

## Stressful sport-parenting? Development and initial validation of parental stressors scale in sport

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### Abstract

**Introductions:** The roles and tasks of parents in sport are well researched but there have been only a few sport parenting-related questionnaires developed. **Purpose:** The aims of the present study were to develop a new measure for sport parents; assess the factor structure of this new scale using exploratory factor analysis, followed by confirmatory factor analysis; and investigate the psychometric properties. **Methods:** The parents (N = 1260; mean age = 43.54, SD = 5.10) completed an extended version of the Parental Stressors Scale in Sport (PSSS), the Parental Involvement in Sport Questionnaire (PISQ) and the Competitive State Anxiety Inventory-2 (CSAI-2). **Results:** Exploratory factor analysis presented four meaningful factors made up of 11 items (KMO coefficient = .756, Bartlett's Sphericity test:  $\chi^2(55) = 3687.677$ ;  $p < .001$ ) results of the confirmatory factor analysis indicated an acceptable fit to the data ( $\chi^2/df=4.61$ ; TLI=.95; CFI=.96; RMSEA=.075; SRMR=.055). The *Deselection* factor reflects the fear of performance expectations and their negative consequences, while the *Feedback* factor shows how well parents are informed by the club about their children's development. The factor of *Club-related stressors* provides information on the effectiveness of the parent-club relationship, and the factor of *Education-related stressors* reflects the fears of parents regarding the negative influence of competitive sport on school performance and educational development. Internal consistencies of the subscales ranged from .75 to .98. The new factors positively associated with trait anxiety, parental direct behaviour and parental pressure ( $r = .13 - .55$ ), and negatively associated with self-confidence ( $r = -.12 - -.42$ ). There were no significant differences between the groups based on the gender of parents and their children, controlling for their ages. **Discussions:** In conclusion, the new scale emerged as a reliable and valid measure for a comprehensive assessment of parental stressors in relation to their children's involvement in sport.

**Key Words:** sport parents, youth sport, scale development, parental involvement

### Introduction

Parents are expected to accomplish several tasks to support their children's sports careers successfully. Gould et al. (2008) divided parental tasks into four categories. The first includes an appropriate parental perspective, which underlines that development, and not the result, should be the focus of parent's evaluation. The second category contains factors emphasising the child's total development, such as respecting sports values, encouraging other activities, and creating a suitable attitude to work. The third category includes different forms of parental support (financial, time, and emotional), while the fourth (other) category includes factors regarding parents' emotional control, such as stability and effective emotion-management or showing unconditional love.

Relatively few studies mention effects influencing parents' behaviours in their child's sport socialisation. According to interviews, parents report anxiety when their children are the centre of attention, feeling confused when they see other parents argue (Sutcliffe et al., 2020), when they face financial difficulties and if the sport has a negative impact on the time the family can spend together. Moreover, they can feel miserable when they see other parents fight with their children, the coaches, or umpires (Wiersma & Fifer, 2008). Parents' negative experiences can be related to the behaviour of the coach, such as being too strict, or if coaches disagree with umpires or if they put a spotlight on other parents' children (Holt et al., 2008; Harwood & Knight, 2009b). During in-depth interviews with parents, most of them stated that after their children had finished competitive sport they regarded the coach's involvement and the impact of their behaviour much more negatively, than when their children were competing (Kerr & Stirling, 2012). Further, the parents also reported that the phenomenon of self-blame appeared to increase with the rising number of training sessions, or when parents gave the lead to the coaches and became of secondary importance, especially if they were completely excluded from their children's sports life. Another survey based on interviews with parents indicated that during socialisation into elite sport, parents' responsibility increased (Clarke & Harwood, 2014). Along with the growing responsibility, parents reported fear and insecurity about the possibility of displaying behaviour that

could create an unfavourable impression on the sports academy, and consequently have a negative impact on their child's career. Consequently, parents' subjective experience appeared to change in accordance with their children's sports age.

A survey on sports requiring early specialization showed that those parents whose children started training for a sport earlier perceived the development of their children's skills better; however, they also described themselves as parents who made serious sacrifices—for example, financial, cancelled family programmes or school performance (Livingston, Schmidt & Lehman, 2016). Furthermore, the longer the child pursued a sport, the more likely it seemed that the activity became less enjoyable for the family—although burnout was more likely to appear in the context of family members rather than the participating child who usually still enjoyed the sport. It is important to highlight that, although the main objective of the Sampling Years (Côté & Hay, 2002) was to create athlete enjoyment and performance without expectations regarding results, there are stressors on the parents' side as well.

In their survey with tennis players, Harwood and Knight (2009a, 2009b) found that parents of young people were affected by three groups of stress sources during specialising years. The most common stressor was organizational issues, a category that included difficulties in logistics regarding transportation between the venues of training, home and school, and financial costs and time pressure (Sutcliffe, Kelly & Vella, 2021). Problems within the organisation and conflicts with the clubs also belonged in this category. Most parents deplored the lack of appropriate feedback from clubs concerning their child's development, and the unmanaged rehabilitation of possible injuries, which became the parents' responsibility (Harwood et al., 2019). The second group of stressors regards competitions. For many parents, it was difficult to watch helplessly as their children performed and to have to handle the stress this entailed (Lienhart et al., 2020). Parents not only struggle with themselves but often with the inappropriate behaviour of other spectators, in addition to their children's reaction to a mistake or possible failure, which can also generate negative experiences and stress reactions (Szalánczi, Kovács & Bácsné Bába, 2020). The third group included problems linked to the child's development, such as keeping contact with the school, which may lead to further conflicts (Lienhart et al., 2020; Livingston, Schmidt & Lehman, 2016). As it is the parents' responsibility to make decisions about the child's future, this can evoke more and further conflicts. For instance, a fear of future prospects arising from the one-dimensional athletic identity might appear, while the possibility of not having a chance to be outstanding in sport could also cause anxiety. A similar outcome resulted in the case of other sports as well. Harwood et al. (2010) asked the parents of the players at a football academy about the stress effects they experience during the specialising years. These effects were put into the following groups: academy processes and the quality of communication (e.g. lack of feedback, lack of understanding and appreciation by coaches), stressors related to matches (e.g. child's level of performance, other parents' comments and behaviours), sport-family role conflicts (e.g. one dimensional personal, logistic problems) life, school support and education issues (e.g. children's fatigue alongside homework and exam pressures).

The selection and specialization period could be a stress source for both the athlete and the family. According to Neely et al. (2017), the processing of related critical situations can be divided into three phases. Initially, if a child is rejected, parents feel it is their task to help their children through this crisis and teach them how to process such negative experiences. Meanwhile, children may feel that handling this process is difficult for their parents as well. In the next phase, the mutual work commences, during which the whole family works on handling the consequences—this is the period of rationalisation and positive reframing of the situation. The third phase has a focus on the individual athlete's battle which, for example, can manifest itself in setting new targets, or the athlete may turn to their extended environment for help with processing the situation. Another survey among the parents of gymnasts between the age of 11 and 14 showed that families created different coping strategies to reduce stress (Burgess et al., 2016). For instance, keeping distance consciously from gymnastics decreases the intensity of stressors or the frequency of their occurrences. Effective parental coping can also be achieved by sharing parental tasks or becoming consciously aware of the child's potential coping strategies. During the process of normalising experiences, parents can re-evaluate expectations towards their child and may rewrite them in accordance with their own previous experiences. Furthermore, the need and intention to learn and to develop may also decrease the level of stress, whether the child learns from others or their own experiences.

The complexity of the situation is demonstrated by the high number of studies focusing on the dyadic relationship of parent-athlete and attempts to provide an alternative solution for professionals. For instance, the methodology of family therapy based on a systemic approach (Zito, 2011) also highlights the direct effect of parental expectations, beliefs and behaviours on children's sport performance. Moreover, multiple psychoeducational books and programmes set out to help parents to create a suitable and effective atmosphere (Dorsch et al., 2016; Smoll, Smith & Cumming, 2007; Thrower, Harwood & Spray, 2017; Vincent & Christensen, 2015). There are training programmes advising coaches on ways to build efficient/effective coach-parent relationships (Côté, Turnnidge & Evans, 2014; Mills et al., 2014; Smoll, Cumming & Smith, 2011). Further development models also assign a key role to the parental background (Balyi, Higgs & Way, 2013; Fraser-Thomas, Côté & Deakin, 2015; Henriksen, Stambulova & Roessler, 2010).

The aim of this study is to develop a self-administered instrument that helps to identify stressors experienced by parents. We have limited our sample to team sports because, while they follow a similar developmental process (Côté & Hay, 2002) individual-team sport differences do not emerge (Sutcliffe et al., 2021) and, furthermore, we can avoid the specific background of early specialization sports (Balyi, Higgs & Way, 2013). These conditions can easily modify the expectations, stressors and pressure perceived by children and their parents. Considering possible space and time constraints, the aim is to create an instrument that is short, easy to use and has good psychometric properties (reliability and validity).

## Material & methods

### Participants

The sample included a total of N=1260 participating parents (399 males and 861 females) aged 29 to 74 years ( $M_{\text{age}} = 43.54$ ,  $SD = 5.10$ ). All participants had at least one child who regularly engaged in a team sport as a registered member of a sports club or sports academy at the time of data collection and 45.3% of them had themselves previously been athletes at a competitive level. Their children, for whom they provided further details, comprised 906 boys (71.9%) and 354 girls (28.1%) aged 5 to 21 years ( $M = 12.88$ ,  $SD = 2.89$ ). By stage of sport participation, 31.4% of the children were at the sampling stage, 50.0% at the specializing stage, and 18.6% at the investment stage. The children engaged in handball (50.2%), football (34.8%), basketball (7.6%), water polo (3.5%), ice hockey (2.9%) and volleyball (1.0%).

### Procedure

The participants were recruited via convenience sampling. They were contacted directly or with the help of sports associations, sports clubs, a sports academy and professional trainers. All these contributors and all participants gave consent to participate after being informed about the purpose of the study, the employed instruments, and the relevant ethical standards, including confidentiality. The participants completed an online form including demographic questions, questions on their children's sport participation, and self-report psychological measures. The research plan was approved by the Research Ethics Committee of the University of Physical Education, Budapest, Hungary, under License No. TE-KEB/No1/2019. Data were collected between December 2018 and May 2019. The statistical data analysis was carried out with the IBM SPSS Statistics v. 22 software package and the IBM SPSS Amos v. 24 structural equation modelling application.

### Measures

Parental Involvement in Sport Questionnaire (PISQ): The 15-item Parental Involvement in Sport Questionnaire (PISQ; Lee & McLean, 1997; Kovács et al, 2020a) consists of four subscales as follows. The Directive Behaviour subscale (DB, 6 items) measures the extent to which a parent strives to directly control her/his child's sport-related behaviour; the Active Involvement subscale (AI, 2 items) assesses parental attendance of training sessions and competitions; the Praise and Understanding subscale (PU, 3 items) taps the relative importance of empathetic and understanding parental behaviour, while the Parental Pressure subscale (PP, 4 items) provides a measure of the importance of parental expectations for the child's good performance and/or success in competition. Each Likert item is rated on a five-point scale. The Hungarian version of the PISQ showed adequate internal consistency (Cronbach's  $\alpha = .654$  to  $.882$ ).

Competitive State Anxiety Inventory – 2 (CSAI-2): The three subscales of the 27-item questionnaire (Competitive State Anxiety Inventory – 2; Sipos et al., 1999) are the following: cognitive anxiety related to competitions; somatic anxiety related to competitions; self-confidence related to competitions. Both the items of the questionnaire and the instructions were rephrased by the target group. The internal consistency of the questionnaire scales was acceptable (Cognitive anxiety: Cronbach's  $\alpha = .769$ ; Somatic anxiety: Cronbach's  $\alpha = .829$ ; Self-confidence: Cronbach's  $\alpha = .776$ ). Parental Stressors Scale in Sport compilation: Parental stressors in sport are the aggregate of physical, psychological, social effects and factors related to the sport which challenge parents' coping potential as they face real or perceived requirements and have effects on parental behaviour. We aimed to develop a scale that is relevant to parents with children in sports and does not focus on harmful or over-involved parental participation. Based on previous studies, we identified four main facets of parental stressors that can describe the intensity of parental fears related to their children's sport carrier (as described in Table I).

Club-related stressors contain statements that are related to the processes of the sports club or academy. These do not only involve the quality of the relationships between parents, coaches and sports managers but the quality of the athlete-coach relationship and how suitable they think the club is for the development of their child—including problems with game time and the quality of feedback regarding their child's performance (Clarke & Harwood, 2014; Harwood & Knight, 2010; Kerr & Stirling, 2012; Wiersma & Fifer, 2008).

Match-related stressors contain both parents and their children's difficulties regarding emotion management during games, including game time, umpires and the behaviour of other parents (Bowker et al., 2009; DeFrancesco & Johnson, 1997; Harwood & Knight, 2010; Kidman, McKenzie & McKenzie, 1999; Ross, Mallett & Parkes, 2015; Shields et al., 2005). Family-related stressors contain those statements that endanger the balance of family life, whether about logistics problems, cancelling family holidays or the inequality of parents' attention towards their children (Côté & Hay, 2002; Harwood & Knight, 2010; Livingston, Schmidt & Lehman., 2016; Neely et al., 2017; Peter, 2011; Wiersma & Fifer, 2008).

Education-related stressors involve possible conflicts between parents and schools, the fear of one-dimensional athletic identity and the possible unfavourable effect of the sports environment on the development of their children (Côté & Hay, 2002; Harwood & Knight, 2010; Livingston, Schmidt & Lehman, 2016).

After consulting with sport psychologists, clinical psychologists, child psychologists and athletes and their parents, the authors wrote items that were very easy to understand, which clearly belonged to the factors, and which had good face validity. See items measuring the specific behaviour and questions of each field in Table I. All items contain a statement that reflects parents' worries and doubts they experience during their children's sport socialisation. Parental Stressors Scale in Sport contains 30 items in which respondents had to indicate their level of agreement to the items on a five-point Likert scale (1: *Never*; 2: *Rarely*; 3: *Sometimes*; 4: *Often*; 5: *Always*).

Table I. The 30-items of Parental Stressors Scale in Team Sport\*

Club-related stressors (C)

- (C1) I'm afraid my child will be deselected from the team.
- (C2) I'm afraid my child is neglected due to certain decisions of the coach.
- (C3) I feel the expectations of the academy/club towards parents are too high.
- (C4) I feel the expectations of the academy/club towards athletes are too high.
- (C5) I feel the expectations of the academy/club towards athletes are too low.
- (C6) I'm not satisfied with the way the academy/club communicates with me.
- (C7) I'm not satisfied with the way the coach communicates with me.
- (C8) I don't get the appropriate quantity of information/feedback regarding my child's performance.
- (C9) I don't get the appropriate quality of information/feedback regarding my child's performance.

Match-Related Stressors (M)

- (M1) I find it difficult to handle my child's feelings after a game they lost.
- (M2) I find it difficult to handle my feelings during my child's game.
- (M3) I'm afraid my child will get injured during the game.
- (M4) I'm afraid my child will play badly at their next game.
- (M5) I'm afraid my child will be benched.
- (M6) I'm upset during my child's games.
- (M7) The way other parents behave during my child's game makes me anxious.
- (M8) The way umpires lead the game makes me anxious.
- (M9) The umpire's behaviour and decisions during my child's games make me tense.

Education-related stressors (E)

- (E1) I'm afraid that after finishing his/her sports career, my child will not have an appropriate profession/job.
- (E2) I'm afraid my child's school performance gets worse because of the sport.
- (E3) I have got into conflict with my child's school more times because of sport.
- (E4) I have got into conflict with the club/coaches more times because of school duties.
- (E5) I'm afraid the sport environment will have a negative effect on my child's intellectual abilities.
- (E6) I'm afraid the sport environment will have a negative effect on my child's moral sense.

Family-related stressors (F)

- (F1) I'm afraid I am / will be engaged with my other child less because of sport.
- (F2) I'm afraid sport will have a negative effect on my child's relationship/future relationship with me.
- (F3) I'm afraid my relationship with my child will be hurt because of sport.
- (F4) I find it difficult to transport my child to and from training.
- (F5) We have cancelled family events because of my child's sports events (holiday, family celebrations, and family programmes).
- (F6) Our child's sports life results in serious financial expenditures for our family.

\* The items of the scale are formulated in the Hungarian language

*Statistical Analysis*

Apart from basic statistical indicators, we carried out exploratory and confirmatory factor analysis to examine the factor system of the scale. Based on Bearden's (2011) recommendation, we split the data randomly in half for the two factor analyses. We examined the two data sets with SPSS 22.0 program Wilcoxon and Chi-square tests to ensure the homogeneity of the two partial samples. After that first step, we explored the factor structure of the scale with exploratory factor analysis (EFA) using Maximum likelihood analysis with Varimax rotation. We analysed the final factor structure with AMOS 20.0 software using confirmatory factor analysis (CFA). To interpret our results, we used more fit indices created specifically for this purpose: Chi-square ( $\chi^2$ ), the value resulting from the minimum Chi-square/degree of freedom (CMIN/df); root mean square error of approximation (RMSEA); a Tucker-Lewis index (TLI); comparative fit index (CFI); and standardized root mean square residual (SRMR). We followed the recommendations of literature regarding the acceptable values of fit indices (Bryant & Satorra, 2012; Byrne, 2010; Garson, 2015; Hooper et al., 2008; Hu & Bentler, 1999).

The whole sample was used in order to measure construct validity. We analysed the sub-factors of the Parental Stress in Sport Scale and the relations between CSAI-2 and PISQ subscales with Pearson product-moment correlations. One-way analysis of covariance was performed on the whole sample to determine whether there are differences between groups based on the gender of parents and their children in the Parental Stressors in Sport Scale (PSSS) factors controlling for the age of parents and their children.

## Results

*Exploratory factor analysis*

Exploratory factor analysis (Maximum likelihood method with Varimax rotation) was performed on the 30 items to test the factor structure of the PSSS. In order to obtain an item set with high structural fidelity, we required that items have a loading greater than .25 on their home factor and two times greater than on any other factor. As there were significant cross-loadings, items that did not meet the above-mentioned criteria were rejected from the analysis one by one, always the least loaded item rejected first. From the original 30 items, 19 items were eliminated, all of them not loading substantially on any of the remaining four factors. In the final model, the KMO coefficient is .756, Bartlett's Sphericity test:  $\chi^2(55) = 3687.677$ ;  $p < .001$ . The final factor structure revealed 11 items spread across four factors: Education-related stressors; Club-related stressors, Deselection, and Feedback, explaining 65.7% of the total variance.

We selected factor names by discussing content representation. The first factor was named *Deselection* which refers to parents' fears that their children do not get enough game time during matches, they do not perform well, or they are deselected from the team—so this factor reflects the fear of performance expectations and their negative consequences regarding their children. The second factor is *Feedback* which is about the quality and quantity of feedback about children to parents, how well parents are informed by the club about their children's development. The third factor was named *Club-related stressors*, which can give exact feedback on the effectiveness of the parent-club relationship. It indicates the requirements clubs have towards children and parents as well as the quality of communication. Finally, the fourth factor is called *Education-related stressors* which involves the fears of parents that competitive sport will affect their children's school performance and also parents' fear of getting into conflict with their children's club because of school commitments.

The final factor-loadings, the explained variance, and reliability coefficients are displayed in Table II, which also contains the means, standard deviations, skewness, and kurtosis scores of the final 11 items and the four factors. All mean scores were relatively low (i.e., below 2 on a 5-point scale). The skewness scores ranged from 0.64 to 2.45, and kurtosis scores ranged from 0.33 to 6.19, indicating some non-normality in the data distribution. Internal consistency for four factors was acceptable based on Cronbach alpha (Cronbach's  $\alpha = .753 - .977$ ).

Table II. Results of the exploratory factor analysis on the Parental Stressors Scale in Sport

	Parental Stressors in Sport Scale factors			
	Factor 1 Deselection	Factor 2 Club-related stressors	Factor 3 Education-related stressors	Factor 4 Feedback
Eigenvectors	2.194	1.862	1.674	1.499
Explained variance (%)	19.947	16.929	15.216	13.624
<i>Items</i>				
C1	<b>.615</b>	.163	.107	.110
C2	<b>.623</b>	.237	.065	.250
M4	<b>.578</b>	.195	.077	.112
M5	<b>.915</b>	.098	.021	.140
C3	.185	<b>.789</b>	.107	.126
C4	.257	<b>.767</b>	.082	.064
C6	.128	<b>.473</b>	.126	.190
E4	.094	.099	<b>.964</b>	.080
E5	.087	.157	<b>.688</b>	.140
C8	.254	.193	.139	<b>.930</b>
C9	.243	.191	.145	<b>.900</b>
<i>Factor determinacy</i>				
Cronbach's $\alpha$	.810	.753	.822	.977
M (SD)	7.70 (3.40)	5.51 (2.60)	2.69 (1.36)	4.30 (2.36)
Minimum	4	3	2	2
Maximum	20	15	10	10
Skewness (SE)	1.08 (0.10)	1.16 (0.10)	2.41 (0.10)	0.96 (0.10)
Kurtosis (SE)	0.79 (0.20)	0.85 (0.20)	6.41 (0.20)	-0.06 (0.20)

Note. C = Club-Related stressors; M = Match-Related stressors; E = Education-Related stressors

*Confirmatory factor analysis*

Confirmatory factor analysis (with maximum-likelihood estimation) was used to determine whether the factor structure obtained using exploratory factor analysis could be confirmed on the second half of the sample ( $N = 630$ ). Data were analysed using AMOS 24. The four-factor solution derived from the EFA with 11 items was conducted, and the solution provided an excellent model fit ( $\chi^2/df = 4.61$ ;  $TLI = .95$ ;  $CFI = .96$ ;  $RMSEA = .075$ ;  $SRMR = .055$ ). These findings provide further support for the 11-item four-factor structure of the PSSS (as shown in Figure I.).

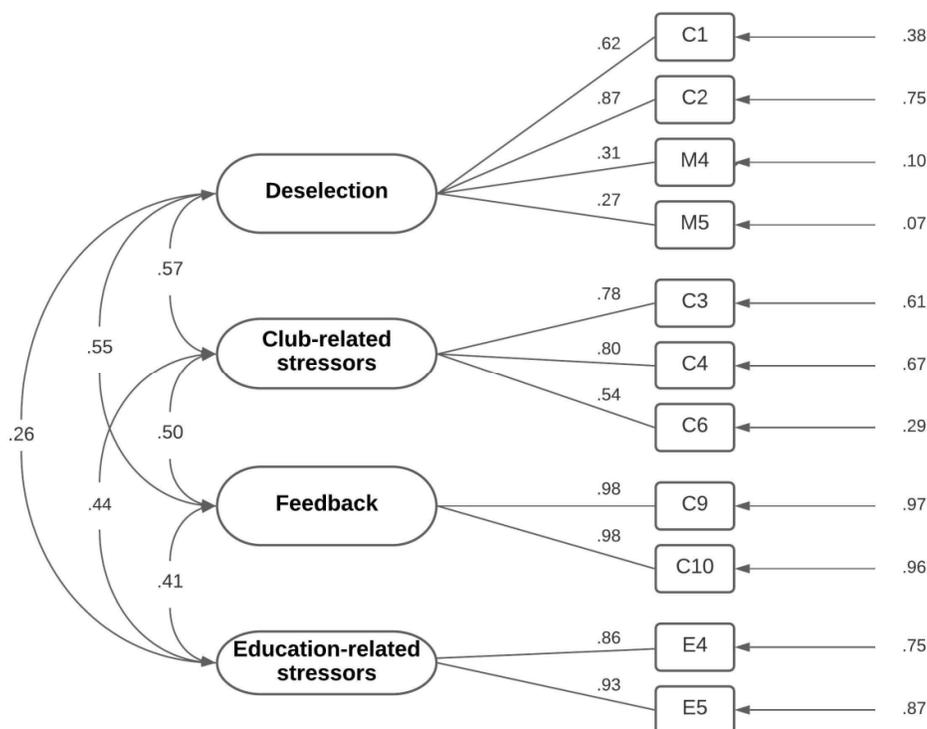


Figure I. Factor structure of the PSSS

*Validity and the difference between groups*

The whole sample was used in order to measure construct validity. The *Deselection* factor showed significant positive moderate correlation with the CSAI-2 Cognitive anxiety subscale; positive weak correlation with the CSAI-2 somatic anxiety subscale and two PISQ subscales (Direct Behaviour and Parental Pressure); a significant negative moderate correlation between CSAI-2 Confidence subscale; and significant negative weak correlation with Active Involvement and Parental Support (see Table III).

*Club-related stressors* showed a significant positive weak correlation with the CSAI-2 Cognitive and Somatic anxiety subscales, and with Direct Behaviour and Parental Pressure. The results showed a significant negative weak correlation between Somatic anxiety (see Table III).

*The Feedback* factor indicated a significant positive weak correlation with the anxiety and the controlled parental involvement subscales, and a significant negative weak correlation with Active Involvement and Self-Confidence (see Table 4) while the *Education-related stressors* factor showed a significant negative weak correlation with Self-Confidence and supportive parental involvement scales (see Table III).

Table III. Correlation between PSSS and Anxiety, Self-Confidence and Parental Involvement

	PISQ DB	PISQ P	PISQ AI	PISQ PU	CSAI CA	CSAI SA	CSAI SC
Deselection	.233**	.300**	-.122**	-.140**	.555**	.309**	-.421**
Club-related stressors	.133**	.181**	-.046	-.060*	.252**	.186**	-.207**
Feedback	.137**	.136**	-.138**	-.060*	.198**	.106**	-.169**
Education	.018	.052	-.133**	-.118**	.117**	.068*	-.123**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Note: CSAI CA: CSAI-2 Cognitive Anxiety, CSAI SA: CSAI-2 Somatic Anxiety; CSAI SC: CSAI-2 Self-Confidence; PISQ DB: PISQ Direct Behaviour; PISQ P: PISQ Pressure; PISQ AI: PISQ Active involvement, PISQ PU; PISQ Praise and Understanding

Finally, we classified participants into four groups based on the gender of parents and their children (father-boy, father-girl, mother-boy, mother-girl). One-way analysis of covariance was performed to determine whether there are differences between groups in the PSSS subscales controlling for the age of parents and their children. There were no significant differences between the groups.

## Discussion

The primary aim of our study was to create a self-administered instrument identifying parental stressors related to their children's sports life. While initial theories tried to limit parents' roles and their engagement in children's sports life (Power & Woolger, 1994; Tofler et al., 2005), new research describing this field and mechanisms of action reveal a more complex and detailed picture (Rodis, 2013; Wolfenden & Holt, 2005). Several of these studies found that not only coaches but also parents play a significant role in the development of athletes' mindsets as the relationship between athletes and their parents' attitudes towards sport (Anderson et al., 2003; Ullrich-French & Smith, 2006; Xiang et al., 2003), goal orientation (Atkins et al., 2015; Juntumaa, Keskiavaara & Punamaki, 2005), motivation (Cope et al., 2013) and perfectionism (Sapieja et al., 2011) were detected. Studies also highlighted an association between parental behaviour and the level of anxiety experienced by children (Kaye et al., 2014; Scanlan & Lewthwaite, 1984, 1986) as well as their self-confidence (Sorkkila, Aunola & Ryba, 2017). Consequently, we find it important to explore parents' subjective experiences. Although several interview-based surveys include some general information about the impact on parents during their children's sports career, relatively few validated measures exist (Clarke & Harwood, 2014; Kerr & Stirling, 2012). The items of the newly developed scale were based on previous studies (Bowker et al., 2009; Clarke & Harwood, 2014; Côté & Hay, 2002; DeFrancesco & Johnson, 1997; Harwood & Knight, 2010; Kerr & Stirling, 2012; Kidman, McKenzie & McKenzie, 1999; Livingston, Schmidt & Lehman, 2016; Neely et al., 2017; Peter, 2011; Ross, Mallet & Parkes, 2015; Shield et al., 2005; Wiersma & Fifer, 2008). After sampling a large number of parents whose children pursue a team sport, the stressors were grouped into four categories—namely, Club-Related Stressors, Match-Related Stressors, Family-Related Stressors, and Education-Related Stressors. Further items for each group were identified after consultations with applied sport psychologists, clinical and child psychologists. The model of the exploratory factor analysis, contrary to the initial grouping, resulted in a different four-factor solution (Deselection, Education-related stressors, Feedback, Club-related stressors) explaining 65.7% of the total variance. High figures in the *Club-related stressors* were linked to higher parental anxiety caused by the uncertainties/conflicts/problems regarding parents' relationship with their children's clubs. The *Feedback* implies a lack of information flow and related issues, while the *Deselection* regards the unsure position of the player within their team, which may arise from the parents' disappointment regarding game time or the uncertainty that their child could be deselected from the club. The two-item factor of *Education-related stressors* is about parents' conflicts regarding the balance of school and sport life. This newly developed scale gives researchers and professionals in youth sport a possibility of providing more objective feedback regarding the processes of their associations/clubs. In Hungary, sports academies must ensure players' academic development at school as a condition for their operation. Thus, *Education-related stressors* can provide useful information about the effectiveness of a given organization.

The overall psychometric properties of the scale were acceptable, including internal consistency and construct validity. In line with our preliminary assumption, the study reflected a relationship between trait anxiety (cognitive and somatic) present during games and both *Deselection* and *Club-related stressors*. Our findings support previous studies—for example, highlighting that, for parents, the quality of their relationship with coaches can be a significant and anxiety-generating factor (Kerr & Stirling, 2012; Wiersma & Fifer, 2008). In addition, during games parents may react sensitively to factors such as their children's performance and behaviour, as well as the attitude and behaviour of other parents and coaches (Harwood & Knight, 2009). Therefore, further research could focus on identifying factors that increase anxiety and on ways to strengthen parents' coping skills. We also found a relationship between the subscales and direct controlling parental behaviour. This association might indicate that if parents have doubts regarding their children's opportunity to play, they are more actively engaged in their children's sports life, which can have a harmful effect on the children (e.g. performance anxiety). This link also supports other findings that highlighted that negative spectator behaviour is more likely to be displayed by parents who have stronger control over their children's sports lives than those parents who ensure safe autonomy for their children (Goldstein & Iso-Ahola, 2008). In addition, (Partridge & Wann, 2015) found that those parents who have higher expectations towards their children in sport, express their negative feelings more often and may react with anger when their children's performance is insufficient. Several effective programmes have been introduced for parents and coaches internationally (Côté, Turnnidge & Evans, 2014; Mills et al., 2014; Thrower, Harwood & Spray, 2017; Vincent & Christensen, 2015) and this newly-created scale may be a useful tool for the development and evaluation of such programmes. Our scale provides feedback not only for parents but also for professionals helping them to decide the focus of parent support. These findings can also add useful information to clubs and academies. For example, the feedback from the scale may facilitate effective communication between coaches and parents and, consequently, the youth athletes may, directly and/or indirectly, benefit from improved cooperation between parents and clubs.

The main limitation of this study was the non-representative sample. The findings are solely based on self-report measures—therefore, they are prone to bias. This study was based on team sports, hence results are not readily generalisable to individual sports without further research replicating findings in this area. More research suggested that the level of parental stress increases with their children's age, which may be linked to stakes (Burgess et al., 2016; Harwood et al., 2010; Wiersma & Fifer 2008). The related analysis was beyond the scope of this study, hence in future research it would be important to determine how the level of parental anxiety

experienced in sport changes in different age groups. The items related to social interactions among parents are excluded by EFA, so the final version does not refer to these effects. The test-retest analysis was not carried out— therefore, the temporal stability of the measure requires further exploration. Despite the limitations mentioned above, PSSS proved to be a reliable measure, and it has suitable psychometric properties. The new scale can enrich the practical segment of applied sport psychology, help the work of professionals in youth sport and contribute to a better understanding of the dynamics of the young athlete-parent-coach relationship.

### Conclusion

The present research demonstrated that the Parental Stressors Scale in Sport is able to capture the main facets of parental stressors related to their children's sports career, namely Deselection, Club-related stressors, Education-related stressors and Feedback. This short scale showed good psychometric properties and reliability. Findings suggest Parental Stressors were associated with parental involvement and parents' state of anxiety. The scale can also measure parental satisfaction related to their children's sports club or academy. In conclusion, PSSS emerged as a reliable and valid measure for a comprehensive assessment of parental stressors concerning their children's involvement in a team sport. Future studies could explore the dynamic processes underlying the anxiety experienced by parents and their provoking factors. It would also be important to identify the role of the environment in parental anxiety and whether anxiety is associated with personality traits such as perfectionism. The potential practical implications of this (and further research) are that its findings can support the development of programmes that help parents to become 'quite good' sport parents. Moreover, Sport psychology consultants (sport psychologists) could use the findings to support the creation of informative psychoeducational courses which contain multidisciplinary knowledge regarding the processes of becoming an athlete, including possible difficulties. In addition, trained professionals/clinicians could introduce coping strategies and techniques for anxiety that would increase parents' ability to handle unsure situations (e.g. during games, keeping contact with coaches) and learn effective communication strategies. Similarly, information based on the scale could also be fruitful for sports associations. Clubs could become familiar with parents' behaviour, including factors that parents find threatening, and could use this knowledge to build effective cooperation.

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#### Appendix Parental Stressors in Sport Scale

You find statements below that can cause stress to parents during their children's sport socialisation. Read each statement carefully and please mark on a scale of 1 to 5 how you typically feel about these statements. Do not spend too much time on any one statement. There are no right or wrong responses.

1. Never, 2. Rarely, 3 Sometimes, 4 Often, 5 Always

1	I'm afraid my child will be deselected from the team.	1	2	3	4	5
2	I'm afraid my child is neglected due to certain decisions of the coach.	1	2	3	4	5
3	I feel the expectations of the academy/club <i>towards parents</i> are too high.	1	2	3	4	5
4	I feel the expectations of the academy/club <i>towards athletes</i> are too high.	1	2	3	4	5
5	I'm afraid my child will play badly at their next game.	1	2	3	4	5
6	I'm afraid my child will be benched.	1	2	3	4	5
7	I'm not satisfied with the way how the academy/club communicates with me.	1	2	3	4	5
8	I have got into conflict with the club/coaches more times because of school duties.	1	2	3	4	5
9	I'm afraid the sports environment will have a negative effect on my child's intellectual abilities.	1	2	3	4	5
10	I don't get the appropriate <i>quantity</i> of information/feedback regarding my child's performance.	1	2	3	4	5
11	I don't get the appropriate <i>quality</i> of information/feedback regarding my child's performance.	1	2	3	4	5

**Evaluation** (no reversed items): Deselection: 1, 2, 5, 6, Club-related stressors: 3, 4, 7, Education-related stressors: 8, 9, Feedback: 10, 11