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## ORIGINAL

### DESIGN AND VALIDATION OF A SOCIO-EMOTIONAL QUESTIONNAIRE FOR YOUTH FOOTBALL PLAYERS

### DISEÑO Y VALIDACIÓN DE UN CUESTIONARIO SOCIO-EMOCIONAL PARA JÓVENES FUTBOLISTAS DE ÉLITE

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#### ABSTRACT

The objective of this study was to design a valid questionnaire to detect and manage the socio-emotional factors that influence the performance of young football players. A group of specialists designed a self-completion questionnaire of 40 items grouped into 3 dimensions. Content validity was analysed and evaluated by 14 experts and construct validity was analysed by factorial analysis. To evaluate reliability the questionnaire was administered to young elite football players, and internal consistency was analysed with Cronbach's alpha. Test-retest reliability was assessed with the intraclass correlation coefficient (ICC). Factor analysis confirmed the existence of 18 factors, which as a whole explained 65.40% of the total variance. The Cronbach's alpha of the questionnaire was 0.944 ( $p < 0.01$ ) and the ICC of the entire questionnaire was 0.894 ( $p < 0.01$ ). The questionnaire gathers together enough psychometric

properties to be considered a valid and reliable tool for gauging the socio-emotional environment of young football players.

**KEYWORDS:** socio-emotional, questionnaire, youth, football, soccer, development.

## RESUMEN

Con el objetivo de detectar y controlar los factores socio-emocionales que influyen en la progresión del joven futbolista, se diseñó un cuestionario auto-cumplimentado de 40 ítems, agrupados en 3 dimensiones (entorno social, bienestar e inteligencia emocional). Se analizó la validez de contenido mediante la valoración de 14 expertos y la validez de constructo mediante análisis factorial. Se evaluó la fiabilidad del cuestionario, administrándolo a jóvenes futbolistas de élite ( $n=281$ ) y analizando la consistencia interna por el método del Alfa de Cronbach y la fiabilidad test-retest mediante el coeficiente de correlación intraclase (CCI). El análisis factorial confirmó la existencia de 18 categorías, que en conjunto explican el 65,40% de la varianza total. El Alfa de Cronbach del cuestionario fue de 0,944 ( $p<0,01$ ) y el CCI de 0,894 ( $p<0,01$ ). El cuestionario reúne suficientes propiedades psicométricas como para ser considerado una herramienta válida y fiable para medir el entorno socio-emocional de jóvenes futbolistas.

**PALABRAS CLAVE:** Cuestionario, Socio-emocional, Jóvenes futbolistas, Progresión deportiva

## INTRODUCTION

Whether or not a young person is able to make successful progress in their sporting career depends on numerous factors. Psychosocial factors are one of these which should be considered, as it is worth noting that the social framework in which an athlete develops conditions and determines their personal progress to a great extent (Phillips, Davids, Renshaw, & Portus, 2010; Williams & Reilly, 2000).

Although a positive social environment seems to be beneficial to the general development of young athletes, a more in-depth examination of socio-economic studies related to under-19 football shows that the social context is not an aspect that has been sufficiently researched (Donohue, Miller, Crammer, & Cross, 2007). Research places a preference on the assessment of physical and physiological aspects (Burgess & Naughton, 2010). Therefore, Lorenzo (2002) states that we need more studies of a psychosocial nature with a multidimensional view, as "...anthropometric or physiological characteristics are of no use when it comes to effectively predicting successful progress in these sports". Along this same line of thought, Williams & Reilly (2000) also propose a holistic view that takes the environment into account during the process of detecting and training talented young people.

Various studies have found that teenagers who sense a negative social environment suffer more social anxiety (Inglés, Hidalgo, Méndez, & Inderbitzen, 2003) and have greater difficulty showing assertiveness (Spence & Liddle, 1990) and relating with the opposite sex (Goldberg & Botvin, 1993) and with their parents and peers (Cavell & Kelley, 1994). In addition, higher levels of emotional intelligence (hereinafter EI) are associated with greater psychological skills for controlling competitive situations (Crombie, Lombard, & Noakes, 2009). Depending on how young athletes perceive their social environment, this last aspect generates a state of positive or negative well-being that can have an influence on their sporting performance (Lane et al., 2010).

At no time are the training process or the path towards high performance free of risks and situations that expose footballers to the continuous predicament of having to deal with competition-related stresses (Crombie, et al., 2009). The phenomenon of compensation or *Resilience* should also be assessed in the context of this multidimensional framework, as there are cases where an athlete's efforts and motivations go beyond environmental, morphological and social limitations (Vaeyens, Lenoir, Williams, & Philippaerts, 2008).

The scales that we used to draw up the socio-emotional questionnaire independently measure the subject's environmental relations (Donohue, et al., 2007), emotional intelligence or *resilience* (Bar-On, 1997) and well-being and happiness (Alarcón, 2006). Furthermore, as usual we have found that scales measuring the social relationships of a subject tend to focus on the figures of the coach, parents and team mates, leaving out very important aspects that ought to be taken into account such as relations with the rest of their family members and with team support staff, teachers, friends, partners, representatives and the general public, etc. (VanYperen, 1995), which we do tackle in our questionnaire. We have chosen to design a self-completion tool, as this method is the most commonly used due to its low cost and easy application (Méndez, Inglés, & Hidalgo, 2001). Among other advantages, this type of tool allows the thoughts and feelings of the subject in social situations to be evaluated in an objective manner (Gresham & Elliot, 1984).

In short, the aim of the project was to design and validate a socio-emotional (hereinafter S-E) questionnaire as a valid and reliable tool to inform us in a comprehensive manner on the socio-emotional factors that influence the successful progress made by young footballers.

## **MATERIAL AND METHODS**

The questionnaire was designed by a group of specialists. Participating was a multidisciplinary team with 7 members, made up of teaching staff from the *Facultad de Ciencias de la Actividad Física y del Deporte de Madrid* (Madrid Faculty of Physical Activity and Sport Science) specialising

in sociology and sport psychology, as well as graduates in physical activity and sport science with professional connections to the three lower categories of the most important clubs in Madrid.

The specialists drew up a list of aspects to be evaluated and the dimensions that should ultimately be included in the questionnaire: social environment, well-being and emotional intelligence. The items in the questionnaire were subsequently drawn up (López Torres et al., 2005). The instruments available for evaluating some of the factors relevant to the socio-emotional environment were reviewed and it was decided that closed answer items should be composed. The questions included in the *Preliminar\_1* questionnaire were selected based on consensus between the researchers. They were drawn up in a clear, simple and concise manner to ensure that less time and attention were required from the young people, and they were kept neutral so as not to influence their answers. Questions drawn up in a negative manner were avoided, as were questions requiring the use of memory or effort since the questionnaire was aimed at young people. As regards the order of the questions, the simplest were placed at the beginning, the weightiest in the middle and the least relevant were left until the end. The questionnaire was constructed in a logical order, by subject group. The effect of any questions contaminating or creating bias in others during completion of the questionnaire was avoided. In accordance with the indications of Martín (2004), we believe that a minimum of 6 items should be considered in order to evaluate a dimension. We chose a scale from 1 to 10 for the evaluation of each item, as we thought that it would be easier for the young footballers to evaluate the questions if they were similar and bore some relationship to grades used in the academic environment.

Subsequently, two pilot tests were conducted for the purpose of establishing the clarity of the questions (comprehension by the young people) and of the instructions contained in the scale, as well as whether any improvements should be added and in order to log the time necessary to complete the test. One test was conducted with students from the 3<sup>rd</sup> year of the degree in Physical Activity and Sports Science. The other test was conducted with 10 young footballers from the under-19 categories of Getafe C.F. (Football Club) (mean of 15.1 ±1.4 years), with a similar profile to those who will be used in the sample given the final questionnaire. The young people answered the 44 proposed items. After checking comprehension difficulties with some questions and identifying any duplicate information, the number of items was reduced to 42 and the corresponding modifications were made to produce the final questionnaire *Preliminar\_2*.

A total of fourteen experts participated in the process of validating the preliminary questionnaire. The preliminary questionnaire was sent to the experts along with a document entitled "Questionnaire evaluation", allowing them to assess the following aspects of each item: relevance, content and wording. Each of the items was evaluated using a scale numbered from 1 to 6, with 1 corresponding to "completely unsuitable" and

6 to "very suitable". A section was left for adding remarks for each item. The responses from the experts were subjected to a statistical analysis, which we used to determine which questions should be included in the final questionnaire (Noya, Benito, Calderon, & Gómez, 2008).

A sample of 281 young footballers aged between 13 and 18 years from the under-19 categories of a first division club from Madrid was used for the reliability analysis. All of them were male and were participants in competitions between Spain's autonomous regions. One week later, a sample of 15 of the footballers previously surveyed was selected from the under-19 category sampling unit. 5 footballers from each of the following categories were selected: *infantil* (children), *cadete* (under-17) and *juvenil* (under-19). The subjects repeated the questionnaire with the questions out of order, for the purpose of conducting a test-retest reliability analysis.

The questionnaire was given after gaining permission from the club. The coaches sent a letter to parents explaining the goals of the project and requesting consent for participation in the study. The letter guaranteed that the information collected would be kept private under Organic Law 15/1999 of 13<sup>th</sup> December on personal data protection. The final questionnaire was approved by the ethics committee of the *Universidad Politécnica de Madrid* (Madrid Polytechnic University) for use in subsequent research.

## Statistical analysis

Version 15.0 for Windows of the program SPSS (*Statistical Package for the Social Sciences*) was used. The statistical significance level was set at  $\alpha < 0.05$ .

The following statistical analyses were used for the validation process: Central tendency and dispersion statistics were used by the evaluators to assess the questionnaire. The Mann-Whitney U test was used to compare the scores given to the evaluated sections and the different dimensions of the questionnaire by the two groups of experts. To observe the aggregation or relationship of the answers in the three sections (relevance, content and wording), Spearman's Rho was used for bivariate analysis and the intraclass correlation was used to observe the relationship between the three sections as a whole.

A principal component factor analysis with Varimax rotation was carried out to determine construct validity. Factor analysis adequacy was verified using the Kaiser-Meyer-Olkin measurement and Bartlett's test of sphericity, as well as the associated anti-image correlation matrix, which is more complete as it considers both correlations and partial correlations and, unlike the first test, is not biased by sample size.

The following exclusion criteria were established using the results obtained from the evaluation of the preliminary questionnaire and the statistical analyses.

**First criterion:** Exclusion requested by at least two of the experts.

**Second criterion:** Obtaining a score for an independently evaluated item that falls below a confidence interval of 95% with respect to the average for the entire test, as well as a coefficient of variation greater than 25% for the relevance and content parameters.

Additionally, all items meeting any of the following criteria were reviewed:

**First review criterion:** Requested by at least one of the experts.

**Second review criterion:** Obtaining a lower-than-average score for the relevance and content parameters, as well as a coefficient of variation of 20% or more in the wording criteria evaluated by the experts.

The final questionnaire was obtained by applying these criteria to the preliminary questionnaire.

For the statistical analysis of the reliability of the final questionnaire, Cronbach's alpha coefficient was used to evaluate internal consistency, i.e. the degree of convergence of each item with respect to its corresponding dimension. Test-retest reliability was analysed using the intraclass correlation coefficient (ICC), which measures the level of agreement between two measurements and indicates whether the result of the mean is stable over time.

## RESULTS

Table 1 shows the Mean  $\pm$  SD of the item scores given to each of the categories by the experts.



**Table 1:** Mean score and standard deviation after evaluation by each expert.

|             | <b>RELEVANCE</b> | <b>CONTENT</b> | <b>WORDING</b> | <b>TOTAL</b> |
|-------------|------------------|----------------|----------------|--------------|
|             | Mean ± SD        | Mean ± SD      | Mean ± SD      | Mean ± SD    |
| Expert_1    | 4.76 ±1.17       | 3.96 ±1.13     | 4.96 ±0.56     | 4.56 ±1.08   |
| Expert_2    | 4.93 ±1.27       | 5.24 ±0.96     | 5.36 ±0.77     | 5.18 ±1.03   |
| Expert_3    | 5.44 ±0.55       | 5.67 ±0.52     | 5.65 ±0.53     | 5.59 ±0.54   |
| Expert_4    | 5.95 ±0.31       | 5.90 ±0.44     | 5.71 ±0.84     | 5.85 ±0.58   |
| Expert_5    | 4.98 ±0.78       | 5.04 ±0.85     | 5.33 ±0.80     | 5.12 ±0.82   |
| Expert_6    | 5.48 ±0.76       | 5.50 ±0.63     | 5.43 ±0.50     | 5.47 ±0.64   |
| Expert_7    | 5.58 ±0.73       | 4.88 ±0.85     | 4.72 ±1.01     | 5.06 ±0.94   |
| Expert_8    | 6.00 ±0.00       | 5.88 ±0.45     | 5.98 ±0.15     | 5.95 ±0.28   |
| Expert_9    | 5.02 ±0.73       | 4.96 ±0.86     | 4.89 ±1.06     | 4.96 ±0.89   |
| Statistic_1 | 6.00 ±0.00       | 6.00 ±0.00     | 5.98 ±0.15     | 5.99 ±0.09   |
| Statistic_2 | 5.11 ±1.35       | 5.07 ±1.42     | 4.69 ±1.74     | 4.96 ±1.52   |
| Statistic_3 | 5.13 ±1.58       | 4.56 ±1.64     | 3.63 ±1.86     | 4.44 ±1.80   |
| MEAN        | 5.37 ±0.77       | 5.22 ±0.81     | 5.19 ±0.83     | 5.26 ±0.85   |
| STD_DEV.    | 0.44 ±0.51       | 0.61 ±0.45     | 0.67 ±0.54     | 0.52 ±0.48   |

Table 2 shows the result of comparing the two groups of experts with each of the three categories by performing the Mann-Whitney U test.

**Table 2:** Results of the Mann-Whitney U analysis to compare the means obtained by each group of experts for each of the criteria to be evaluated

|                          | Relevance    | Content      | Wording      |
|--------------------------|--------------|--------------|--------------|
| Mann-Whitney U           | 10.0         | 13.0         | 8.5          |
| P (Sig. (1-tailed))      | 0.578        | 0.926        | 0.354        |
| Statisticians (mean ± σ) | 5.413 ± 0.50 | 5.210 ± 0.72 | 4.763 ± 1.17 |
| Experts (mean ± σ)       | 5.349 ± 0.45 | 5.227 ± 0.61 | 5.335 ± 0.41 |

There are no significant differences between the experts and the statisticians in terms of their evaluation of the relevance, content and wording of the items on the questionnaire.

Table 3 shows a comparison between the two groups of experts for each of the dimensions included in the questionnaire.

**Table 3:** Results of the Mann-Whitney U analysis, to compare the means obtained by each group of experts for each of the criteria to be evaluated with respect to each dimension

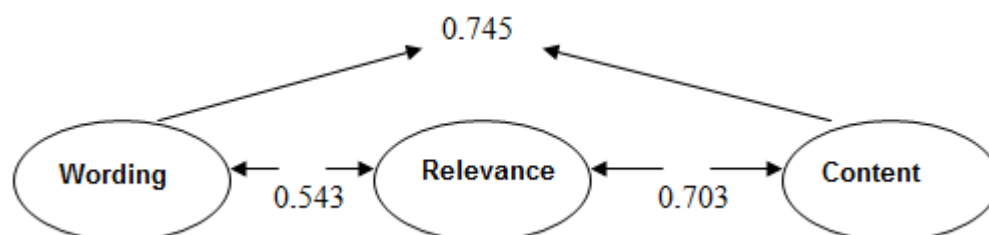
| Dimension                 | Criteria  | Expert Type |               |           | Mann-Whitney U |               |
|---------------------------|-----------|-------------|---------------|-----------|----------------|---------------|
|                           |           | Experts     | Statisticians | Total     | Z              | p             |
| <b>Social E.</b><br>n=305 | Relevance | 5.46±0.74   | 5.41±1.32     | 5.43±0.91 | -2.533         | <b>0.0113</b> |
|                           | Content   | 5.26±0.95   | 5.30±1.33     | 5.28±1.05 | -2.166         | <b>0.0303</b> |
|                           | Wording   | 5.42±0.84   | 5.04±1.63     | 5.23±1.10 | -1.167         | 0.2432        |
| <b>Well-being</b><br>n=69 | Relevance | 5.02±1.16   | 5.28±1.00     | 5.15±1.13 | -1.957         | <b>0.0504</b> |
|                           | Content   | 4.94±0.99   | 5.17±1.07     | 5.05±1.02 | -2.021         | <b>0.0433</b> |
|                           | Wording   | 5.09±0.89   | 4.39±1.73     | 4.74±1.16 | -0.217         | 0.8283        |
| <b>EI</b><br>n=93         | Relevance | 5.14±1.05   | 5.27±1.16     | 5.20±1.07 | -1.112         | 0.2663        |
|                           | Content   | 5.18±0.99   | 4.95±1.53     | 5.07±1.13 | -0.334         | 0.7384        |
|                           | Wording   | 5.31±0.85   | 4.18±1.97     | 4.74±1.29 | -1.538         | 0.124         |
| <b>Other</b><br>n=53      | Relevance | 5.11±1.00   | 5.75±0.50     | 5.43±1.10 | -0.97          | 0.3318        |
|                           | Content   | 5.22±1.02   | 5.75±0.50     | 5.49±1.20 | -0.336         | 0.7369        |
|                           | Wording   | 5.33±0.63   | 5.25±1.50     | 5.29±1.13 | -1.045         | 0.2962        |

There are differences between the experts and the statisticians in that the latter systematically award higher scores in the relevance and content sections of the "social environment" and "well-being" dimensions (in bold). There are no significant differences in the rest of the sections. If we focus on the mean scores of the sections where there is a significant difference, it can be seen that the mean score is high and that there is not an appreciably large difference between one group and another. This leads to the deduction that the large number of cases, particularly in the social environment dimension (n=305), makes the differences become significant.

In addition, it can be seen that the Z value is negative in all of the sections, for which reason we can state that the group of statisticians always scored higher than the specialists.

Figure 1 shows the correlations between the three evaluation criteria, measured using Spearman's Rho statistic. All feature a significance of  $p < 0.01$ .

**Figure 1.** Analysis of the correlation between the relevance, content and wording criteria



The ICC for observing the relationship between the three sections as a group gives us a result of 0.808, with a confidence interval of 95%.



In the factor analysis, construct validity was analysed using Bartlett's test of sphericity as a measure of sampling adequacy, which was significant at ( $p < 0.001$ ), along with the Kaiser-Meyer-Olkin measurement, which was 0.717 with a low proportion of anti-images, meaning that the correlation was high and it was worth proceeding with the analysis (Visatua & Martori, 2003).

Application of the first exclusion criteria led to the elimination of three items (22, 31 and 38) from questionnaire *Preliminar\_2*.

The second exclusion criteria led us to eliminate items 17 and 28, along with some of the sections in the "Family Information" unit, as a score of below a 95% confidence interval was obtained and the coefficient of variation was more than 25% in the relevance and content parameters. The mean score of item 17 was  $4.485 \pm 1.176$  and item 28 was  $4.403 \pm 1.741$ , both of which fell outside the confidence limit of 4.68.

After applying the two item review criteria we had to modify various spelling, wording, expression and content aspects of all items with the exception of: 8, 10, 16, 20, 25, 29 and 39. Furthermore, in line with the recommendations made by experts in the "remarks" section, we added 3 new items to the questionnaire. One of these items completed an already existing sub-category in the "well-being" dimension, and the other two items incorporated 2 new categories into the dimension of "social environment". These were "media" and "representatives".

The factor analysis confirmed the existence of 18 factors, which together explained 65.40% of the total variance of the results. In the end, the final questionnaire was drawn up with the following dimensions and their corresponding categories:

**Table 4:** Shows the dimensions assessed by the questionnaire and their respective categories

| <b>Social Environment</b>                  |  |
|--|--|
| 1 Relationship with the family environment | 6 Relationship with partner                            |
| 2 Relationship with team staff             | 7 Relationship with representative/agent               |
| 3 Relation with teammates                  | 8 Co-habitation in a residence or shared accommodation |
| 4 Relationship with friends or peers       | 9 General public                                       |
| 5 Relationship with school environment     | 10 Media   |
|  | 11 Socio-economic status                               |
| <b>Well-being</b>                          |  |
| 12 Happiness                               | 13 Stress  |
| <b>Emotional Intelligence (EI)</b>         |  |
| 14 Emotional perception                    | 15 Emotional expression                                |
| 16 Emotional self-regulation               |  |
| <b>Other</b>                               |  |
| 17 Moral development                       | 18. Performance self-assessment                        |

After performing the corresponding analyses for validating the questionnaire, we conducted the statistical analyses necessary to determine its reliability. Table 5 uses Cronbach's alpha to show the internal consistency of each of the 4 dimensions and of the questionnaire as a whole.

**Table 5.** Cronbach's alpha reliability indices of the final questionnaire and its different dimensions ( $p < 0.01$ )

|                  | Social E. | Well-being | EI    | Other | Entire questionnaire |
|------------------|-----------|------------|-------|-------|----------------------|
| Cronbach's alpha | 0.746     | 0.783      | 0.544 | 0.616 | 0.944                |

A sample of the young footballers ( $n=15$ ) was invited back after 1 week to check the test-retest reliability. Table 6 shows the coefficients for each of the dimensions.

**Table 6.** Intraclass correlation coefficient (ICC) indices of the questionnaire ( $p < 0.01$ )

|     | Social E. | Well-being | EI    | Other | Entire questionnaire |
|-----|-----------|------------|-------|-------|----------------------|
| ICC | 0.948     | 0.798      | 0.323 | 0.720 | 0.894                |

## DISCUSSION

The final questionnaire was shown to have an excellent overall internal consistency ( $\alpha=0.944$ ) with an excellent measurement value (George & Mallery, 1995). We observed that all of the dimensions had acceptable values with the exception of emotional intelligence (EI), whose value is somewhat poorer (0.544). It is considered that indices of this sort are sufficient for these initial phases of hypothetical measurements of a construct (Nunnally, 1994). The internal consistency result for the EI dimension is similar to the values obtained on the sport-oriented emotional competence scale (Arruza et al., 2005), but moves away from the results obtained in the Bar-On *Emotional Quotient Inventory* (Bar-On, 1997) and on the *Trait Meta-Mood Scale* ( $\alpha=0.89$ ) (Fernández-Berrocal & Ramos, 2002). It should be taken into account that our questionnaire measures EI in a general manner and in relation to other dimensions, so it cannot be compared to questionnaires that measure this dimension exclusively and in depth. Our aim with this questionnaire was to assess EI in a general manner and as a social construct, as we have done with the socio-emotional environment of the young person, and the results show us that it is possible to offer both rigorous validity and reliability.

The number of factors extracted from the factor analysis corresponds to the number of categories proposed in the questionnaire, which leads us to think that the construct validity is sufficient to consider that the questionnaire measures what it is intended to measure.

The intraclass correlation coefficient (ICC) results show that the questionnaire has a high level of test-retest reliability. If we use Fleiss (1986) as a basis, very good results have been obtained for the social environment dimension ( $r=0.948$ ) and good results for the well-being dimension ( $r=0.798$ ), as well as for the categories measured under *other* ( $r=0.720$ ). Less consistent results have been obtained for the EI dimension (0.323). The ICC for the entire questionnaire was good, and very close to being excellent ( $r=0.894$ ).

Another problem that we observed when measuring EI was the lack of agreement that exists when defining the dimensions that comprise this construct. There is no established consensus and each author establishes the dimensions that they deem appropriate. This situation coincides with the conclusions of some authors such as Goleman (2007), who state that when measuring EI as a psychological construct we must ask ourselves to what extent we are sure that what we are measuring represents the whole, or a part, or whether we are measuring something else in addition to EI.

As this is a questionnaire with 40 items that does not require memory and takes little time to complete, it is most feasible to implement it in football *canteras* (term used in Spain to refer to youth sides), where it could be of great use for deciding what intervention is necessary during the progress of young people through the lower categories.

Not many works have been published so far on the psychosocial character of athletes (Bruner, Munroe-Chandler, & Spink, 2008) , but even far fewer works have been published on young footballers (Pain & Harwood, 2007). Nevertheless, the lack of agreement between these works in terms of the methodology and materials used means that it is difficult to discuss and compare the results that have been obtained.

Bloom (1985) can be considered the pioneer of this type of study, as he performs a longitudinal study of the professional careers of musicians, athletes, scientists and artists. He highlights how families and coaches play a very important role, as they provide emotional and financial support for these careers. Studies relating to sport have been disparate, as have their results, and thus whereas for Côté (1999) the family has a very relevant role, for Van Rossum & Van Der Loo (1997) there are no relevant differences between the family structures of athletes with higher and lower degrees of talent.

The potential implementation of programmes aimed at overcoming difficulties experienced by young footballers in their social relationships requires reliable, valid and applicable evaluation procedures to be established in order to select at-risk populations and assess the improvements resulting from intervention (Hops & Greenwood, 1988).

Ultimately, and according to Martindale, Collins, & Daubney (2005) the fact that individual sequences of development depend equally on genetic inheritance and environmental influences must be respected and taken into account during the sporting careers of young footballers. Thus, the submitted questionnaire allows assessment of the proposed dimensions with differing validity and reliability. While the data acquired for the social environment, well-being and other dimensions include sufficient psychometric properties to be considered valid, reliable and reproducible, the data derived from the dimension of emotional intelligence should be considered cautiously. We believe it is vital for professionals in the field to have reliable instruments to allow them to identify problems in the socio-emotional environments of young footballers. Now that this questionnaire has been validated, professionals have a useful tool that can be included in strategies to improve the successful development of young footballers. In conclusion, the submitted questionnaire features sufficiently clear indicators of validity, reliability and reproducibility to be used to monitor the success/failure of young footballers.

The limitations of our work arise from the difficult nature of its objective, which is to measure the interaction of different factors that may be involved in measuring sporting success or failure. The questionnaire's sample size and its practical applications, however, are its most obvious strengths.

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