

# **Sport Parents**

**The characteristics of parents of youth athletes in team sports with regard to their child's stage of sport participation from a sport psychological perspective**

**Abstract of PhD Thesis**

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## **Introduction**

Organized sport plays an important role in the development of youths (Gould & Carson, 2010, Holt & Knight, 2015, Ream & Rumberger, 2008). The researchers highlight the roles of parents in assuring healthy and prolonged youth sport participation (Babkes & Weiss, 1999, Sukys et al, 2014, Yang, Telama & Laakso, 1996). However, certain parental behaviours appear to be related to their child's sports career, the association between these is complex and warrants further examination and only a few studies address the dynamics of parental behaviour.

Parental involvement is an umbrella term covering a variety of behavioral, cognitive and affective components of parenting that directly or indirectly influence children's development and performance (Grolnick & Slowiaczek, 1994). It is a multidimensional construct including parental beliefs and feelings about the child's activity, which are manifested in active support for the child or in pressure for meeting parental expectations (Leff & Hoyle, 1995). Early studies revealed that parents' involvement in junior athletes' sporting careers showed a U-shaped relationship with the athletes' stress levels and an inverted U-shaped relationship with their enjoyment in sport (Power & Woolger, 1994; Stein et al., 1999). Thus, the quality of parental involvement may have an impact on young athletes' sport experiences. Eklund and Gould (2007) emphasized that the major difficulty faced by young athletes lies less in their sport failures per se and more in the ways in which failure is perceived by influential others in their environment. Lee and MacLean (1997) defined four subtypes of parental involvement by the intensity and quality of characteristic parental behaviors including directive behavior (DB), parental pressure (PP), active involvement (AI), and praise and understanding (PU). These four subtypes comprise two main types of parental involvement. DB and PP are the two aspects of parental pressure as a main type.

Stressors affecting athletes and their immediate social environment is a popular research topic in sport psychology. Existing research shows that both the intensity and type of stress experienced by athletes can vary according to their level of sport participation and age group (Côté & Hay, 2002; Balyi et al., 2013; Wylleman & Lavalee, 2004). Studies have highlighted that sporting children's parents face different stressors compared to other parents that unique stressors can include higher time pressure (Sutcliffe et al, 2021), managing the sport-education balance (Tessitore et al., 2021), deselection (Neely et al., 2017), and concerns about the exclusive dominance of sport in the child's future career (Harwood et al., 2010). The related parental experiences showed a variation according to the child's level of participation in sport (Hurley et al., 2020), while the stressors affecting young athletes and their environment seemed to vary across age groups (Harwood et al., 2010). In their qualitative research, Harwood, Drew, and Knight (2010) identified several types of stressors in a

sample of parents of specialization-age football academy players. These included processes managed by the academy and the quality of their communication, competition-related stressors, conflicts between sport-related and family roles, and problems related to the child's education. These stressors are believed to continue to affect parents in the investment stage that Harwood and Knight (2009) grouped into three types of stressors — namely, organizational influence and problems (e.g., logistical issues, financial support, and conflicts with the child's sport club), competition-related challenges (e.g., dealing with the child's failures and taking account of other parents' behavior), and problems related to the child's development (e.g., keeping contact with the school and prospects for a career after sport). Furthermore, based on Clarke and Harwood's qualitative research (2014), the burden of parental responsibility was found to increase over the course of a child's sport socialization, including a mounting a sense of uncertainty and fear that, by presenting themselves in an unfavorable light in front of the sport academy, they could hinder their child's sporting career.

## **Objectives**

The main purpose of this study was to explore predictors of the various types of parental involvement and parental stressors.

Initially, we aimed to document the psychometric characteristics of the Hungarian translations of 1) the Perceived Autonomy Support Scale for Exercise Settings (PASSES, Hagger et al, 2007), and 2) the Parental Involvement in Sport Questionnaire (PISQ - Lee & MacLean, 1997) and test the reliability and validity of these questionnaires, secondly, 3) to develop a self-administered instrument that helps to identify stressors experienced by parents (Parental Stressors Scale in Sport). 4) The factors tested for their impact on the type and intensity of parental involvement and parental stressors included the parent's and the child's gender, the child's current stage of sport participation (as defined by Côte & Hay, 2002), the parent's previous sporting experience (or the lack thereof), and on variables introduced in the present study (the child's sports injuries, the parent's marital status, the parent's level of education, and the number of children in the family). Finally, the associations between parental involvement, parental stressors, perfectionism and autonomy-supportive behaviour in the employed psychological measures were tested with partial correlation coefficients, controlling for the parent's gender, the parent's previous sporting experience, the child's age, and the child's sports injuries.

## Studies

In the next part of the dissertation, we represent our studies related to the topic of sport parenting. The order of the studies is sequential, with three different samples.

### **Study 1.: Hungarian adaptation of Perceived Autonomy Support Scale for Exercise Settings**

#### Procedure

Data were collected between September 2018 and December 2018 via convenience sampling. The participants were contacted directly or with the help of sports associations, sports clubs, a sports academy and professional trainers. The research plan was approved by the Research Ethics Committee of the University of Physical Education, Budapest, Hungary, under License No. TE-KEB/No4/2018.

#### Participants

Study samples consisted of (PASSES-H) persons (men = 196; women= 233;  $M_{age} = 18,38$ ,  $SD= 4,04$ ). The criteria for inclusion were a registered member of a sports club or sports academy at the time of data collection. The participants engaged in karate (n=128), football n=118), handball (n=31), other team sports (n=52), and other individual sports (n=99).

#### Measurements

The Hungarian version of the *Perceived Autonomy Support Scale for Exercise Settings* (PASSES-H; Hagger et al., 2007, Kovács et al., 2020b) has originally been designed to assess junior athletes' perceptions of parental autonomy support. Each Likert item was rated on a seven-point scale ranging from Strongly disagree (1) to Strongly agree (7). Higher overall scores indicated higher levels of parental autonomy support.

*Task and Ego Orientation in Sport Questionnaire* (TEQSQ; Soós et al, 2004) The scale consists of 13 questions (Ego orientation  $Cronbach-\alpha = 0,87$ , and Task orientation  $Cronbach-\alpha=0,67$ ). The participant could indicate their statements on 5 point Likert-type scale.

One subscale (Confidence) of the *Attachment Style Questionnaire* (ASQ-H; Hámori et al, 2016), were applied for the validation.

## *Results*

### Confirmatory factor analyses

Confirmatory factor analysis (with maximum-likelihood estimation) was used to determine the factor structure. The one-factor solution was conducted, and the solution provided an excellent model fit ( $\chi^2/df = 5,53$ ,  $p < 0,001$ ;  $CFI = 0,93$ ;  $TLI = 0,91$ ;  $RMSEA = 0,10$ ;  $SRMR = 0,04$ ).

#### Internal consistency and test-retest reliability

Internal consistency of the scale (PASSES-H Cronbach  $\alpha = 0,95$ ; maximum of inter-item correlation = 0,74) proved to be excellent. The normality test of the scale showed a normal distribution based on skewness and kurtosis.

#### Test-retest reliability

For tests of stability and the reproducibility of the measure, test-retest reliability over a two-week interval was examined ( $N = 83$ , 52 male, 31 female,  $M_{age} = 16,30$ ,  $SD = 1,79$ ). We found a strong significant relationship between the two completion, the correlation coefficient for test-retest reliability was ranging from 0,90 to 0,95.

#### Construct validity

PASSES-H showed a significant, positive mediate correlation with *Confidence* ( $r(193) = 0,436$   $p < ,001$  95% CI [0,314 – 0,543]) and significant but negligible correlation with *Task orientation* ( $r(194) = 0,188$   $p < ,001$  95% CI [0,047 – 0,322]). We haven't found a relationship between autonomy support and *Ego orientation*.

#### *Conclusion*

The aim of the paper was to document the psychometric characteristics of the Hungarian translations of Perceived Autonomy Support Scale for Exercise Settings (PASSES, Hagger et al, 2007) based on Self-Determination Theory, and test the reliability and validity of these questionnaires. The Hungarian version of the PASSES seems to be a valid and reliable questionnaire to measure autonomy-supportive behaviour according to the Self-Determination Theory.

## **Study 2.: Hungarian adaptation of Parental Involvement in Sport Questionnaire**

### *Material & methods*

#### Procedure

Data were collected between April 2019 and June 2019 via convenience sampling. The participants were contacted directly or with the help of sports associations, sports clubs, a sports academy and professional trainers. The research plan was approved by the Research Ethics Committee of the University of Physical Education, Budapest, Hungary, under License No. TE-KEB/No4/2019.

## Participants

The criteria for inclusion were a registered member of a sports club or sports academy at the time of data collection. In the present study participated 471 persons aged between 13 and 21 ( $M_{Age} = 16.76$ ,  $SD = 2.79$ ; boys: 40.3%, girls: 54.2%; missing data: 5.5%). Their mean competitive experience was 7.04 years ( $SD = 3.45$ ) and their average training hours per week were 9.78 ( $SD = 6.06$ ). The participants also engaged in individual (39,1%) and team sports (60,9%); had participated in championships at the international (16,4%) and national level (59,6%) or local competition (21%) and 3% were inactive at the time of data collection.

## Measurements

*Parental Involvement in Sport Questionnaire (PISQ)*: The 20-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*) measures the extent to which a parent strives to directly control her/his child's sport-related behaviour; the Active Involvement subscale (*AI*) assesses parental attendance of training sessions and competitions; the Praise and Understanding subscale (*PU*) taps the relative importance of empathetic and understanding parental behaviour, while the Parental Pressure subscale (*PP*) 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. In the original version, Lee and MacLean (1997) and using the PISQ investigated the source of parental pressure among age group swimmers, and the swimmers' perception of their parent's level of involvement respectively. To assess parents' behaviors in the sporting practice, an adapted version was applied, modifying the original items' phrasing - from "swimming" to "doing sport".

The *Perceived Autonomy Support Scale for Exercise Settings (PASSESS-H)* was applied for the validation.

## *Results*

### Explorative factor analysis

The international versions of the Parental Involvement in Sport Questionnaire differ (Bois, Lalanne & Delforge, 2009; Lazopoulou, 2006 in Giannitsopoulou et al., 2010; Torregrosa et al., 2005; Wuerth, Lee & Alfermann, 2004). Due to the differences, we checked the factor structure with exploratory factor analysis (Maximum likelihood method with Varimax rotation). EFA was performed on the 20 items to test the factor structure of the PISQ. The final factor structure revealed 14 items spread across four separate factors (Directive Behaviour, Praise and Understanding, Active

Involvement and Parental Pressure), explaining 54,2% of the total variance. In the final model, the KMO coefficient is .82, Bartlett's Sphericity test:  $\chi^2(91) = 2356,1; p < .001$ .

Internal consistency of the subscales proved to be adequate (Cronbach- $\alpha$ : 0,64–0,85).

#### Test-retest reliability

For tests of stability and the reproducibility of the measure, test–retest reliability over a two-week interval was examined ( $N= 69$ , 35 male, 24 females,  $M_{age}$ : 16,61;  $SD = 1,67$ ). We found a strong significant relationship between the two completion, correlation coefficient for test-retest reliability ( $PU r(67) = 0,82; p < ,001$ ;  $P r(67) = 0,81; p < ,001$ ;  $DB r(67) = ,93; p < ,001$ ,  $AI r(67) = 0,94; p < ,001$ ).

#### Convergent Validity

Examination of construct validity revealed small-medium relationships– as it was found in the literature too - between the Perceived Autonomy Support Scale for Exercise Settings with PU ( $r(337) = 0,56; p < ,001$ ), and with DB ( $r(337) = 0,30; p < ,001$ ). We found a significant but negligible correlation between PASSES and AI ( $r(337) = 0,11; p = ,04$ ), and haven't found a relationship between *autonomy support* and *parental pressure*.

#### *Conclusion*

The aim of the paper was to document the psychometric characteristics of the Hungarian version of the Parental Involvement in Sport Questionnaire (PISQ-H) and test the reliability and validity of the instrument. The Hungarian version of the PISQ seems to be a valid and reliable questionnaire to measure.

### **Study 3.: Development and initial validation of Parental Stressors Scale in Sport**

#### *Material & methods*

##### Procedure

Data were collected between December 2018 and May 2019 via convenience sampling. The participants were contacted directly or with the help of sports associations, sports clubs, a sports academy and professional trainers. 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.

##### Participants

The sample included a total of  $N=1260$  participating parents (399 males and 861 females) aged 29 to 74 years ( $M_{age} = 43.54$ ,  $SD = 5.10$ ). 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 previously been athletes at a competitive level. Of all participants, 17.5% had one child, 50.6% had two children, and 31.9% had three or more children. In addition, 9.3% of the respondents reported that they were single, 90.7% were married, or lived in a relationship. Finally, 1.1% of the sample reported to had less than a high school education, 44.2% reported having received a high school diploma, 52.3% had a university degree and 2.4% got a PhD.

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%).

### Instruments

The participants provided data on both their own and their children's sociodemographic and sport-relevant characteristics (parents' gender, age, educational level, and past sporting experiences; children's gender, age, sport, training hours per week, active years in the sport, sports participation stage, and past injuries).

*Competitive State Anxiety Inventory – 2 (CSAI-2)* (Martens et al., 1990; Sipos et al., 1999): The three subscales of the 27-item questionnaire 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  $\alpha = .77$ ; Somatic anxiety: Cronbach's  $\alpha = .83$ ; Self-confidence: Cronbach's  $\alpha = .78$ ).

*Parental Involvement in Sport Questionnaire (PISQ)* (Lee & McLean, 1997; Kovács et al., 2020) The 15-item Parental Involvement in Sport Questionnaire consists of four subscales. The Hungarian version of the PISQ showed acceptable–good internal consistency (Cronbach's  $\alpha = .65$  to  $.88$ ).

*Perceived Autonomy Support Scale for Exercise Settings (PASSES-H)* The Hungarian version of the Perceived Autonomy Support Scale for Exercise Settings was originally designed to assess junior athletes' perceptions of parental autonomy support. For the purposes of the present study, both the instructions and the 12 original items were reworded to obtain a measure of parents' self-perceived autonomy support provision (e.g., the original item My parents encourage me to do active sports and/or vigorous exercise in my free time was replaced with the item I encourage my child to do active sports and/or vigorous exercise). Each Likert item is rated on a seven-point scale ranging from Strongly disagree (1) to Strongly agree (7). Higher overall scores indicated higher levels of parental autonomy support. The scale showed good internal consistency (Cronbach's  $\alpha = .83$ ).



*Parental Stressors Scale in Sport compilation:* Parental stressors in sport are the aggregate of physical, psychological, and 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.

## *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. 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. In the final model, the KMO coefficient is .756, Bartlett's Sphericity test:  $\chi^2(55) = 3687.677$ ;  $p < .001$ .

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, and 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. Internal consistency for four factors was acceptable based on Cronbach alpha (Cronbach's  $\alpha = .75$  to  $.98$ ).

### 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 ( $N = 630$ ). 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

### Validity

The *Deselection* factor showed a significant positive moderate correlation with the CSAI-2 Cognitive anxiety subscale; a positive weak correlation with the CSAI-2 somatic anxiety subscale and two PISQ subscales (DB and PP); a significant negative moderate correlation between CSAI-2 Confidence subscale; and significant negative weak correlation with AI and PP. *Club-related stressors* showed a significant positive weak correlation with the CSAI-2 Cognitive and Somatic anxiety subscales, and with DB and PP. The results showed a significant negative weak correlation between Somatic anxiety. *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 AI and Self-Confidence while the *Education-related stressors* factor showed a significant negative weak correlation with Self-Confidence and supportive parental involvement scales

### *Conclusion*

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. 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.

## **Study 4.: The effects of parents and their children's characteristics on parental involvement and parental stressors in sport**

### *Material & methods*

#### Procedure and participants

Same as study 3.

#### Measurements

In this study, I used the following questionnaires: *Perceived Autonomy Support Scale for Exercise Settings* (PASSES-H); *Parental Involvement in Sport Questionnaire* (PISQ), *Competitive State Anxiety Inventory 2* (CSAI-2) *Parental Stressors in Sport Scale* (PSSS), and for subscales of *Multidimensional Perfection Scale* (FMPS, Frost et al, 1990; Dobos & Pikó, 2017): *Concern over mistakes* (CM Cronbach- $\alpha = 0,84$ ) reflects perfectionists' fear about making mistakes and the negative consequences, *Doubts about actions* (D Cronbach- $\alpha = 0,62$ ) reflect a tendency towards

indecisiveness related to uncertainty about doing the right thing and *Personal Standards* (PS  $Cronbach-\alpha = 0,82$ ) reflect tendencies to set high standards of performance.

## *Results*

### Differences in Parental Involvement

Fathers ( $DB: t=7,16, p<,001; PP: t=3,51, p<,001$ ) and parents with previous sporting experience ( $DB: t=5,19, p<,001; PP: t=4,55, p<,001$ ) scored higher on both DB and PP than did mothers and those with no sporting experience, respectively. Parents of children at the sampling stage showed lower levels of DB ( $F=5,98, p=,003$ ) as compared to parents of those at either the specializing or the investment stage. Fathers ( $t=2,98, p=,003$ ), parents of girls ( $t=-3,43, p<,001$ ), and those with previous sporting experience ( $t=5,26, p<,001$ ) scored higher on Active AI than mothers, parents of boys, and those with no sporting experience, respectively. Furthermore, mothers ( $t=-3,23, p<,001$ ), those having one child ( $F=6,92, p<,001$ ), and parents of children at the sampling stage ( $F=6,54, p<,001$ ) scored higher on PU than did fathers, parents of boys, those having two or more children, and parents of children at the specializing or investment stage, respectively. No significant mean difference was found on either PISQ subscale between groups based on the child's sport injuries, the parent's marital status, and the parent's level of education.

### Differences in Overall Parental Stress and the Relative Importance of Different Stressors

The results of the independent samples t-test and the one-way ANOVA test revealed that the parents of children at the sampling stage experienced significantly lower levels of stress ( $F=12,89, p<,001$ ), fear of deselection ( $F=9,02, p<,001$ ), and conflict with the sports club/academy ( $F=11,17, p<,001$ ) compared to the parents of children at the investment or specialization stage. The parents of children with a previous sports injury reported higher levels of fear of deselection ( $t=3,36, p<,001$ ) and negative experiences related to communications from the club ( $t=3,81, p<,001$ ) compared to the parents of children with no previous sports injury. Furthermore, the parents with tertiary education reported higher levels of concern about their children's academic progress ( $t=-2,76, p=,006$ ) compared to those with secondary education. No significant differences on either PSSS subscale were associated with the parent's gender, the child's gender, the parent's previous sporting experience (yes/no), the parent's marital status (single/married/cohabitant), or the number of children in the household (one/two/three or more).

### Predictions on Parental Involvement and Overall Parental Stress and the Relative Importance of Different Stressors

Taking account of the related previous findings, the same hierarchical model was consistently tested for each of the four *PISQ* subscales as the dependent variables, in which the parent's gender (male/female), the child's gender (boy/girl), and the child's sport participation stage

(sampling/specializing/investment) were entered in Step 1, while the parent's previous sporting experience (yes/no), and family size (one/two/three or more children) were entered in Step 2. The hierarchical regression analysis with *PP* as the dependent variable showed that both models had significant predictive power (Model 1:  $F(4,1255) = 4.20, p = .002$ ; Model 2:  $F(7,1252) = 4.33, p < .001$ ). Model 1 and Model 2 respectively accounted for 1.3% and 2.4% of the total variance in *PP*. The significant predictors were the parent's gender and the parent's sporting experience: mothers and parents with no sporting experience were less likely to press their children for progress in sport than fathers and parents with previous sporting experience, respectively. The hierarchical regression analysis with *DB* as the dependent variable showed that both models had significant predictive power (Model 1:  $F(4,1255) = 17.305, p < .001$ ; Model 2:  $F(7,1252) = 11.959, p < .001$ ). Model 1 and Model 2 respectively accounted for 5.2% and 6.3% of the total variance in *DB*. The significant predictors were the parent's gender, the parent's sporting experience, and the child's sport participation stage. The hierarchical regression analysis with *AI* as the dependent variable showed that both models had significant predictive power (Model 1:  $F(4,1255) = 6.779, p < .001$ ; Model 2:  $F(7,1252) = 8.117, p < .001$ ). Model 1 and Model 2 respectively accounted for 2.1% and 4.3% of the total variance in *AI*. The significant predictors were the parent's gender, the child's gender, the parent's sporting experience, and family size. The hierarchical regression analysis with *PU* as the dependent variable showed that both models had significant predictive power (Model 1:  $F(4,1255) = 6.484, p < .001$ ; Model 2:  $F(7,1252) = 4.935, p < .001$ ). Model 1 and Model 2 respectively accounted for 2.0% and 2.7% of the total variance in *PU*. The significant predictors were the parent's gender, the child's sport participation stage, and family size.

Since the previous related studies did not reveal any predictors that explained substantial variance in parental stress, all predictors employed in the present study were entered in one step in each of five multiple linear regression models with overall parental stress and each parental stressor as the outcome variable. The entered predictors were the parent's level of education (secondary/tertiary), the child's sports participation stage (sampling/specialization/investment; entered as two dummy variables, encoding sampling and investment), and the child's previous sports injury (yes/no). The results revealed that the model for *overall parental stress* was statistically significant ( $F(4,1236) = 10.511, p < .001$ ). The model explained 3.3% of the total variance in parental stressors. The significant predictors were the parent's level of education, having a child at the sampling stage, and the child's previous sports injury. All four models for the four PSSS subscales were statistically significant. The model for *deselection* explained 1.7% of the total variance in the outcome variable ( $F(4,1236) = 5.261, p < .001$ ). However, none of the employed predictors were significant. The model for *club-related stressors* explained 1.6% of the total variance in the outcome variable ( $F(4,1236) = 5.020, p < .005$ ). The significant predictors were the

parent's level of education and the child's previous sports injury. The model for inadequate *feedback* explained 3.1% of the total variance in the outcome variable ( $F(4,1236) = 9.991, p < .001$ ). The significant predictors were the parent's level of education and the child's previous sports injury. Finally, the model for *education-related stressors* explained 1.3% of the total variance in the outcome variable ( $F(4,1236) = 3.973, p < .005$ ). The significant predictors were the parent's level of education and having a child at the sampling stage.

#### Associations between the psychological measures

The associations between the employed psychological measures were tested with partial correlation coefficients, controlling for the parent's gender, the parent's previous sporting experience, the child's age, and the child's sport injuries. Both *overall parental stress* and *deselection* showed low-mediate but significant positive partial correlations with *DB* ( $r=.20-.23$ ) *PP* ( $r=.26-.30$ ), *Cognitive* ( $r=.43-.55$ ) and *Somatic Anxiety* ( $r=.26-.31$ ) and Concern over mistakes subscale ( $r=.21$ ) while both mentioned PSSS measures correlated negatively with *autonomy support* ( $r=-.21$ ) and Confidence ( $r=-.35 - -.42$ ). Furthermore, *education-related stressors* showed a low but significant negative partial correlation with *autonomy support*. ( $r=-0.22$ )-

*DB* showed a low positive correlation with the *Cognitive Anxiety* ( $r=.27$ ) subscale of the CSAI-2, *PP* showed low positive correlations with the *Cognitive Anxiety* ( $r=.32$ ) and *Somatic Anxiety* ( $r=.20$ ) subscales of the CSAI-2 and *Personal standards* ( $r=.21$ ) and *Concern over mistakes* ( $r=.26$ ) subscales of FMPS. *AI* showed a low positive correlation with perceived parental *autonomy support* ( $r=.21$ ), while *PU* showed low positive correlations with the *Confidence* ( $r=.30$ ) subscale of the CSAI-2 and with perceived parental *autonomy support* ( $r=.23$ ).

#### *Conclusions*

##### Parental involvement

The present study explored possible predictors of different types of parental involvement in junior athletes' sport career. The results revealed significant predictors for all four parental involvement types (*DB, PP, AI, PU*) including the parent's gender, the child's gender, the parent's previous sporting experience, the child's current sport participation stage, and the number of children in the family.

Fathers were more likely than mothers to engage in *PP, DB* and *AI*, while mothers were more likely than fathers to provide *PU*. These findings are consistent with the traditional gender roles in parenting, requiring mothers to provide support and fathers to set expectations and exercise control. However, fathers' more intense *AI* contradicts relevant previous findings, which generally suggest

that AI is supportive (i.e., maternal) in nature (see Amado, Sánchez-Oliva, González-Ponce, Pulido-González, & Sánchez-Miguel, 2015; Wuerth, Lee & Alfermann, 2004). The AI subscale of the Hungarian PISQ comprises items that focus on the parent's role as a manager or sponsor of the child's sports association. Depending on the specific sport pursued by the child, fulfilling such a role may function as a form of parental control, since involving parents as managers or sponsors is not a common or encouraged practice in most sports. However, parents' perceptions of their own behavior may be inconsistent with their children's appraisal of parental involvement (Marsh, Zavilla, Acuna, & Poczwadowski, 2015). That is, certain forms of parental involvement judged to be productive by the parent herself/himself may be harmful to the child, and vice versa, parental behaviors eliciting negative reactions from the child may result in positive outcomes. Parents with previous sporting experience were more likely to engage in AI, DB, and PP than those with no sporting experience. Previous findings demonstrated that parents' own sporting experiences may have an impact on the intensity of their involvement in their children's sport career, and their communication style at competitions may be essentially influenced by their previous experiences in the sport pursued by the child (Holt et al., 2008). Furthermore, junior athletes are more responsive to parental feedback on their progress if their parents have themselves been athletes at a competitive level (Knight, Neely & Holt, 2011). As expected, previous sporting experience significantly predicted DB and PP. These findings are in line with Hellstedt (2005), who suggests that the quality of parental involvement is essentially influenced by the parent's past (in sport). An important subject of further research is the impact of DB and PP on children's development and progress in sport, given the contradictory findings in the field. Although the early findings point out potential harmful consequences of controlling parental behavior such as increased state anxiety (O'Rourke, Smith, Smoll, & Cumming, 2011) and low self-confidence (Power & Woolger, 1994; Stein, Raedeke, & Glenn, 1999), more recent studies underline possible positive outcomes such as openness to new experiences, positive social behavior, (Danioni & Barni, 2017; Siekańska, 2012), and a successful sport career (Wolfenden & Holt, 2005). The ecological model proposed by Bronfenbrenner (1995, DiSanti & Erickson, 2020) assigns decisive importance to parents' previous experiences and knowledge, which may have a formative impact on their perceptions of important events in their children's lives, thus parents' previous sporting experience may essentially influence their involvement in their children's sport career, including controlling parental behavior. The child's sport participation stage was found to predict DB. Previous findings show that junior athletes pursuing certain sports (e.g., gymnastics, football) have a need for less intense parental control and pressure (Giannitsopoulou, Kosmidou, & Zisi, 2010; Mastroilli & Greco,

2020), while those engaging in other sports are generally satisfied (e.g., swimming; see Rodis, 2013) or need more intense parental involvement than they receive (e.g., ice hockey; see Ede et al., 2012; Marsh, Zavilla, Acuna, & Poczwadowski, 2015). Sport-specific differences in the pace of progress may be an important factor underlying these differences, among others. Sports with an early specializing stage as well as the sampling years in general require more intense parental involvement (Anderson, Funk, Elliott, & Smith, 2003; Lawler, Heary, Shorter, & Nixon, 2021; Sukys, Majauskienė, Cesnaitiene, & Karanauskiene, 2014), which is reflected in the finding that both DB and PU were significantly higher at the sampling stage as compared to later stages. A plausible explanation for the generally more intense parental involvement at the sampling stage is that parents serve as role models during the early years of their children's sport career, that is, it is their own physical activities that the child follows as a model, and it is they who provide the necessary environmental and psychological conditions for the child's sport participation, which functions are later fulfilled by the coaches and teammates or fellow athletes.

The authoritative parenting style, which combines a supportive attitude with providing secure limits for the child's progress in sport, has proved an ideal form of parental involvement, as reflected in the associated positive outcomes such as adaptive perfectionism (Sapieja, Dunn & Holt, 2011) and the pursuit of learning goals (Juntumaa, Keskiavaara, & Punamäki, 2005). The obtained findings are also in line with the conclusion proposed by the authors of the developmental models of sport career that parental involvement decreases with the child's progress in sport. A natural development unfolding over time and possibly underlying this observation is the growing importance of peers' and coaches' feedback as opposed to that of parental involvement. However, several studies suggest that parents' importance likewise increases rather than decreases with the child's age (Côte & Hay, 2002; Harwood & Knight, 2015; Knight & Holt, 2012, 2014), while parents' experiences undergo changes as well.

The obtained findings show that PU is associated with positive outcomes such as parental autonomy support and confidence in the child's success in sport. Although some of the related findings suggest that the supportive forms of parental involvement have a favourable impact on junior athletes' self-efficacy (Teques et al., 2019) and pre-competitive anxiety (Bois, Lalanne, & Delforge, 2009), other findings point out that the athletes themselves need less intense parental support (Marsh et al., 2015). In the present study, PU was significantly predicted by the parent's gender, the child's sport participation stage, and family size. Specifically, mothers, parents having one child, and parents of children at the sampling stage were more likely to provide PU than fathers, parents having two or more children, and parents of children at the specializing or investment stage, respectively. These

findings are not surprising, given that young athletes' need for parental reinforcement and support decreases as their sport participation becomes more and more self-determined, while parental investment in each child decreases with the number of children in the family, and parental involvement decreases with time.

### Parental stressors in sport

The present study explored the relative importance of stressors potentially influencing the quality of parental involvement in junior athletes' sports careers, and it also tested possible predictors of parental stress related to various stressors. The obtained results revealed that the parent's education, the child's sports participation stage, and the child's previous sports injury significantly predicted the parent's stress related to several stressors.

The related findings show that parents may also be influenced by external expectations and circumstances that significantly impact their athletic children. Sports parenting expertise is not confined to children's emotional support. Parents manage their children's sports-studies-leisure balance, mediate between various participants in their children's life, fulfil logistic duties, provide financial support for their children's sports career, and often make decisions that require sacrifices from the family (Dorsch, 2018; Harwood & Knight 2015). While the importance of parental participation in children's sports careers decreases over time (Balyi, Higgs & Way, 2013; Wylleman & Lavalee, 2004), the number of related duties and responsibilities increases at each successive stage of sports participation (Harwood & Knight, 2009; Harwood, Drew, & Knight, 2010), leading to significant stressors in their life. The roles of parents change over the different stages of athletic development. In the specialization and investment years, as a result of the increasing burdens accompanied by decreasing parental involvement, parents may develop a sense of uncertainty about the previously anticipated return on the sacrifices they made for their children's progress in the sport. One such issue could be the management of a dual career, that is, the decisions to be made on further education that should enable the child to pursue a career after quitting competitive sport from the specialization years (Wylleman & Lavalee, 2004). Furthermore, pursuing a career in sport involves substantial risk; an injury, changing coaches or clubs, or a season with poor results may severely hinder or even prematurely end the child's sports career (Burgess, Knight & Mellalieu, 2016, Harwood & Knight, 2009, Neely et al., 2017). Finally, due to athletic children's strict schedule, their private life also requires careful planning to protect the quality of their peer relationships, leisure time, and family life (Côté, & Hay, 2002; Dorsch, 2018; Harwood & Knight 2015). All these decisions have to be made by the parents, who need to take account of many factors to meet



their children's needs and serve their best interests. Considering that the child's education could be a significant parental stressor, especially at later stages of sports participation, it is important to increase the capacity of sports clubs, academies, and schools to support children in pursuing a dual career and ease parents' burdens.

The elite sport involves intense competition and thus the risk of physical injury. The risk of sports injury emerges as a significant parental stressor at the specialization stage (Harwood & Knight, 2009; Harwood, Drew, & Knight, 2010, Hernandez et al., 2021), in line with our findings. Parents are not only concerned about the injury itself but also about the difficulties they may have to face during the rehabilitation process. Beyond the difficulties of ensuring adequate health care, including rehabilitation experts and those keeping contact with the sports club, a severe injury may delay children in, or even prevent them from, achieving their sport-related goals. Questions may arise concerning the severity of the lag for the child to catch up with after resuming elite sport, how it affects their standing at the club, and how these circumstances affect their long-term goals. Identifying and securing the available forms and sources of post-injury social support may lay the ground for effective cooperation between parents, athletes, and practitioners, which in turn may improve the effectiveness of rehabilitation (Arvinen-Barrow & Pack, 2013).

None of the parent's gender, the child's gender, the parent's previous sporting experience, the parent's marital status, and the number of children in the household accounted for significant differences in parental stress. Although most related studies found the child's age to be a factor influencing parental stress (Harwood, Drew, & Knight, 2010; Harwood & Knight 2015; Neely et al., 2017), most of these studies were aimed at identifying the major stressors or coping strategies (Burgess, Knight & Mellalieu, 2016; Lienhart et al., 2020). The PSSS employed in the present study assesses state (vs. trait) anxiety, which is primarily determined by situational conditions rather than intra-individual factors, which is also reflected in the obtained findings.

The intensity of parental stress might be influenced by the child's stages of sports development. Apparently, parental involvement could decrease while parental stress increases over time. Other important parental stressors might include conflicts with the child's sports club or school and the risk of dropout. The importance of these stressors might presumably be related to the unpredictability of the child's sports career, which is dependent on several factors outside junior athletes' and their parents' control, such as suffering a sports injury, for example. These findings have important implications for parental psychoeducation as well as for the training of sports professionals (coaches, sports medicine physicians, and rehabilitation experts).

## **Conclusion**

Parents and parenting clearly have an impact on children's sporting experiences, although the complexity and influencing factors of parental involvement have only been brought into the focus of the detailed empirical investigation at an international level over the past decades. The present research explored the factors potentially influencing the level of parents' involvement and their perception of stressors.

The results revealed that controlling parental involvement was significantly predicted by the parent's gender and sporting experience: fathers and parents with previous sporting experience were more likely to show controlling parental behavior than mothers and parents with no sporting experience, respectively. Controlling parental behavior is related both to parents' anxiety experienced during their children's competitions and to the stressors parents perceive in relation to their children's sport socialization. Specifically, directive and pressing parents experience higher levels of stress, especially those whose children have previously suffered sport-related injuries. Our results highlighted the level of perceived autonomy support was associated with both controlling and supportive parental involvement. These findings suggest that controlling and supportive parental involvement are not two ends of a scale but are part of two independent scales. The coexistence of supportive and controlling parental behaviours shows similarities with the authoritative parenting attitude.

Supportive parental involvement was associated with autonomy support, which is a cornerstone of children's self-determined motivation. Parental support was predicted by the parent's gender, the parent's sporting experience, and the number of children in the household. No relationship was found between parental support and parental stress in the given sample, that is, supportive parental involvement did not serve as a protective factor against stress.

Both the level of parents' stress and the observed forms of their involvement were influenced by their children's developmental stage. Specifically, parents' involvement decreased while their stress level increased with their children's sporting age. These findings have important implications for parental psychoeducation.

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