



Assessing validity and reliability of the Persian version of the Stressors among Parents in Youth Sport Survey (SPYSS)

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Article Info	Abstract
Article type: Original Article Article history: Received: 14 May 2024 Revised: 01 July 2024 Accepted: 17 July 2024 Published online: 01 January 2026  © 2026 the authors. Published by University of Tehran, Faculty of Sport Sciences and Health. This is an open access article under the terms of the Attribution-NonCommercial 4.0 International (CC BY 4.0) License.	Background: Parents serve as the initial architects of their children's character, values, and intellectual standards. Parenting stress refers to the distress or discomfort experienced due to the demands associated with parenting roles. Aim: This study aims to assess the validity and reliability of the Persian version of the Stressors among Parents in Youth Sport Survey (SPYSS). Materials and Methods: A random sample of 384 parents was selected. The questionnaire was translated into Persian and underwent several stages of revision. Content validity was evaluated, followed by confirmatory factor analysis for construct validity assessment. Composite reliability and Cronbach's alpha were employed to assess reliability. Results: Exploratory factor analysis confirmed the presence of ten factors with a Kaiser-Meyer-Olkin (KMO) index of 0.949. Cronbach's alpha indicated high reliability with combined values of 0.961 and 0.951. Given the optimal validity and reliability indicators, the Persian version of SPYSS can be considered a valid and reliable instrument for measuring parenting stress in the context of youth sports. Conclusion: Two component include time spent on my child's sport impacting my social life (sport-life conflict) and wanting my child to succeed and/or win (athlete's performance) weren't approved. Keywords: parent stress, reliability and validity, survey, youth sport.

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1. Introduction

Participation in sports offers young people various benefits, including improvements in mental and physical health, as well as academic performance. Extensive research has highlighted the physical health advantages of engaging in sports, alongside a growing body of evidence supporting the psychological and mental health benefits (1). Sports play a vital role in society, particularly for youth, contributing to their vitality, well-being, and health. The role of significant others, including parents, has been found to influence physical activity levels and youth participation in sports (2). Youth sports are undergoing changes due to various social, political, economic, and technological factors. These changes have led to increased performance and competition expectations for participants, including athletes, parents, and coaches (3).

Parents serve as the initial architects of their children's character, values, and intellectual standards (1). According to Bronfenbrenner's bioecological theory of human development, parents are integral to their children's microsystem, exerting a direct impact on their sports career. However, their parental attitudes and behaviors may also be influenced by external systems, such as workplace expectations or relationships with their child's sports club (2).

Previous studies have predominantly focused on parental involvement forms and their impact, while also exploring the positive effects of sports on health and academic achievement (3-6).

Parental support and involvement, including financial support and participation in children's lives, have been shown to enhance academic ambition and reduce school dropout rates (7). Numerous studies have highlighted the pivotal role of parents, alongside coaches, in shaping athletes' mindsets and attitudes towards sports [3, 4, 6]. Parental attitudes influence athletes' socialization, goal orientation, motivation, and perfectionism throughout their sporting careers (8-12).

During the initial stages of youth participation in sports, parents often take on managerial roles, overseeing their children's experiences. This encompasses finding participation opportunities, providing financial support, coordinating practice and training schedules, arranging transportation, volunteering as coaches or fundraisers, and managing day-to-day responsibilities (13-18). Fredricks and Eccles (2004) identified three fundamental roles parents play in their children's sports experience: 'provider' (offering opportunities, financial support, and transportation), 'interpreter' (emotionally reacting to wins and losses), and 'role model' (exhibiting ideal attributes and behaviors in sports) (5). The supportive and encouraging roles of parents have been found to correlate most strongly with youth's physical activity levels and sports participation.

Given that a significant portion of children's time, particularly during their formative years, is spent with family, parents can assume various roles such as coach, driver, financial supporter,

spectator, and leader (2). Financial support from parents can encompass expenses related to sports participation, equipment purchases, transportation, coaching, and enrollment in sports or educational classes. Spiritual support involves praising and expressing pride in the child's activity, supporting their choices, and accompanying them through victories and defeats (1).

The family, particularly parents, play a crucial role in shaping children's beliefs, attitudes, and behaviors towards sports. Continuous parental participation in physical activity and sports, combined with encouragement and support, can foster a lasting commitment to physical activity and sports participation in children (2). While fulfilling these roles, parents often invest significant time in sports environments, experiencing organizational stressors similar to those faced by athletes and coaches. This time commitment can strain their occupational, social, and family lives, especially if focused predominantly on one child-athlete at the expense of non-sport siblings (8).

Parenting stress refers to the distress or discomfort arising from the demands associated with parenting. It is estimated that 36–50% of parents experience some level of parenting-related concerns. Such stress can impact parents, children, and the parent-child relationship (14, 17). Additionally, parenting stress has been linked to adverse child outcomes, including emotional and behavioral problems, socio-emotional dysfunction, and reduced social

competence, either directly or indirectly through its effects on parents (19). Parents experience increased stress as their child progresses through various stages of sports development, particularly following sports injuries, with significant associations observed between directive parental behavior, experienced stress, and children's sports injuries (20-24).

The intensity of parental stress correlates with their involvement in their children's sports careers. Elevated levels of anxiety may lead to increased parental pressure (25), potentially resulting in negative emotional outcomes for athletes such as diminished enjoyment in sports, reduced self-confidence, and heightened stress (26). These factors can ultimately contribute to early dropout rates among young athletes (22). A comprehensive understanding of parental stressors is crucial to develop appropriate educational resources for parents, coaches, and organizations. This ensures that parents can positively influence their children's engagement in sports. Addressing this need, our study aimed to raise awareness of parental stressors within the tennis industry, exploring the perceived stressors among a diverse group of tennis parents (27).

Currently, the scientific exploration of parents in sports remains limited in scope, often focusing predominantly on perceptions from other stakeholders, such as coaches and athletes (22). In the field of parents and sports, studies with the approach of the role of the family in institutionalizing physical activity [1], relationship between the parenting style of

parents and the amount of physical activity of children (28), relationship between parents' participation and perceived competence of teenagers' enjoyment of sports (29), family-school support in the development of sports talents (30) and impact of parents' physical activity on children's (31) has been done in Iran. The review of the literature shows that apart from the survey, there are only two scales on the subject of parental stress in sports (20, 22), and does not assess some of the key stressors reported by parents in previous studies, such as financial or time-related demands on parents, logistical stressors, injury concerns, and stressors related to their child's opponents and officiating in competition. In Iran, no scale has been introduced in this regard, nor has it been validated. In this context, Tamminen et al. (2024) developed a questionnaire designed to measure parental stress among parents of young athletes (32). The current study aims to assess the validity and reliability of this questionnaire in Iran.

2. Methods and Materials

The present study adopts an applied research approach, focusing on tool development and validation, conducted through a survey method.

2.1. Participation

The target population comprises parents of young athletes participating in various team sports (including football, volleyball, basketball, and handball) and individual sports (such as swimming, table tennis, judo, karate, taekwondo,

gymnastics, horse riding, chess, fencing, wrestling, and kung fu) who engage in regular training. Cochran's formula for unlimited communities was used to select the number of samples. From this population, a random cluster sample of 384 parents was selected for participation. To select the research sample, the researchers first prepared a list of sports and then tried to identify clubs and coaches in different cities of the country and communicate with them. The questionnaire was sent to them and they were asked to answer the questionnaire themselves and the parents of their athletes. The respondents answered the online questionnaire in seven different provinces from east to west and south to north of the country (Isfahan, Tehran, Golestan, Kerman, Yazd, Mazandaran and East Azarbaijan provinces).

2.2. Instrument

The research instrument employed was the Stressors among Parents in Youth Sport Survey (SPYSS) questionnaire, developed by Tamminen, et al. (2024) (32). Initially, the questionnaire was translated into Persian and subsequently underwent several stages of refinement. The face validity of the questionnaire was evaluated by a panel of five faculty members. The final version consisted of 43 items, categorized into 10 central components: sport-life conflict (6 items), finances (4 items), competition logistics (4 items), coaching and training quality (5 items), injury (4 items), other sport parents/guardians (4 items), negative competitive

experiences (5 items), athlete's performance (4 items), athlete responses to competition (3 items), and discrimination and lack of belonging (4 items).

2.3. Procedure

Responses to the questionnaire were recorded using a 5-point Likert scale, ranging from 'I completely disagree' to 'I completely agree', scored from 1 to 5, respectively. To assess the validity of the questionnaire, confirmatory factor analysis and structural equation modeling were employed. Additionally, Cronbach's alpha coefficient was calculated to evaluate the reliability of the instrument.

2.4. Statistic

Out of the 400 online questionnaires distributed to potential respondents, 384 completed responses were received. Data analysis was conducted using SPSS and Smart PLS software.

3. Results

The demographic characteristics of the study participants are presented in Table 1. The children of the respondents were engaged in a variety of sports, including soccer, volleyball, basketball, handball, swimming, table tennis, judo, karate, taekwondo, gymnastics, horse riding, chess, fencing, wrestling, and kung fu. Of the participants, 138 individuals (36%) reported that their children were involved in individual sports, while 246 individuals (64%) indicated their children participated in team sports.

Descriptive statistics revealed that the majority of the participants were male, accounting for 54% of the sample. The most frequently reported sport among the participants was soccer, with a frequency of 43%, followed by swimming at 16%, and basketball at 10%.

Table 1. Demographic of participation

Demographic characteristics	Frequency	%Frequency
Gender	Male	208
	Female	176
Group/Individual sport	Group sport	242
	Individual sport	142
Years of involvement	Below 5 years	110
	Upper 5 years	274
Number of child's	1	118
	2	203
	3	44
	4	19
Age of parents	Below of 35	43
	36-40	138
	41-45	107
	Upper 46	96
Age of child's	Below of 10	115
	11-15	197
	Upper 15	72

To assess the validity and reliability of the questionnaire components, confirmatory factor analysis was employed. The Kaiser-Meyer-Olkin test was utilized to evaluate the adequacy of the

sample size, while Bartlett's test was conducted to assess the suitability of the data for confirmatory factor analysis (Table 2).

Table 2. Checking the adequacy of the sample and the permissibility of confirmatory factor analysis

Kaiser-Meyer-Olkin measure of sampling adequacy		0.949
Bartlett's test of sphericity	Approx. Chi-square	9157.212
	df	816
	Sig.	0.00

Based on Table 2, the KMO statistic yielded a value of 0.949, exceeding the recommended threshold of 0.7. This indicates that the sample size is adequate for conducting confirmatory factor analysis. Additionally, Bartlett's test yielded a significance value of 0.000, which is below the 0.05 threshold, confirming the

appropriateness of the data for confirmatory factor analysis. Accordingly, using the smartPLS software and by constructing a structural equation model, the validity and reliability of the questionnaire were examined. The structural equation model, based on the operational load, is depicted in Figure 1.

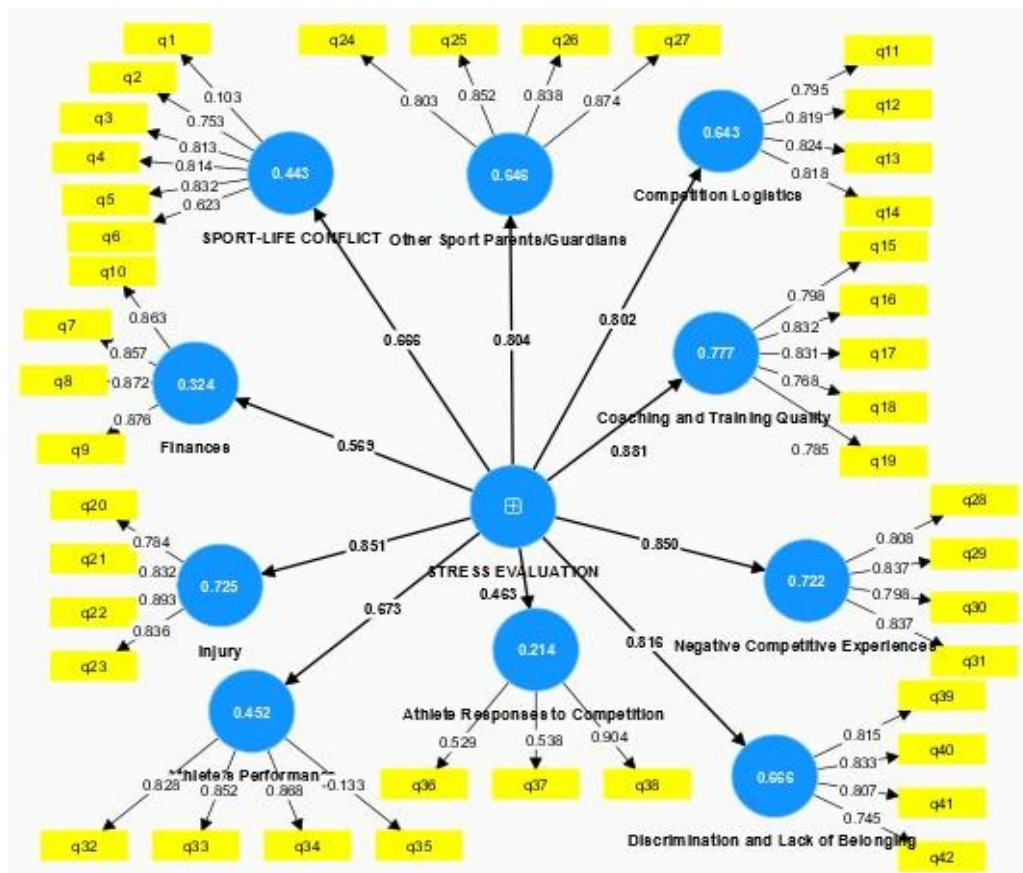


Figure 1. Structural equation model based on factor loadings

Cronbach's alpha, composite reliability, and convergent validity were assessed. As indicated in Table 3, the convergent validity index confirms the adequacy of validity for the respective component. Furthermore, both composite

reliability and Cronbach's alpha values demonstrate the high measurement precision of the instrument for this category, indicating the reliability of the tool.

Table 3. Validity and reliability evaluation indicators

Component	Cronbach's alpha	Composite reliability (rho_a)	Average variance extracted (AVE)
Athlete responses to competition	0.526	0.968	0.562
Athlete's performance	0.594	0.806	0.546
Coaching and training quality	0.862	0.864	0.645
Competition logistics	0.831	0.831	0.663
Discrimination and lack of belonging	0.813	0.815	0.641
Finances	0.890	0.893	0.752
Injury	0.857	0.858	0.701
Negative competitive experiences	0.838	0.839	0.673
Other sport parents/guardians	0.863	0.865	0.709
Sport-life conflict	0.757	0.832	0.597
Stress evaluation	0.951	0.961	0.563

To illustrate the structural equation model, Table 4 presents the correlation coefficients for each path. As shown in Table 4, all path coefficients

are close to or above 0.5, indicating that each component has a significant and appropriate effect on the model.

Table 4. Path coefficients for the main components of the model

	Path coefficient
Stress evaluation -> Athlete responses to competition	0.463
Stress evaluation-> Athlete's performance	0.673
Stress evaluation-> Coaching and training quality	0.881
Stress evaluation-> Competition logistics	0.802
Stress evaluation-> Discrimination and lack of belonging	0.816
Stress evaluation-> Finances	0.569
Stress evaluation-> Injury	0.851
Stress evaluation-> Negative competitive experiences	0.850
Stress evaluation-> Other sport parents/guardians	0.804
Stress evaluation-> Sport -life conflict	0.666

To assess the significance of each component, critical values and significance levels are provided in Table 5. All components exhibit loadings close to or above 0.5. Specifically, for the variable "Athlete Responses to Competition" with a factor loading of 0.468, the significance

level is below 0.05, and the t-statistic value exceeds 1.96. Consequently, based on the factorial values and significance levels, it can be concluded that all components of the model have been validated for validity.

Table 5. Factor loadings, critical values, and significance levels for each component

	Sample mean	Standard deviation (STDEV)	t statistics ((O/STDEV))	P values
Stress evaluation -> Athlete responses to competition	0.468	0.041	11.197	0.00
Stress evaluation-> Athlete's performance	0.674	0.033	20.198	0.00
Stress evaluation-> Coaching and training quality	0.882	0.012	74.784	0.00
Stress evaluation-> Competition logistics	0.802	0.020	40.259	0.00
Stress evaluation-> Discrimination and lack of belonging	0.816	0.020	40.536	0.00
Stress evaluation-> Finances	0.569	0.044	13.029	0.00
Stress evaluation-> Injury	0.852	0.016	53.259	0.00
Stress evaluation-> Negative competitive experiences	0.850	0.016	53.466	0.00
Stress evaluation-> Other sport parents/guardians	0.804	0.020	39.573	0.00
Stress evaluation-> Sport -life conflict	0.667	0.036	18.341	0.00

Additionally, factor loadings for the sub-items are provided in Table 6. It is evident that questions 1 and 35, which pertain to the influence of sports on children's social life and parents' reactions to their child's performance outcomes, respectively, were not significant. However, the

remaining components show significant effects, with significance levels below 0.05. Consequently, the null hypothesis suggesting the ineffectiveness of these components and their related sub-items is rejected.

Table 6. Significance levels of sub-components

	Sample mean	Standard deviation (STDEV)	t statistics ((O/STDEV))	P values
Time spent on my child's sport impacting my social life <- Sport-life conflict	0.101	0.069	1.476	0.140
My child's sport conflicting with my work <- Sport-life conflict	0.753	0.027	28.366	0.000
Organization and administration issues with my child's sport taking a lot of time <- Sport-life conflict	0.812	0.020	40.324	0.000
My child's sport resulting in a lack of sibling attention and/or more sibling resentment <- Sport-life conflict	0.813	0.020	41.378	0.000
My child's sport resulting in a lack of family and/or partner time <- Sport-life conflict	0.831	0.017	49.428	0.000
Logistical arrangements related to my child's sport competitions <- Sport-life conflict	0.622	0.038	16.385	0.000
Fundraising organization and/or commitments for my child's sport <- Finances	0.857	0.017	51.246	0.000
Lack of player funding for my child's sport <- Finances	0.871	0.016	54.199	0.000
The financial impact of my child's sport on family and/or siblings <- Finances	0.876	0.013	66.880	0.000
Financial decisions around my child's sport <- Finances	0.863	0.017	50.792	0.000
Competition structures, draws, and seedings <- Competition logistics	0.795	0.022	35.827	0.000
Inefficient competition organization <- Competition logistics	0.819	0.020	40.521	0.000
Accommodation issues and decisions related to competitions <- Competition logistics	0.823	0.020	41.843	0.000
The selection of and/or geographical location for my child's sport competitions <- Competition logistics	0.817	0.020	40.776	0.000
Information, feedback, and guidance of coaches in my child's sport <- Coaching and training quality	0.797	0.023	34.233	0.000

Quality and scheduling of athlete training <- Coaching and training quality	0.831	0.016	50.611	0.000
Problems associated with my child's sport training programs <- Coaching and training quality	0.830	0.017	48.298	0.000
Access to training facilities for my child's sport <- Coaching and training quality	0.767	0.027	28.869	0.000
The sufficiency and quality of training for my child's sport competitions <- Coaching and training quality	0.784	0.025	31.351	0.000
Insufficient advice and support on dealing with my child's injury <- Injury	0.784	0.023	34.740	0.000
Loss of training and competition due to injury and its impact on my child's play, skills, and ranking <- Injury	0.832	0.017	49.401	0.000
Long term impact of injury on my child's sport and health <- Injury	0.893	0.011	80.185	0.000
Costs of treatment and rehabilitation for my child's injury <- Injury	0.836	0.019	42.945	0.000
Seeing parents/guardians pressure their child to perform and/or win <- Other sport parents/guardians	0.802	0.023	35.220	0.000
Watching parents/guardians act in a threatening way towards athletes <- Other sport parents/guardians	0.852	0.015	55.108	0.000
Experiencing gossip, back biting and cliqueness <- Other sport parents/guardians	0.838	0.019	44.981	0.000
Other parents or guardians interfering and using intimidation in the sport environment <- Other sport parents/guardians	0.874	0.012	70.461	0.000
There has been poor officiating during my child's sport competitions <- Negative competitive experiences	0.807	0.021	38.969	0.000
There has been poor behaviour by the athletes during my child's sport competitions <- Negative competitive experiences	0.837	0.018	46.938	0.000
Concerns about my child's opponent, competitor, and/or the other team <- Negative competitive experiences	0.798	0.020	40.244	0.000
Bullying, swearing, and poor conduct during my child's sport games/competitions or other sport-related experiences <- Negative competitive experiences	0.837	0.016	51.750	0.000
My child not performing to their full ability <- Athlete's performance	0.828	0.020	42.423	0.000
My child's inconsistency of play/performance <- Athlete's performance	0.851	0.021	40.202	0.000
My child's level of effort during competitions and/or practices <- Athlete's performance	0.867	0.015	58.304	0.000
Wanting my child to succeed and/or win <- Athlete's performance	-0.136	0.084	1.582	0.114
My child's reaction to the competition outcome <- athlete responses to competition	0.516	0.097	5.436	0.000
Talking to or consoling my child following a poor outcome or result <- Athlete responses to competition	0.521	0.100	5.399	0.000
Dealing with my child's negative behaviour after competition <- Athlete responses to competition	0.903	0.036	25.082	0.000
Unfair treatment of my child in their sport because of their race/ethnic group, sexual identity, gender or gender identity, class, mental health, religion, disability, language, body shape or size <- Discrimination and lack of belonging	0.815	0.020	40.010	0.000
My child feeling like they do not belong in their sport because of their race/ethnic group, sexual identity, gender or gender identity, class, mental health, religion, disability, language, body shape or size <- Discrimination and lack of belonging	0.833	0.020	42.561	0.000
My child being treated with less respect than other athletes <- Discrimination and lack of belonging	0.807	0.022	36.467	0.000
My child being called names, insulted, or being excluded in sport <- Discrimination and lack of belonging	0.745	0.029	26.081	0.000
My child being called names, insulted, or being excluded in sport <- Discrimination and lack of belonging	0.745	0.029	26.081	0.000

The values for the coefficient of determination and the adjusted coefficient of determination are displayed in Table 7. As indicated in the table, both coefficients are close to or above 0.5. This

suggests a substantial relationship between the model's components, demonstrating a strong correlation among the variables.

Table 7. Coefficient of determination and adjusted coefficient of determination

Components	R-square	R-square adjusted
Athlete responses to competition	0.514	0.512
Athlete's performance	0.452	0.451
Coaching and training quality	0.777	0.776
Competition logistics	0.643	0.642
Discrimination and lack of belonging	0.666	0.665
Finances	0.524	0.522
Injury	0.725	0.724
Negative competitive experiences	0.722	0.721
Other sport parents/guardians	0.646	0.645
Sport-life conflict	0.543	0.542

Fit indices for the model are provided in Table 8. As observed, the goodness-of-fit indices fall within the acceptable range, confirming that the

model possesses the required characteristics for a good fit. Thus, the validity of the model is confirmed.

Table 8. Fit Indices for the model

Statistics	Saturated model	Estimated model
SRMR	0.110	0.113
d_ ULS	43.419	45.744
d_ G	0.76	0.78
Chi-square	3012.53	3012.22
NFI	0.65	0.78

The dependency of each model component on gender is presented in Table 9. It's evident from the table that there is no homogeneity of variance for the "finances" and "athlete responses to competition" variables. The significance value for the average difference between girls and boys

exceeds 0.05, indicating that there is no significant difference between the genders for these variables.

Conversely, results from Levin's test for the components of "sport-life conflict," "competition logistics", "coaching and training quality",

"discrimination and lack of belonging", "injury", and "negative competitive experiences" indicate homogeneity. A significant difference was found between the mean values of these variables for

girls and boys, as evidenced by the positive t-values. This suggests that these characteristics are more pronounced among girls, with a higher average compared to boys.

Table 9. Investigating the dependency of each model component on children's gender

Components	Equal variances assumptions	Levene's test for equality of variances				t-test for equality of means			95% confidence interval of the difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	Lower	Upper
Sport-life conflict	assumed	2.335	0.127	3.445	375	0.001	0.33519	0.09730	0.14386	0.52653
	not assumed			3.423	349.849	0.001	0.33519	0.09791	0.14262	0.52777
Finances	assumed	4.344	0.038	1.533	375	0.126	0.20414	0.13312	-0.05762	0.46591
	not assumed			1.550	371.012	0.122	0.20414	0.13169	-0.05481	0.46310
Competition	assumed	28.747	0.000	6.378	375	0.000	0.72874	0.11427	0.50405	0.95342
	not assumed			6.532	374.737	0.000	0.72874	0.11156	0.50937	0.94810
Coaching	assumed	32.492	0.000	7.384	375	0.000	0.77791	0.10534	0.57077	0.98505
	not assumed			7.590	373.583	0.000	0.77791	0.10250	0.57637	0.97945
Injury	assumed	7.254	0.007	8.413	374	0.000	0.88047	0.10466	0.67467	1.08627
	not assumed			8.510	371.045	0.000	0.88047	0.10346	0.67703	1.08391
Negative	assumed	4.062	0.045	8.751	373	0.000	0.92674	0.10590	0.71850	1.13499
	not assumed			8.810	366.764	0.000	0.92674	0.10519	0.71989	1.13360
Performance	assumed	9.827	0.002	5.096	374	0.000	0.48200	0.09459	0.29600	0.66799
	not assumed			5.192	373.909	0.000	0.48200	0.09283	0.29947	0.66452
Guardians	assumed	14.530	0.000	5.406	373	0.000	.64297	0.11893	0.40911	0.87684
	Equal variances not assumed			5.513	372.999	0.000	0.64297	0.11664	0.41363	0.87232
Responses	assumed	33.105	0.000	1.200	374	0.000	0.11301	0.09421	-0.07224	0.29826
	not assumed			1.248	359.615	0.000	0.11301	0.09056	-0.06509	0.29111
Discrimination	assumed	0.995	0.00	8.373	373	0.231	0.91979	0.10986	0.70377	1.13581
	not assumed			8.379	359.806	0.213	0.91979	0.10978	0.70391	1.13567

4. Discussion

Parents undeniably influence their children's sporting experiences, and the complexity of parental involvement has gained attention in international empirical investigations over recent decades (26). Influenced by external expectations, parents juggle their children's sports, studies, and leisure activities, mediating between various aspects of their children's lives, fulfilling logistical duties, and providing financial support (12, 33). While the significance of parental involvement may diminish over time

(34, 35), the responsibilities increase, leading to considerable stressors (36, 37).

Though stress research primarily focuses on athletes and coaches, studies have begun to understand the stressors parents face in youth sports (21). This study aims to validate the Stressors among Parents in Youth Sport Survey (SPYSS) in Iran. The questionnaire comprises ten components: sport-life conflict (6 items), finances (4 items), competition logistics (4 items), coaching and training quality (5 items), injury (4 items), other sport parents/guardians (4 items), negative competitive experiences (5

items), athlete's performance (4 items), athlete responses to competition (3 items), and discrimination and lack of belonging (4 items).

The sport-life conflict component demonstrated good validity and reliability (coefficient of determination= 0.543; Cronbach's alpha= 0.757). The items include "my child's sport conflicting with my work" (0.753), "organization issues with my child's sport taking a lot of time" (0.812), "my child's sport resulting in a lack of sibling attention" (0.813), "my child's sport resulting in a lack of family time" (0.832), and "logistical arrangements related to my child's sport" (0.622). All items were significant except "time spent on my child's sport impacting my social life".

The potential for organized sports to promote positive youth development has led to studies examining motivational factors. Parents of sport-involved children experience higher time pressures (24). The family plays a pivotal role in children's sports participation and talent identification. Parents often alter work schedules to accommodate their children's activities [39]. Balancing dual careers, especially decisions regarding further education, is crucial for children's future after competitive sports (31). The risks associated with pursuing a sports career, such as injuries or poor seasons, can jeopardize or end a child's sports journey prematurely [23, 34, 38]. Given these challenges, parents must carefully plan their children's schedules to protect their social life and family time (12).

Additionally, the education of the child can be a significant stressor, especially in later sports stages, emphasizing the need to support children in dual careers (22). Parents also face time stressors, including limited personal and family time, travel, work conflicts, and school commitments (12).

The financial component of the questionnaire demonstrated good validity and reliability (coefficient of determination= 0.524; Cronbach's alpha= 0.890). This component encompasses "fundraising organization and/or commitments for my child's sport" (0.857), "lack of player funding for my child's sport" (0.871), "the financial impact of my child's sport on family and/or siblings" (0.876), and "financial decisions around my child's sport" (0.863). Limited research has explored the impact of family financial investment on developmental outcomes (38). Parents often face significant financial commitments to support their child's sports participation. Economic factors are a priority in family sports development, with research placing them at the forefront (21). Kirk et al. (1997) highlighted the negative financial impact of junior sports participation on families (6). Similarly, Baxter-Jones and Maffuli (2003) found that tennis-playing children accounted for about 12% of the family budget, with 16% of tennis parents experiencing financial hardship. Financial stressors include coaching fees, transport, equipment, accommodation, and membership fees (4).

The competition logistics component also demonstrated good validity and reliability (coefficient of determination= 0.643; Cronbach's alpha= 0.831). This component includes "competition structures, draws, and seedings" (0.795), "inefficient competition organization" (0.819), "accommodation issues and decisions related to competitions" (0.823), and "the selection of and/or geographical location for my child's sport competitions" (0.819). Previous studies have identified various logistics-related stressors for parents in youth sports, including organizational problems and travel (10, 39).

The coaching and training quality component showed good validity and reliability (coefficient of determination= 0.777; Cronbach's alpha= 0.862). It comprises "information, feedback, and guidance of coaches in my child's sport" (0.797), "quality and scheduling of athlete training" (0.831), "problems associated with my child's sport training programs" (0.830), access to training facilities (0.767), and "the sufficiency and quality of training for my child's sport competitions" (0.784). Parents often report stressors related to coaching behavior, organization, communication, and favoritism (40, 41).

The injury component demonstrated good validity and reliability (coefficient of determination= 0.725; Cronbach's alpha= 0.857). Items include "insufficient advice and support on dealing with my child's injury" (0.784), "loss of training and competition due to injury" (0.832), "long-term impact of injury on my child's sport

and health" (0.893), and "costs of treatment and rehabilitation" (0.836). Parents experience increased stress when their child reaches higher stages of sports development or has previously suffered an injury (22). Sports involve risks of physical injury, which emerges as a significant stressor for parents (42). Parents are concerned not only about the injury but also about the rehabilitation process and its potential impact on their child's future in sports (43).

The results showed that the other sport parents/guardians component of the questionnaire has good validity and reliability (coefficient of determination= 0.646; Cronbach's alpha= 0.863). This component includes "seeing parents/guardians pressure their child to perform and/or win" (0.802), "watching parents/guardians act in a threatening way towards athletes" (0.852), "experiencing gossip, back biting and cliqueness" (0.837), and "other parents or guardians interfering and using intimidation in the sport environment" (0.874). The general pattern of associations between parents' stressors with ratings of their child's ability, their expectations for their child, and parent-child conflict suggest that parental goals and values related to their child's success in sport are relevant for parents' experiences of stressors in youth sport settings, supporting previous research (8, 44).

The results showed that the negative competitive experiences of the questionnaire have good validity and reliability (coefficient of determination= 0.722; Cronbach's alpha= 0.838).

This component includes "there has been poor officiating during my child's sport competitions" (0.807), "there has been poor behaviour by the athletes during my child's sport competitions" (0.837), "concerns about my child's opponent, competitor, and/or the other team" (0.798), and "bullying, swearing, and poor conduct during my child's sport games/competitions or other sport-related experiences" (0.837). Following the match, the predominant stressor explained by parents was the effect the result had on their child and their lack of skills in helping or knowing how to help their child manage the resultant emotions (32).

Parents experienced a diversity of competition stressors that highlighted the difficulties that they face in their roles as provider, interpreter, and role model in relation to matches and tournaments. The unsporting behaviour of opponents (e.g. cheating), negative interference of other parents, and the docility of referees were further sources of stress in the competitive environment. In this respect, the provision of psychological safety and emotional security for their child seemed to be an important caring role for parents, a role that was hampered by the rules of the game in calling for audience restraint and encouraging players to work through their own adversities (45). Child's reaction to match outcome, child losing a match, spouse's reaction to match outcome, pressure/expectation that child places on themselves and child's negative approach going into a match among the stressful cases in this area (45). Competitive stressors reported by parents

included watching matches (avoiding placing pressure on child, helplessness to deal with 'during-match' issues, wanting child to succeed/win), other parents (seeing parents pressurizing their child, threatening behavior due to result, gossip, back biting and cliqueness, interfering and intimidation during match), child's behavior and attitude (bad line calls and cheating, bad physical and verbal behavior, player distress and lack of coping), child's opponent (bad line calls and cheating, bullying, swearing and gamesmanship), preparation for matches (sufficiency and quality of training, logistical arrangements, physical and dietary readiness), child's performance (performing to their full ability, inconsistency of play and momentum changes, and level of child's effort), outcome of the match (the child's reaction to the match, talking/consoling child following defeat, and dealing with negative behavior by either player), and child's psychological readiness (child's nervousness before matches, pressure/expectations that child places on themselves, and child maintaining focus during the match (12).

The results showed that the athlete's performance component of the questionnaire has good validity and reliability (coefficient of determination= 0.452; Cronbach's alpha= 0.594). Athletes' performance includes "my child not performing to their full ability" (0.827), "my child's inconsistency of play/performance" (0.851), "my child's level of effort during competitions and/or practices" (0.867), and "wanting my child to

succeed and/or win" (-0.136). In this component, the last item was not significant. The phrase "not playing to full potential and limited effort" was reported in another study (46).

Parents' stressors related to their child's performance and their child's response to competition may be driven by parental expectations rather than by their view of their child's ability in sport. Thus, it seems parents may report more frequent stressors related to their child's performance and their child's responses to competition as a function of their expectations for their child, regardless of how much ability they think their child has as an athlete (35).

Theoretically, these factors support Lazarus' (1999) conceptualization of stressors and the importance of personally relevant goals and values underpinning stressor appraisals. The results related to parents' coping self-efficacy are also theoretically and empirically supported by previous research, such that parents who reported greater coping self-efficacy tended to report less frequent stressors. Additionally, these results support previous qualitative research suggesting that parents' goals, expectations, and beliefs for their child's sport are important factors that influence parental involvement in youth sport (47). Bad behavior and attitude, interfering with play and intimidating, and aggressive behavior are common stressors in this area (48).

The results showed that the athlete responses to competition component of the questionnaire has good validity and reliability (coefficient of determination= 0.514; Cronbach's alpha= 0.526).

The component includes "my child's reaction to the competition outcome" (0.516), "talking to or consoling my child following a poor outcome or result" (0.521), and "dealing with my child's negative behaviour after competition" (0.903). Canonical correlation analysis showed a positive relationship between pre-competitive anxiety and parenting practices for tennis players, but not for basketball players. Directive behaviours and pressure were positively associated with pre-competitive anxiety for all tennis players, whereas praise and understanding were negatively related to anxiety for female tennis players only (49). Stressors related to match are match stressors (including planning, logistics, and travel; physical and nutritional preparation; child's psychological state), pre-match behavior (including behaviour of opponents and problem parents; match environment and tournament organization), in-match stressors (child's emotional control and behavior; child's level of performance and enjoyment; other parents' interference, intimidation or gossiping; controlling feelings of helplessness and offering correct support; opponent's behaviour and line calling), and post-match stressors (including lack of skills in helping child to manage emotions associated with result; other parents' inappropriate comments and competitiveness; ensuring appropriate physical recovery for the next match; conducting a rational post-performance analysis; managing own negative emotions and match perceptions; seeing/feeling child's emotional responses to loss/poor

performance; addressing children's poor behavior) (10).

The results showed that the discrimination and lack of belonging component of the questionnaire has good validity and reliability (coefficient of determination= 0.666; Cronbach's alpha= 0.813). This component includes "unfair treatment of my child in their sport because of their race/ethnic group, sexual identity, gender or gender identity, class, mental health, religion, disability, language, body shape or size" (0.815), "my child feeling like they do not belong in their sport because of their race/ethnic group, sexual identity, gender or gender identity, class, mental health, religion, disability, language, body shape or size" (0.833), "my child being treated with less respect than other athletes" (0.807), and "my child being called names, insulted, or being excluded in sport" (0.745). Perceived parental discrimination may increase psychological distress and thus lower support for child participation in various out-of-school activities (50). Many individuals of a racial/ethnic minority actively participated in sports despite the presence of perceived discrimination (50). Some racial/ethnic minority individuals have even used sports to proactively denounce racism and inspire others to participate in sports regardless of the presence of discrimination (51). Some parents are interested in encouraging their children to participate in sports not only because of the potential health benefits it provides but also because sport is an opportunity for socialization and exposing their children to different

racial/ethnic groups and cultures. For parents of a racial/ethnic minority, sport can be a unique opportunity for their children to be involved within the community, a potential benefit that can offset the negative effects of perceived racial/ethnic discrimination. Lastly, sports can provide structure within out-of-school settings and can prevent child anti-social behavior, violence, and drug use after school hours. Parents may recognize these positive attributes of sports, despite the potential for discrimination and its associated psychological distress (52).

Perceived discrimination by parents because of their child's sexual orientation or gender identity is associated with a lower likelihood of the child participating in out-of-school sports. Sexual stigma has been observed within team sports settings and is thought to contribute to participation avoidance in individuals of a sexual minority or of a trans or non-binary gender identity. This phenomenon does seem to be of higher prevalence in males of a sexual minority compared to females. The low prevalence of sexual minority and/or trans or non-gender sports participation could originate from perceived stigma from parents. Parents themselves may perceive stigma or victimization because of their child's sexual minority status or gender identity [49], and may have feelings of judgement, shame, and embarrassment if the child was placed in a competitive sports environment with mostly heterosexual and cis-gender peers (50). Feelings of discrimination and stigma by parents may mitigate support for their child to participate in

out-of-school sports. It is unclear if these feelings of discrimination are shared between the parent and child and how different sources of perceptions of discrimination and stigma associate with both individual and team sports participation (38).

Regarding the questionnaire components and gender differences, it was found that there is no homogeneity of variance in the finances and athlete responses to competition components. The significant value of the average difference between girls and boys is higher than 0.05, indicating no significant difference between girls and boys in these components.

5. Conclusion

Two component include time spent on my child's sport impacting my social life (sport-life conflict) and wanting my child to succeed and/or win (athlete's performance) weren't approved. Harwood and Knight (2010) (15), Kovacs et al. (2024) (16), and Sutcliffe et al. (2024) (24) found that sport-life conflict one of the stressors in child's sport, because they had more than one child and were very busy. It can be said that the economic and living problems of families in Iran are one of the factors of this conflict. Harwood and Knight (2010) (15), Thrower et al. (2017) (53), and Kovacs et al. (2024) (22) introduced concern about performance and success in youth sports as one of the stressful factors, and attributed this to the club and coach. It can be said that the lack of high-level coaches in youth sports and on the other hand, insufficient attention to

this age group by clubs and educational centers are the main reasons for this concern.

In components such as competition logistics, coaching and training quality, discrimination and lack of belonging, injury, and negative competitive experiences, it was found that they have the necessary homogeneity. There is a significant difference between the mean of these variables between girls and boys. According to the positive t-values, it can be said that these characteristics among girls have a larger average and are more pronounced.

Some previous studies have shown that parents who have a male child experience higher levels of stress than parents who have a female child. This may be due to the higher rate of externalizing behavior problems in boys compared to girls. The increased amount of stress in parents of boys compared to girls may stem from the perception that boys are harder to control than girls (53).

The strength of this study, use of respondents in different sports fields and in different parts of our country. Parents of athletes from different fields of individual and team sports, contact and non-contact sports, aquatic and non-aquatic sports from different provinces participated in this study. The limitation of this study is that in studies that collect data using self-report, they are prone to bias.

It is suggested to conduct further studies in different populations related to the questionnaire so that this tool can be used more effectively and universally.

Conflict of interest

The authors declared no conflicts of interest.

Authors' contributions

All authors contributed to the original idea, study design. Conceptualization, A.R.Z., A.M.; methodology, S.H.M., H.M.; investigation, A.R.Z., A.M.; writing - original draft preparation, A.R.Z.; writing - review and editing, A.R.Z., A.M. Both authors have read and agreed to the published version of the manuscript.

Ethical considerations

The authors have completely considered ethical issues, including informed consent, plagiarism, data fabrication, misconduct, and/or falsification, double publication and/or redundancy, submission, etc.

Data availability

The dataset generated and analyzed during the current study is available from the corresponding author on reasonable request.

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