models for each factor maintained the structure [e][g]/[p], where (p): participant; (e): age; and (g): gender. In all the models analyzed, satisfactory results were obtained with relative G coefficients (reliability) above 0.9 and absolute G (generalizability) around 0.7, confirming the reliability and generalizability of the numerical structure of the sample.

3.2. Descriptive, Correlational and Predictive Analysis

Tables 1 and 2 show the descriptive statistics of the variables under study. As can be seen, the skewness and kurtosis values are adequate. In addition, the Kolmogorov–Smirnov test was performed, suggesting that there was a normal distribution of the data in all variables ($p > 0.05$).

The analyses performed indicated that there were statistically significant differences by gender in the variables ego orientation ($t_{111} = 3.57$; $p < 0.001$) and task orientation ($t_{111} = -2.45$; $p < 0.05$), although not in cognitive ($t_{111} = -0.96$; $p > 0.05$) and somatic anxiety ($t_{111} = -0.77$; $p > 0.05$), CSAI-2 self-confidence ($t_{111} = 1.68$; $p > 0.05$) and CACD self-confidence ($t_{111} = 1.35$; $p > 0.05$), as well as in the insecurity factor ($t_{111} = -1.31$; $p > 0.05$).

Table 1. Descriptive statistics.

	Total Sample				Boys (n = 63)				Girls (n = 50)			
	M	***SD***	***S***	***K***	***M***	***SD***	***S***	***K***	***M***	***SD***	***S***	***K***
PMCSQ-2												
Ego	2.13	0.56	0.57	−0.09	2.29	0.51	0.37	0.50	1.93	0.56	1.04	0.32
Task	3.44	0.45	−0.47	0.24	3.35	0.44	−0.47	−0.70	3.55	0.44	−1.62	1.50
CSAI-2												
Cognitive anxiety	3.06	0.64	−0.44	0.30	3.01	0.58	0.06	−0.41	3.12	0.71	−0.90	0.99
Somatic anxiety	2.34	0.80	0.42	0.43	2.29	0.86	0.74	0.93	2.40	0.71	−0.20	−0.53
Self-confidence	3.83	0.74	−0.20	−0.76	3.93	0.76	−0.42	−0.52	3.69	0.70	0.05	−0.81
CACD												
Self-confidence	5.64	0.99	−0.40	−0.71	5.74	1.02	−0.63	−0.34	5.49	0.95	−0.11	−0.99
Insecurity	3.69	0.98	0.35	0.28	3.58	1.01	0.62	1.12	3.82	0.94	−0.04	−0.83

Note: *M* = Mean; *SD* = Standard Deviation; *S* = Skewness; *K* = Kurtosis.

Table 2. Correlation level (Pearson).

	Total		Boys		Girls	
	Ego	**Task**	**Ego**	**Task**	**Ego**	**Task**
Cognitive anxiety	0.23 *	−0.11	0.14	0.06	0.36 *	−0.45 **
Somatic anxiety	0.18	−0.04	0.28 *	−0.01	0.12	−0.14
Self-confidence (CSAI)	−0.23 *	0.46 ***	−0.17	0.49 ***	−0.48 **	0.56 ***
Self-confidence (CACD)	−0.24 *	0.45 ***	−0.16	0.52 ***	−0.47 **	0.47 **
Insecurity	0.31 **	−0.20 *	0.27 *	−0.09	0.49 ***	−0.45 **

Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 2 shows the correlations (Pearson) established between the variables. As shown, there are positive relationships between cognitive anxiety and ego orientation in the total sample and girls, as well as negative relationships with task orientation in girls. Somatic anxiety only correlates positively with ego in boys. Self-confidence correlates statistically and positively in all cases with task orientation, and negatively with ego orientation, except in boys. Finally, the insecurity factor correlates positively and in all cases with ego orientation, as well as negatively with task orientation in the total sample and girls.

Table 3 shows the linear regression analyses performed (using the stepwise technique). The variables excluded in the various cases are not present due to lack of significance ($p > 0.05$). All the resulting models meet the assumptions of model acceptance, such as linearity in the relationship between predictor variables and criterion, as well as homoscedasticity and normal distribution of the residuals, whose mean value is 0 and standard deviation practically 1 (0.99).

As seen in Table 3, for the total sample, ego orientation was a predictor of cognitive anxiety ($R = 0.18$; corrected $R^2 = 0.03$; $F = 15.70$; $p < 0.001$), task climate was a predictor of CSAI-2 self-confidence ($R = 0.46$; corrected $R^2 = 0.21$; $F = 118.13$; $p < 0.001$) and CACD ($R = 0.47$; corrected $R^2 = 0.22$; $F = 126.62$; $p < 0.001$), as well as insecurity ($R = 0.29$; corrected $R^2 = 0.09$; $F = 10.01$; $p < 0.01$).

By gender, in boys, ego orientation was a predictor of somatic anxiety ($R = 0.23$; corrected $R^2 = 0.05$; $F = 14.21$; $p < 0.001$), task climate was a predictor of CSAI-2 self-confidence ($R = 0.49$; corrected $R^2 = 0.24$; $F = 78.22$; $p < 0.001$) and CACD ($R = 0.52$; corrected $R^2 = 0.27$; $F = 91.07$; $p < 0.001$). For its part, in girls, task orientation was a predictor of cognitive anxiety ($R = 0.45$; corrected $R^2 = 0.20$; $F = 49.37$; $p < 0.001$), and jointly task and ego climate were predictors of CSAI-2 self-confidence ($R = 0.57$; corrected $R^2 = 0.32$; $F = 47.43$; $p < 0.001$) and CACD ($R = 0.52$; corrected $R^2 = 0.26$; $F = 36.71$; $p < 0.001$). In addition, ego climate was a predictor of insecurity ($R = 0.49$; corrected $R^2 = 0.23$; $F = 15.01$; $p < 0.001$).

Table 3. Linear regression analysis (successive steps).

Sample	Criterion Variable	*R*	R^2 Corrected	D-W	Variable Predictors	Beta	t	T	IVF
Total	A. Cognitive	0.18	0.03	1.98	Ego Climate	0.18	3.96 ***	1.00	1.00
	Self-confidence CSAI-2	0.46	0.21	1.59	Climate Task	0.46	10.87 ***	1.00	1.00
	Self-confidence CACD	0.47	0.22	1.51	Climate Task	0.47	11.25 ***	1.00	1.00
	Insecurity	0.29	0.09	1.63	Climate Task	−0.29	−3.16 **	1.00	1.00
Boys	A. Somatic	0.23	0.05	1.72	Ego Climate	0.23	3.77 ***	1.00	1.00
	Self-confidence CSAI-2	0.49	0.24	1.65	Climate Task	0.49	8.84 ***	1.00	1.00
	Self-confidence CACD	0.52	0.27	1.84	Climate Task	0.52	9.54 ***	1.00	1.00
Girls	A. Cognitive	0.45	0.20	2.02	Climate Task	−0.45	−7.03 ***	1.00	1.00
	Self-confidence CSAI-2	0.57	0.32	1.53	Climate Task	0.43	5.58 ***	0.59	1.71
					Ego Climate	−0.19	−2.52 *	0.59	1.71
	Self-confidence CACD	0.52	0.27	1.68	Climate Task	0.39	4.95 ***	0.58	1.74
					Ego Climate	−0.17	−2.16 *	0.58	1.74
	Insecurity	0.49	0.23	2.01	Ego Climate	0.49	3.87 ***	1.00	1.00

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

3.3. Cluster Analysis

Through cluster analysis (K-means), two clusters were generated according to the ego and task orientation variables. Each case was well classified, given that the maximum distance of each one with respect to the center of its group (0.99) was smaller than the distance between the centers of the clusters (1.08). Thus, and as can be seen in Figure 1, the two clusters (cluster 1, n = 68; cluster 2, n = 45) constituted were characterized by having (1) high task orientation and low ego orientation, and (2) lower task orientation and higher ego orientation than cluster 1, being overall moderate values with respect to cluster 1.

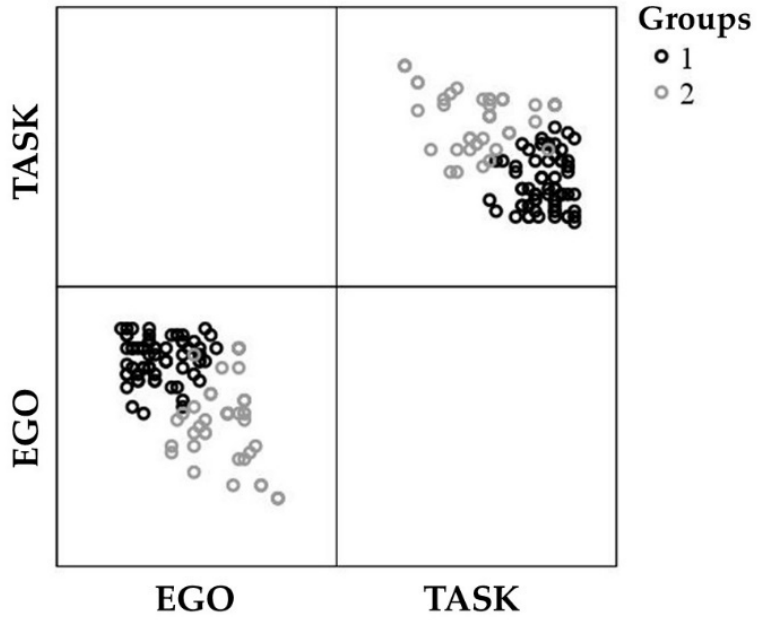

Figure 1. Clusters formed from measures of task and ego orientation.

Table 4 shows the descriptive statistics of the variables analyzed for the groups formed on the basis of ego and task climate. As can be seen, group 1 had higher and statistically significant scores in task orientation (($t_{111} = 11.86$; $p < 0.001$), CSAI-2 self-confidence ($t_{111} = 3.47$; $p < 0.001$) and CACD self-confidence ($t_{111} = 3.56$; $p < 0.001$), and lower scores on ego orientation ($t_{111} = -11.73$; $p < 0.001$) and insecurity ($t_{111} = -1.99$; $p < 0.05$).

Table 4. Descriptive and normality measures of the variables analyzed after cluster analysis.

	Group 1 (n = 68)				Group 2 (n = 45)			
	M	***DT***	***A***	***K***	***M***	***DT***	***A***	***K***
PMCSQ-2								
Ego	1.80	0.36	0.53	−0.60	2.62	0.36	−0.13	−0.60
Task	3.70	0.21	−0.71	0.05	3.01	0.40	−0.12	−0.24
CSAI-2								
Cognitive anxiety	3.05	0.68	−0.60	0.46	3.07	0.55	−0.02	−0.29
Somatic anxiety	2.31	0.75	0.18	0.02	2.34	0.78	0.20	−0.30
Self-confidence	4.00	0.75	−0.61	−0.13	3.52	0.62	0.31	−0.79
CACD								
Self-confidence	5.88	0.86	−0.38	−0.98	5.23	1.07	−0.05	−0.81
Insecurity	3.54	0.86	0.17	−0.32	3.88	0.97	−0.05	−96

Note: *M* = Mean; *SD* = Standard Deviation; *S* = Skewness; *K* = Kurtosis.

4. Discussion

The present research aimed to analyze whether the perception of the motivational climate in young soccer players determined the level of competitive anxiety and self-confidence. In addition, the results were analyzed according to gender, to check if there were differences between the female and male categories. The results have shown statistically significant relationships between the constructs studied. On the one hand, self-confidence has been positively related to a task-oriented climate and negatively related to an ego-oriented climate. Moreover, it is observed that ego orientation shows a statistically significant relationship with insecurity and anxiety, although there were differences between boys and girls.

Firstly, and for the total sample, the analyses carried out indicated that there was a statistically significant relationship between the perception of motivational climate and the rest of the variables analyzed. In particular, the relationship with anxiety was more limited, since only ego climate was related to cognitive anxiety. The relationships with self-confidence and insecurity were stronger, since ego climate was negatively linked to self-confidence and positively to insecurity, and task climate perception was positively associated with self-confidence and negatively with insecurity. Despite not finding relationships between somatic anxiety and motivational climate, these results are consistent with previous studies that obtained similar results in sports such as football and others [4,5,40–42].

Likewise, linear regression models showed that an ego-oriented motivational climate predicted scores in cognitive anxiety, and the task climate predicted scores in self-confidence and insecurity, although the latter in a negative sense. The relationship between the perception of ego climate and cognitive anxiety would be based on the concern to perform adequately and live up to the expectations projected by the coaches [43,44]. The relationship between a task-oriented motivational climate and self-confidence and security are aspects that have been widely highlighted in previous studies both in football and other team sports [5,45,46], which would correspond to a lower pressure to achieve a specific result and a greater focus on learning and personal development [47]. However, the model predicting cognitive anxiety had a low percentage of variance explained, which limits the conclusions drawn regarding the link between these variables. More robust associations were observed in the prediction of self-confidence, showing values above 20%.

In addition, cluster analyses, which were formed according to the variables ego and task-oriented climate perception, indicated that the group with higher scores in task climate and lower scores in ego climate had better self-confidence scores and lower scores in insecurity. No differences were obtained in cognitive and somatic anxiety, in line with the results obtained in the correlation and linear regression analyses, which found weak links between the perception of motivational climate and the perception of anxiety. This circumstance could probably be due to the fact that, although there were differences between groups in self-confidence, the values of this variable in both cases were high.

According to Voight et al. [48], for athletes to show high anxiety scores they must perceive a high ego-oriented motivational climate, but a low level of self-confidence. When athletes have self-confidence, the demands promoted by a coach who is focused on the result and performance do not have too high an impact on the anxiety that may be present. In addition, a study carried out by La Fratta et al. [49] observed significant relationships between high levels of self-confidence and low levels of anxiety in young soccer players, corresponding to a better probability of sports performance.

Second, the results highlighted statistically significant differences between boys and girls in the perception of motivational climate. Girls had a higher perception in a task-oriented motivational climate and less in ego than boys. This is congruent with previous studies that had highlighted gender differences in the perception of motivational climate, although the differences predicted in previous research highlighting differences in self-confidence [50–52] were not replicated in the present study. Based on these results and those found in previous studies, it could be indicated that girls are more receptive than boys to the behaviors of their coaches that tend to establish a more task-focused motivational climate, and boys would be more sensitive than girls to the behavior of their coaches that focuses on provoking a more ego-oriented climate.

However, more differences were found between genders when the relationships between variables were analyzed. In both boys and girls, a higher perception of a task-oriented motivational climate was positively related to self-confidence. This corresponds to what was postulated in previous studies that indicated that when more task-oriented climates are created, a more suitable work environment is generated to foster positive experiences when performing physical sports activity, improving their psychological competencies and allowing them to better face the challenges they are presented with [53,54]. However, only in girls was an ego-oriented motivational climate negatively and statistically associated with the level of self-confidence. Moreover, in boys, it is observed that an ego-oriented climate was positively related to somatic anxiety and insecurity. However, in girls, these relationships are more intense, with ego climate being positively associated with cognitive anxiety and insecurity, and task climate with the same variables but in the opposite direction. As can be seen, there is a higher level of association between the perception of motivational climate and the level of anxiety and confidence in girls than in boys. Previous studies had highlighted that the socialization processes to which boys and girls are subjected are usually different, with girls tending to prefer to participate in physical sports activities with a more leisure-oriented orientation than competition [4,44]. This could be on the basis of the results found, which suggest that the ego climate could decrease girls' confidence when they engage in sports practice, as well as increase their insecurity and anxiety levels.

In addition, the data obtained showed differences between boys and girls in the linear regression models. In boys, the perception of ego climate predicted somatic anxiety, but in girls, task climate was the variable that predicted cognitive anxiety. Moreover, in both boys and girls, there was a significant model predicting self-confidence, although in boys only task climate appeared as a predictor variable and in girls both task climate and ego climate. Finally, only in girls did a model emerge for the prediction of insecurity, predicted by the perception of an ego-oriented climate. This would corroborate previous findings [4,44], showing different ways of facing physical sports practice between boys and girls, suggesting that social and cultural aspects are probably embedded in the way in which sports practice is experienced depending on gender.

This work has some limitations. On the one hand, the sample size has prevented us from performing more conclusive analyses, such as structural equations. We intend to increase the sample size in subsequent studies in order to test explanatory models that provide greater support for the above. In addition, it would be interesting to extend the study to other sports, given that the socialization processes according to gender could be different depending on the type of sport practiced. In addition, it would be appropriate to explain other psychological variables that could be acting as modulators of the results.

Thus, aspects such as self-esteem, self-efficacy or coping strategies could be evaluated to observe whether the relationships between the perception of the motivational climate and anxiety or personal confidence are influenced by them.

5. Conclusions

In any case, this work has highlighted the importance that motivational climates have in the prediction of anxiety and self-confidence in young athletes, showing that the data found differences according to gender. Thus, the data obtained have corroborated a higher perception of ego-oriented and lower task-oriented motivational climate in girls. However, girls were notable because ego orientation has been related to lower confidence and higher insecurity than boys. These differences may be due to sociocultural elements, which will be analyzed in future research.

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