CLIMATE, ORIENTATION AND FUN IN UNDER-12 SOCCER PLAYERS

CLIMA, ORIENTACIÓN MOTIVACIONAL Y DIVERSIÓN EN FUTBOLISTAS ALEVINES

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ABSTRACT

The objective was to analyze the influence of soccer 7 (S7), soccer 8 (S8) and soccer 11 (S11) modalities in the U12 category, on the climate and motivational orientation and the degree of fun. 377 players (10.91±0.76 years) completed the PMCSQ-2, POSQ and CDPD questionnaires. In all modalities, high values were obtained for the task-oriented motivational climate and low for the ego-oriented one. The task-oriented perceived motivational climate score in S11 was lower (p <0.05) than in S7 and S8. In task orientation there were no differences between
modalities, with higher ego-oriented values in S11 (p <0.05) than in S7 and S8. The degree of fun in the three modalities was high, being lower in S11 (p <0.05) than in F8, with no differences between S7 and S11. Greater participation can increase fun and adherence to sports practice, preventing premature abandonment of the sport.

**KEY WORDS:** football 7, football 8, football 11, orientation, motivational climate, fun.

**RESUMEN**

El objetivo fue analizar la influencia de las modalidades fútbol 7 (F7), fútbol 8 (F8) y fútbol 11 (F11) en categoría alevín, sobre el clima y orientación motivacional y el grado de diversión. 377 jugadores (10,91±0,76 años) completaron los cuestionarios PMCSQ-2, POSQ y CDPD. En todas las modalidades se obtuvieron valores altos para clima motivacional orientado hacia la tarea y bajos para el orientado al ego. La puntuación clima motivacional percibido orientado hacia la tarea en F11 fue menor (p<0,05) que en F7 y F8. En la orientación hacia la tarea no hubo diferencias entre modalidades, con valores de orientación al ego en F11 superiores (p<0,05) a F7 y F8. El grado de diversión en las tres modalidades fue alto, siendo en F11 menor (p<0,05) que en F8, sin diferencias entre F7 y F11. Mayor participación puede aumentar la diversión y adhesión a la práctica deportiva, evitando el abandono prematuro del deporte.

**PALABRAS CLAVE:** fútbol 7, fútbol 8, fútbol 11, orientación, clima motivacional, diversión.

**1 INTRODUCTION**

The current panorama of competitions in U12 soccer players (10-12 years of age) in Spain is quite unbalanced. Different game modalities exist within the Territorial Federations of the Royal Spanish Football Federation (RFEF). Football 11 (F11) is used by federations such as Madrid and Aragon. Other federations, lacking a stable criterion, use football 7 (F7) or football 8 (F8). Some autonomous communities even choose to use two different game modalities.

Football is a sport composed of multiple systems interacting with one another (Reilly, Bangsbo y Franks, 2000) and its success depends on a combination of physical (Rodríguez-Fernández, Sanchez-Sanchez, Rodríguez-Marroyo y Villa, 2016), perceptive-decisional (Folgado, Gonçalves y Sampaio, 2018) and technical-tactical abilities (Bradley, Lago-Peñas, Rey y Gomez-Diaz, 2013). To these elements we should add psychological abilities, which are crucial to creating a solid football base with regard to terminology related to a climate of enjoyment, due to high participation, low anxiety to towards victory and a sense of physical well-being that will promote an increase in the degree of fun.
(Scanlan, Babkes y Scanlan, 2005). Being motivated in a positive way to practice football, and avoiding those facets which generate anxiety among younger players are some aspects that will improve upon both capacity to learn, and willingness to play the sport (Torregrosa, Boixadós, Valiente y Cruz, 2004).

There are studies that show how psychological factors influence young players’ performances (González Campos, Campos Mesa y Romero Granados, 2014; Fernández, Yagüe, Molinero, Márquez y Salguero, 2014). In order for good performance to occur, athletes must be motivated, focused, safe, cohesive, have a high degree of motivation and have good perception towards the task (De la Vega, Ruiz, García y del Valle, 2011). If young athletes are able to have control over their successes and failures, maintaining a good level of motivation and persisting in the task will increase their overall satisfaction and performance (García-Calvo, Leo, Martín y Sánchez, 2008; Almagro, Sáenz, González-Cutre y Moreno, 2011).

The achievement goal theory (Duda y Nicholls, 1992) indicates that people perform actions in accordance with objectives aimed at achieving goals which depend on what they hope to achieve, on expectations and values that each person considers necessary to achieving success. The goals tend to be task oriented when the individuals are engaged in executing and mastering a skill. The goals tend to be ego oriented when the individuals are focused on doing better than their peers, when they are seeking rewards, avoiding punishments, or when complying with external norms (García-Mas y Gimeno, 2008). The individuals is in some way motivated by both of these goals, though they may be oriented towards one more than the other, or they may exhibit higher or lower values in both (Navas, Soriano, Holgado y López, 2009). High values towards the ego make it difficult to maintain continuity in practicing a sport which generates negative self-perception and leads to giving up (Duda, 2001). Ongoing assessments, evaluations of results, external rewards and public recognition are examples of those things which lead to an orientation towards the ego (Navas et al., 2009).

Our understanding of perceived motivational climate is the climate that athletes perceive in what they consider to be situations of achievement, competence or ability (Nicholls, 1984). A motivational climate that is perceived as task oriented is that occurs when the skill level is judged according to its own standard of reference, depending on how much or little it has progressively improved regardless of a particular result. It entails creating maximum motivation among the players, independent of their perception of high or low ability, effort, low state of anxiety, high level of fun, intrinsic interest in activity and persistence in the task (Balaguer, Guivernau, Duda y Crespo, 1997). The perceived motivational climate involved in the ego occurs when the skill level is judged according to the response to failure and to an obtained result. This brings about a reduction of effort, high degree of anxiety and little persistence in the task (Balaguer et al., 1997).
The factors that affect the motivational climate of a subject can be family, peer group, coaches, etc. (Torregrosa et al., 2007; Henriksen, Stambulova y Roessler, 2010). According to García-Mas et al. (2011), those that favor an ego-centered climate lead to higher levels of anxiety and worry for the athlete. However, external factor may fosters a task-oriented climate, increasing the level of fun, commitment and opportunities to become more involved with sports increases (Ortiz et al., 2016). Regulation could be another example of an external factor which may affect the degree of motivation, goal orientation and perceived physical ability (Fernández et al., 2014).

When athletes perform more hours of sports practice, both in training and in competitions, the level of fun increases, and the level of boredom decreases. This then leads to fewer athletes not showing up to practice, or fewer athletes quitting the sport altogether (Valero y Latorre, 1998).

There are studies which examine the ways in which psychological factors promote success in young athletes, such as high motivation towards the task as well as maintaining continuity in it, few athletes who quit, high levels of commitment, less anxiety and worry or greater fun (Leo, Gómez, Sánchez-Miguel, Sánchez-Oliva y García-Calvo, 2009; Adie, Duda y Ntoumanis, 2010; García-Mas et al., 2011; Álvarez, Balaguer, Castillo y Duda, 2012; Leo, Sánchez-Miguel, Sánchez-oliva, Amado y García-Calvo, 2012; Fernández et al., 2014; Ortiz et al., 2016).

Getting young athletes to have high levels of motivation for the task will bring about a high level of commitment and greater involvement with sports practice that will propagate fewer athletes quitting, high levels of fun, persistence and continuity in the activity as well as preventing fear of negative evaluation, anxiety and social avoidance among others (Adie et al., 2010; Álvarez et al., 2012; Prieto, 2016).

The aim of this study is to analyze the influence that the game modalities used in U12 soccer have on psychological variables (task-oriented or ego-oriented), perceived motivational climate and degree of fun.

2 METHODS

2.1 PARTICIPANTS

In this study, participated 377 players from 17 teams with an average age of 10.91 ± 0.76 years (109 played in F7, 141 in F8 and 127 in F11). Teams competing in the highest level of U12 competition were selected, striving for a homogeneous sample in terms of expertise. The players belonged to several Autonomous Communities, many have 5 years of experience, and attend 2-3 training sessions and a competition every week.
2.2 MEASURES

The different competition modalities of the U12 category in Spain were used (F7, F8 and F11) as independent variables. These have their own laws (Table 1) prepared by the RFEF.

<table>
<thead>
<tr>
<th>RULES</th>
<th>LAWS</th>
<th>F7</th>
<th>F8</th>
<th>F11</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>The field of play</td>
<td>Natural or artificial materials.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dimensions</td>
<td>50-65 x 30-45 m.</td>
<td>90-120 x 45-90 m.</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>The Ball</td>
<td>62-66 cm. Number 4</td>
<td>68-70 cm. Number 5</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Number of players</td>
<td>14, 7 per team</td>
<td>16, 8 per team</td>
<td>22, 11 per team</td>
</tr>
<tr>
<td>VII</td>
<td>The duration of the match</td>
<td>2 x 25 min / 2 x 30 min</td>
<td>2 x 30 min</td>
<td></td>
</tr>
<tr>
<td>XI</td>
<td>Offside</td>
<td>From the line of 12 meters, in the direction of attack.</td>
<td>From the midfield line, in the direction of the attack.</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>Substitution-procedure. Number of substitution</td>
<td>Unlimited substitutions. Players can enter and exit as many times as the want from the field of play.</td>
<td>Up to a maximum five substitutions. A substituted player cannot return to the field of play.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Size of the goals</td>
<td>6 x 2 m</td>
<td>7.32 x 2.44 m</td>
<td></td>
</tr>
</tbody>
</table>

Note: F7 = football 7; F8 = football 8; F11 = football 11; m = meters; cm = centimeters; min = minutes. Fuente: RFEF, 2016.

The dependent variables used were the perceived motivational climate, the perception of success and the degree of fun. To measure the perceived motivational climate, was used the Spanish version (Balaguer et al., 1997) of the Questionnaire on the Motivational Climate Perceived in Sports-2 (PMCSQ-2) of Newton and Duda (1993), composed of 33 items. The validation of this questionnaire to a Spanish population was carried out by González-Cutre, Sicilia and Moreno (2008). The variable task-oriented motivational climate was measured with a subscale of this questionnaire composed of 17 items (Cronbach's α = 0.82), while the ego-oriented motivational climate variable with a subscale composed of 16 items (α of Cronbach = 0.84). For the perception of success, was used the Spanish version (Cervelló, Escartí and Balagué, 1999) of the Success Perception Questionnaire (POSQ) of Roberts and Balagué (1991) composed of 12 items. The variable climate perception of success oriented towards the task was measured with a subscale of this questionnaire composed of 6 items (Cronbach's α = 0.80), while the perception of success oriented to the ego, with a subscale composed of 6 other items (Cronbach's α = 0.84). For the degree of fun was used the Spanish version (Cecchini, González, Carmona and Contreras, 2004) of the Practicing Sports Questionnaire (CDPD) of Duda and Nicholls (1992). The degree of fun variable was measured with a scale of 8 items, of which 3 were analyzed in an inverse manner (Cronbach's α
= 0.67).

2.2 PROCEDURE

After sending the information to those teams participating in the study, a convenient day, time and place was set for the players which would allow them complete the questionnaire individually. This process was always carried out at the beginning of a training session, thereby preventing the possibility of the player being physically and/or mentally fatigued or otherwise conditioned by the activity recently performed. The study was approved by the technical department of the clubs. Before starting to collect data, those in charge of the players signed an informed consent indicating that participation was voluntary and that anonymity was maintained at all times. This design was carried out with respect to the provisions of the Declaration of Helsinki.

2.3 DATA ANALYSIS

Data analysis was performed using SPSS for Windows v. 20.0 (SPSS, Inc., Chicago IL.) Results are presented as average ± standard deviation (SD). The Shapiro-Wilks test was performed to study the normality of the study variables, of which was no significance was detected. To analyze the differences in the psychological variables according to the type of game modality, the one-way ANOVA test and the Tukey post hoc test were used. A significance level of p<0.05 was set. Additionally, the difference between variables was assessed by calculating the effect size (ES) through the Cohen d test (Cohen, 1988). The value of d was < 0.1 (very small), 0.1 to < 0.2 (small), 0.2 to < 0.5 (moderate), 0.5 to < 0.8 (large) and ≥ 0.8 (very large). the Statistical Package for Social Sciences (version 21.0 for Windows, SPSS® Inc, Chicago, IL, USA). Statistical significance was set at p < 0.05.

3 RESULTS

3 ANOVAS of a single factor were performed to study the effect of game modality (F7, F8, F11) on perceived motivational climate, type of orientation and degree of fun. Differences were found in the game modalities, in the ego-oriented perceived climate variables (F(2,374)=3.85, p=0.022), task-oriented perceived climate (F(2,374)=4.68, p=0.010), orientation towards the ego (F(2,374)=5.55, p=0.004), orientation towards the task (F(2,374)=3.05, p=0.048) and fun level (F(2,374)=3.23, p=0.040). The empirical analysis performed with the Tukey test revealed lower levels of task-oriented motivational climate (p<0.05) in F11 (4.39±0.55) compared to F7 (4.54±0.39) y F8 (4.56±0.45). Higher levels of perceived ego-oriented motivational climate were found (p<0.05) in F11(2.14±0.71) than in F8 (1.91±0.63) (Figure 1).
Figure 1. Perceived motivational climate in the different modalities.
Note: F7 = football 7; F8 = football 8; F11 = football 11; ES = effect size. * = Significant difference with F11 (p<0.05).

Regarding task orientation, no significant differences were observed between F7 (4.53 ± 0.64), F8 (4.68 ± 0.53) and F11 (4.51 ± 0.66). Significantly higher levels of ego orientation (p<0.05) were found in F11 (2.99 ± 1.03) compared to F7 (2.57 ± 1.06) and F8 (2.65 ± 1.05) (Figure 2).
Figure 2. Type of orientation in the different modalities.
Note: F7 = football 7; F8 = football 8; F11 = football 11; ES = effect size. * = Significant difference with F11 (p<0.05).

Finally, lower levels of fun were observed (p<0.05) in F11 (4.71 ± 0.57) compared to F8 (4.84 ± 0.28), and no significant differences were found between these two modalities with respect to F7 (4.72 ± 0.39) (Figure 3).

Figure 3. Degree of fun in the different modalities.
Note: F7 = football 7; F8 = football 8; F11 = football 11; ES = effect size. * = Significant difference with F11 (p<0.05).
4 DISCUSSION

The aim of this study is to analyze the influence that the game modalities (F7, F8 and F11) in U12 soccer have on psychological variables (task-oriented or ego-oriented), perceived motivational climate and degree of fun. In the three game modalities, high values were obtained in terms of the perceived task-oriented motivational climate, while those obtained for the perceived ego-oriented motivational climate were low. These results are similar to those of other studies among U12 soccer players, which obtained higher values for the perceived task-oriented climate (Cecchini, González, Prado y Brustad, 2005; Sánchez-Oliva, Leo, Sánchez-Miguel, Amado y García-Calvo, 2010). It seems that subjects of these ages (10-12 years) in any general physical activity, are mostly task-oriented, whereas ego orientation increases with age (Xiang y Lee, 2002; Flores, Salguero y Márquez, 2008).

Higher values of perceived task-oriented motivational climate were obtained in F7 and F8 than in F11. In this modality, the values obtained for the climate of perceived ego-oriented motivation were higher than those obtained in F8. This data is similar to that obtained by Fernández et al (2014) in their study comparing F7, with a sample of U12, and F11 with a sample of players aged between 13 and 14 (U14). Both cases indicated high levels of task orientation, but F11 players perceived a slightly greater ego-oriented climate than those of F7. One of the reasons why the F11 obtains lower values regarding the perceived task oriented motivational climate with respect to F7 and F8, may be the regulation used in these modalities, which allows unlimited substitutions during the game, meaning that the period of participation in the game is different among the players. This can result in no starting-substitute role being created in F7 and F8, given that cases exist in which a player who starts a game as a substitute can play the same number of minutes or more than a starter. Thanks to this, it is possible to prevent external agents (parents, coaches, managers, sports representatives etc.) from making social comparisons as a basis for judgments regarding success. These judgements cause differential attention and positive reinforcement towards only the competent players after a win, which may then result in them being given more participation time than others, possibly generating an increase in the ego-oriented perception climate in F11 (Cruz y Boixadós, 1999; García-Más et al., 2011; Fernández et al., 2014).

An increase in perceived ego-oriented motivational climate causes high levels of anxiety and worry (Duda, 2001; García-Más et al., 2011) unpleasant conditions in sports environments, demotivation (Bortoli, Maurizio, Filho, y Robazza, 2014) and authoritative behaviors and pressure from parents (Sánchez, Leo, Sánchez-Oliva, Amado y García-Calvo, 2013). Therefore it seems that F11 (modality used by professional adults), with young players and under the current regulations, can generate a motivational climate towards the ego higher than that generated by F7 and F8, which to favor a task-oriented motivational climate. It is possible, as noted above, that the regulation of F7 and
F8, with unlimited changes, helps to generate a task-oriented motivational climate.

As in the previous variable, high values of task orientation and very low values of ego orientation were obtained in the three modalities. In the comparison between modalities, the values obtained for the ego orientation in F11 were higher than those of F7 and F8. These results are similar to those obtained in previous studies which indicate that young athletes, as a general rule, tend to be more task-oriented than ego-oriented (Caglar y Hülya Aşçı, 2010; Adie et al., 2010; Ortiz et al., 2016).

The reference of elite F11 players does not exist in F7 and 8, where there are no professional competitions. This aspect, together with the system of substitutions used in F7 and F8, which ensures a higher level of sport practice during the matches, could be considered factors that lead to the improvement of the overall sports experience, competitiveness, fun, and involvement in the task (Nuviala, Ruiz y García, 2003; Prieto, 2016).

Some authors have already demonstrated in studies with U12 players that task-orientation results in greater commitment in terms of personal investments, involvement, persistence in sports, fun and continuity in sports practice (Leo et al., 2009). It this way it seems pertinent that this should be the preferred orientation by U12 players.

Finally, the fun values obtained in a general way were higher in the three modalities (very close to the maximum level marked by the CDPD questionnaire). Differences were observed between F11 and F8, with lower fun values in F11. In general, the values obtained are similar to those of previous studies, and indicate that all game modes result in U12 athletes having fun, regardless of the internal logic and regulation of each modality and the external agents of each context (García-Más et al., 2011; Abraldes, Granero-Gallegos, Baena-Extremera, Gómez-López y Rodríguez-Suárez, 2016).

Regarding the comparison between modalities, our results are different from those obtained by Cruz and Boixadós (1999) in the comparison between F7 (U12) and F11 (U14 = 12 and 13 years), where the latter scored lower than the former in degree of fun. Our results indicate differences only between F11 and F8. This may be due to the fact that the regulation regarding substitution type is a determining factor which allows F8 players to participate more during the games than those of F11, which perhaps means that they have a greater degree of fun while participating in sport (Scanlan et al., 2005; Prieto, 2016).

However, it is true that this type of regulation regarding the substitutions is the same in F7, though no differences were found in F11. It is important to indicate that the type of substitutions is not the only determining variable regarding the degree of fun. Other variables that determine degree of fun may exist, but have not been contemplated in this study. Therefore, these results should be
interpreted with caution and new studies are necessary to expand these results and analyze external factors that influence young athletes.

Thanks to the results of this work, we want to guide the RFEF and Territorial Federations, clubs, teams and technical bodies in the selection and use of a suitable game modality for the U12 category with respect to psychological demand. It is recommended that the game rules of F11 be modified, leaving the number of substitutions open as is done in F7 and F8. This recommendation will foster a higher participation of all the players in the competition leading to an increase in levels of fun and adherence to sports, and avoiding, in some cases, early withdrawal.

5 CONCLUSIONS

The values of perceived motivational climate oriented to the task in the three games modalities were high, while those obtained for the perceived motivational climate oriented to the ego were low. The task-oriented motivational climate was higher in F7 and F8 than in F11.

As in the previous variable, the values of orientation to the task were high in the three modalities. The F11 obtained values of orientation to the ego, greater than the modalities F7 and F8.

The three game modalities indicate in the participants high levels of fun. However, the F8 modality shows higher fun values than the F11 modality.

6 REFERENCES


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