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Are preschool Kosovar children anxious on the edge? Validating the Preschool Anxiety Scale

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Abstract

Introduction: Our current study aimed to test the reliability, validity, and factorial structure of PAS for Kosovar preschool children. Additionally, we sought to explore the anxiety levels in these children and the demographic variables influencing their anxiety.

Methods: We designed the study as a non-experimental and cross-sectional. Parents of 676 preschool children (48.8 % girls) aged 3 to 7 years (*M* = 5.12; *SD* = 1.21) responded via an online questionnaire. The confirmatory factor analysis was conducted using IBM SPSS Amos, Version 25.0. The means and standard deviations, reliabilities (Cronbach's α and mean inter-item correlations), scale intercorrelations for the focal test (PAS), and McDonald's Omega for internal consistency were computed. Through correlation, t-test, ANOVA and MANOVA we investigated age, gender, parents living place and birth order effects on the PAS

Results: Factor analysis validated the original five-factor model after removing two items, suggesting a shorter 26-item version for Kosovar preschoolers. The scale demonstrated a good internal consistency (α = .88/ω_t =.875). For the subscales there were no differences in values from Cronbach's α and McDonald's Omega ω_t: obsessive-compulsive subscale (.71), social phobia (.78), physical injury fears (.72), and separation anxiety (.79) were in fair range, while it was in poor range for the generalized anxiety (0.55). 16.3% of children were found to have significant anxiety symptoms. Older children, female children and children who live in villages scored significantly higher on some subscales as well as on the PAS total scores.

Discussion: Our study presented the first evidence to establish the validity and reliability of the PAS for Kosovar preschool children. Its good psychometric properties provide initial security for the assessment of a wide range of anxiety symptoms in preschool children in Kosovo.

Take-home message: Considering mental health from an early age is a must. The good psychometric properties of the PAS for Kosovar preschool children provide initial assurance for assessing a wide range of anxiety symptoms at this age. Anxiety levels for Kosovar preschool children fall at the upper end of the range offered by the literature, highlighting the need for more in-depth studies on potential risk and protective factors in this age group.

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INTRODUCTION

Childhood stands out as a pivotal developmental phase wherein individuals nurture fundamental skills with profound and enduring effects on their mental health journey. Hence, placing emphasis on children's mental health requirements becomes paramount. Doing so not only addresses immediate well-being but also acts as a proactive strategy for nurturing resilience and averting mental health difficulties in the future.

Anxiety is considered one of the common disorders in childhood [1-5]. Recent findings indicate that symptoms and disorders of anxiety and depression may manifest earlier in life than previously believed, and their prevalence seems to be increasing [6-9]. It's concerning that such a significant portion of preschoolers are experiencing anxiety disorders. Early intervention and support are crucial to help these children develop healthy coping mechanisms and navigate their emotions. Although the benefits of early interventions are significant, the number of studies on anxiety issues in young children is insufficient. The identification and appropriate intervention programs that can prevent mental health issues in children make screening and diagnosing anxiety at young ages extremely important.

Results of studies on the prevalence of anxiety disorders in preschool children provide a wide range. Most studies suggest that the prevalence of anxiety disorders among preschoolers falls within the range 10-20%. [10-15]. These broad variations could stem from the assessment tools utilized (clinical interviews, parental reports, parent-report daily diary, direct observation, symptom scales, etc.), geographical location, demographic differences among study samples, etc. [16]. Despite these fluctuations, the findings indicate that anxiety disorders rank as the most prevalent psychiatric condition across all age brackets, with symptoms typically emerging during or around the preschool years. In fact, there are a considerable number of proposed instruments for screening anxiety disorders in preschool children, such as: Child Behavior Checklist CBCL [17]; the Strengths and Difficulties Questionnaire SDQ [18], ADIS-P-IV [19] etc. However, the most widely used instrument is the Spence Children's Anxiety Scale (SCAS) [20,21,22].

Out of the 28 anxiety symptoms on the Preschool Anxiety Scale—Parent version, five were identified as diagnostic subtype categories applicable to preschool children. This scale is a valuable tool for practitioners, making it easier to identify young children at risk of developing anxiety disorders. It also enables the implementation of tailored, family-based interventions to prevent symptom escalation and severe clinical cases later in life.

PAS Factor Structure

The psychometric properties of the Preschool Anxiety Scale (PAS) have been examined in Chinese [23,24], Dutch [25,26], Romanian [27-28], Portuguese [29], Iranian [30], Nepalese [31], Turkish [32], Hong

Kong [20] children. Most of the studies supported the original five-factor structure proposed by Spence et al. [21]. Studies that reported the psychometric properties or the factor structure of the PAS are shown in Table 1. The type of population is the community sample and informant in all these studies were parents.

Table 1. The psychometric properties or the factor structure of the PAS in some studies.

Country of study & Reference	Size (N)	Female (%)	Age range (min–max)	Age M (SD)	Method	Number of factors (item removed)	Cronbach's α
Dutch [25]	275	57.09	2–6 years	4.42 (1.07)	EFA	5	.86 to .59
Portuguese [29]	562	47	28-84 months	51.19 (13.39)	EFA	5	.88 to .63
Romania [28]	514	56.4	3-6 years	N/A	CFA	5	.87 to .50
Hong Kong [20]	1317	49.1	3-6 years	4.61 (0.67)	CFA	5	.90 to .64
Nepal [31]	680	44.26	3–6 years	N/A	CFA	5 (three items)	.87 to .56
Turkey [32]	918	46.7	3-5 years	N/A	CFA	5	N/A
Australia [33]	764	50.3	36-67 months	47.39 (6.37)	CFA	4 (two items)	.92 to .72
German [26]	577	48.87	2-6 years	43 (15.62)	CFA	5	.93 to .56
Spanish [34]	274	47.8	3-7 years	4.82 (1.46)	CFA	5 (eight items)	.84 to .50

Of the nine studies that examined the factor structure of the preschoolers' version of the Preschool Anxiety Scale (PAS), two utilized exploratory factor analysis (EFA) and seven employed confirmatory factor analysis (CFA). Eight of these studies supported a five-correlated-factor structure, which includes social phobia (SPA), separation anxiety (SA), generalized anxiety (GA), obsessive–compulsive disorder (OCD), and physical injury fears (PIF). Only one study supported a four-correlated-factor structure (social anxiety, generalized anxiety, separation anxiety, specific fears) [33]. In Kosovo, screening for anxiety in young children has been conducted for research purposes using the CBCL 1.5 – 5 & CTRF 1.5-5 [17, 35-41]. Both CBCL & CTRF are psychometrically valid measures which assess broader constructs like the combination of depression and anxiety symptoms in preschool aged children. The instruments are also validated for Kosovo children [36].

Our current study aimed to test the reliability and validity and factorial structure of PAS, for Kosovar preschool children. We also aimed to explore the anxiety level at children and explore demographic variables influencing their anxiety.

METHODS

Study design and procedure

We designed the study as a non-experimental and cross-sectional. An online questionnaire was developed using Google Forms. The initial segment consisted of inquiries pertaining to sociodemographic details such as age, gender, place of residence, birth order of the child, parental level of education, and employment status. The second part of the online questionnaire was the Preschool Anxiety Scale (PAS)

[21]. Distribution of the online questionnaire was facilitated by the study's authors, who are respected figures in the field. Additionally, the questionnaire's first section included written informed consent from parents. While some respondents opted to remain anonymous, others were contacted by the research team and completed the questionnaire confidentially. The study received ethical approval from the University's Ethical Committee.

Study participants and sampling

Our sample included 676 children, with 48.8% of them being girls, and their ages ranged from 3 to 7 years (*M* = 5.12; *SD* = 1.21). The age distribution was as follows: 12.7% (n = 86) were 3 years old, 17.2% (n = 116) were 4, 27.7% (n = 187) were 5 years old, 29.9% (n = 202) were 6 years old, and 12.6% (n = 85) were 7 years old. In our research, most of questionnaires were predominantly completed by mothers (93%), as in most other similar research (20, 26, 64). The average age of mothers was 35.81 (*SD* 4.47) years, and for fathers, it was 38.09 (*SD* 5.19) years. While there was some variation in socio-economic status, middle-class families were the most common. Approximately 55.2% of mothers and 54.7% of fathers had completed a university degree, and 33% were unemployed. Most children (95.1%) were attending preschool or school.

Study instruments

Demographic variables: The questionnaire, created by the first author, aimed to gather information on various demographic factors including age and gender of the children and the parents, urban or rural residence, parental education, parental employment and the birth order of the child.

Table 2. Child and family demographic variables (N=676).

Demographic variables		*N*	*%*	*Chi square*
Gender of the child	Female	330	48.8	
	Male	346	51.2	$\chi(1) = .379, p = .538.$
Gender of the parent	Mother	629	93	
	Father	47	7	$\chi(1)= 501.07, p = .000.$
Education level of parent	Secondary school	34	5.0	
	High school	112	16.6	$\chi(3) = 280.17, p = .000$
	Faculty	326	48.2	
	More than faculty	204	30.2	
Child age	3-year-old	86	12.7	
	4-year-old	116	17.2	
	5-year-old	187	27.7	$\chi(4) = 92.12, p = .000$
	6-year-old	202	29.9	
	7-year-old	85	12.6	
Residence	City	550	81.4	$\chi(1) = 265.94, p = .000$
	Village	126	18.6	
Parental employment	Full time job	464	68.6	
	Part time job	53	7.8	$\chi(2) = 404.12, p = .000$
	Do not work	159	23.5	
Birth order of the child	First	361	53.4	
	Second	198	29.3	$\chi(2) = 380.89\ p = .000$
	Third	92	13.6	
	Fourth	25	3.7	
	M(DS)			*Range*
Age of children	5.12 (1.21)			3-7
Age of parents	33.54 (4.85)			21-55

The Preschool Anxiety Scale (PAS) [21] is a parent-based questionnaire consisting of 28 items that provide information about anxiety and worries in children aged 31 to 83 months. Parents rate each item on a scale from 0 (not true at all) to 4 (very often true) based on their preschool children's level of anxiety. The total scores range from 0 to 112, with subscale ranges varying according to the number of items in each dimension. Scale and total scores are computed by summing the responses to the relevant items.

The Preschool Anxiety Scale (PAS) was translated from English to Albanian by two mental health professionals with expertise in early childhood. Then the Albanian version of the instrument was reviewed by two clinical psychologists. The instrument in Albanian was then retranslated into English by two well-known English language experts with professional experience in psychology. To address any minor discrepancies, the two English versions were compared by the initial authors of this work and two mental health experts. Small differences between the versions were discussed, leading to some changes in the initial version of the scale. The translated version in Albanian was pilot tested with 16 mothers of preschool children in the presence of the first author. The pilot study indicated that the questions were easily understood by the mothers and did not require additional clarification on the questionnaire items. As a result, the final Albanian version of the Preschool Anxiety Scale (PAS) was used to assess psychometric properties through a survey involving 676 parents of preschool children aged 3-7 years in Kosovo.

Data analysis

The software IBM SPSS Statistics for Windows, Version 25.0 was used to analyze the data. All p-values < 0.05 (two-tailed test) were considered to be statistically significant. Furthermore, the confirmatory factor analysis was conducted using IBM SPSS Amos, Version 25.0. RMSEA values below 0.05 were evaluated as good, between 0.05 and 0.08 as adequate and above 0.08 as an indicator for bad model fitting (42-Hooper et al., 2008; 43-Kenny et al., 2014). The means and standard deviations, reliabilities (Cronbach's alpha and mean inter-item correlations), scale intercorrelations for the focal test (PAS), and McDonald's Omega for internal consistency were computed. Through correlation, t-test, ANOVA and MANOVA we investigated age, gender, parents living place and birth order effects on the PAS. The lack of evidence supporting the convergent and divergent validity of the instrument can be considered as a limitation on this study.

Ethical aspects

For this study, ethical approval was not required; however, the survey adhered to the ethical standards and principles set by the American Psychological Association. Participation in the research was entirely voluntary, informed consent was obtained beforehand, and all precautions were taken to maintain anonymity.

RESULTS

The Kaiser-Meyer-Olkin measure of sampling adequacy (=.914) and Bartlett's test of sphericity ($\chi2$ = 5257.450; p=.000) suggested that the data was suitable for factor analysis. The principal components analysis with oblimin rotation was used to extract the factors. The screen test pointed towards solutions with five factors, accounting for 48.03% of the variance.

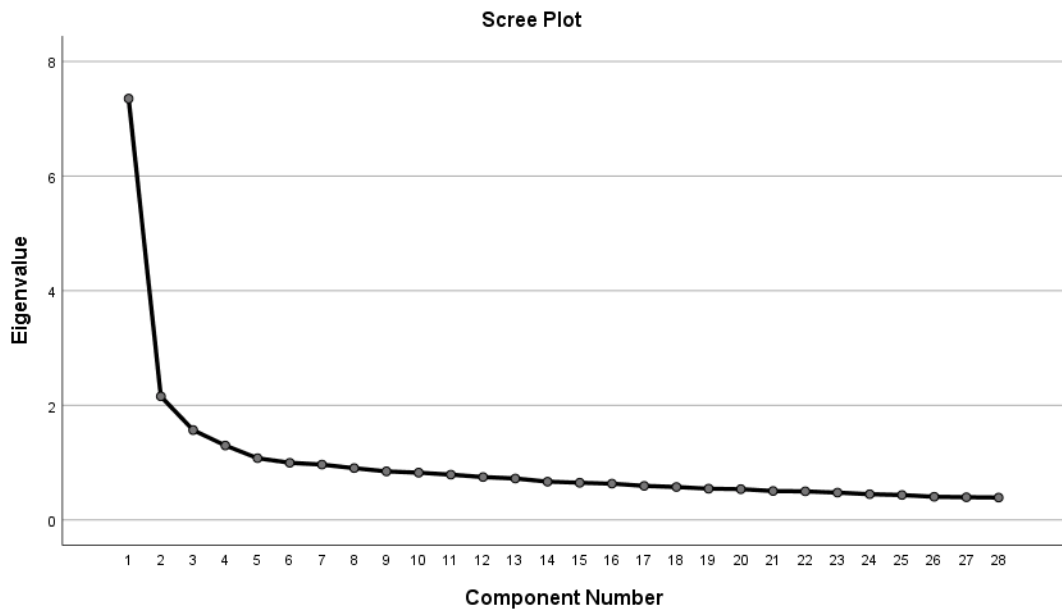**Figure 1.** Screen plot showing the eigenvalue of each component.

Figure 3 shows the Path

Figure 2 shows the Path diagram created because of CFA, while the Table 3 displays the standardized regression weights (i.e., factor loadings) of the 26 PAS items onto their respective factorial dimensions within a correlated five-factor model. The model fit for this confirmatory factor analysis, which aligned each item with the scales as prescribed by the scoring keys, was acceptable: GFI=.904; AGFI=.884, NFI=.821, CFI= .870, TLI= .854, RMSEA= .055, SRMR=.074. The factor loadings of the items on corresponding dimensions ranged from .30 to .88.

Figure 2. Path diagram created as a result of CFA - standardized coefficients
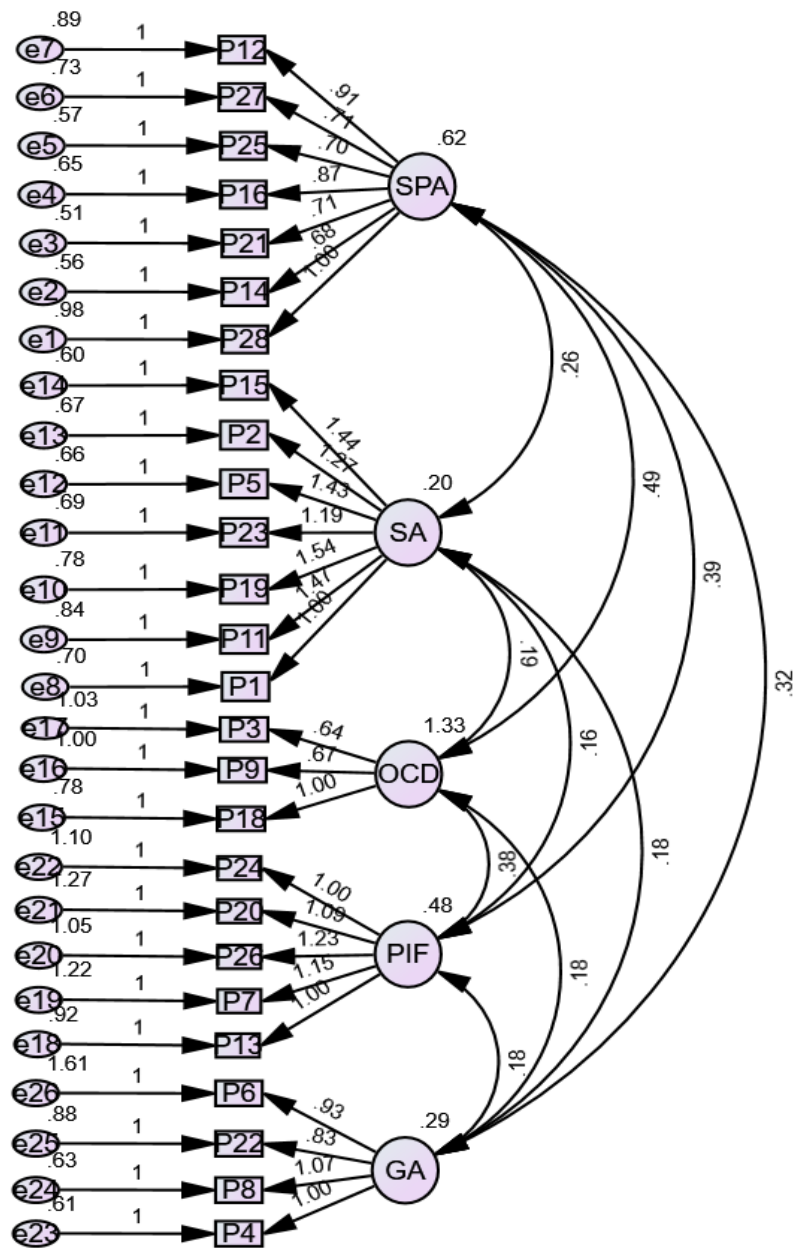
Note: Chi square=887.444, df=289, P-value=.000

Table 3. Factor loadings of individual items on the corresponding latent factors (N = 676).

Items		*Factors*				
The child:		*F1*	*F2*	*F3*	*F4*	*F5*
SPA	Worries that something bad will happen to his/her parents	.71				
	Has to keep thinking special thoughts (e.g., numbers or words) to stop bad things from happening	.69				
	Has nightmares about being apart from you	.69				
	Worries that something bad will happen to him/her (e.g., getting lost or kidnapped) so he/she will not be able to see you again	.68				
	Has bad or silly thoughts or images that keep coming back over and over	.63				
	Spends a large part of each day worrying about various things	.41				
	Asks for reassurance when it doesn't seem necessary	.37				
OCD	Keeps checking that he/she has done things right (e.g., that he/she closed a door, turned off a tap)		.83			
	Washes his/her hands over and over many times each day		.77			
	Has to have things in exactly the right order or position to stop bad things from happening		.66			
PIF	Is frightened of dogs			-.76		
	Is afraid of insects and/or spiders			-.73		
	Is afraid of the dark			-.62		
	Is scared of heights (high places)			-.53		
	Is nervous of thunderstorms			-.48		
SA	Is afraid of talking in front of the class/preschool group (e.g., show and tell)				-.76	
	Worries that he/she will do something to look stupid in front of other people				-.71	
	Is scared to ask an adult for help (e.g., a preschool or schoolteacher)				-.67	
	Is afraid to go up to a group of children to join their activities				-.66	
	Worries that he/she will do something embarrassing in front of other people				-.58	
	Is afraid of meeting or talking to unfamiliar people				-.47	
	Has difficulty stopping him/herself from worrying				-.30	
GA	Is reluctant to go to sleep without you or to sleep away from home					.72
	Becomes distressed about your leaving him/her at preschool or with a babysitter					.62
	Has trouble sleeping due to worrying					.52
	Is tense, restless, or irritable due to worrying					.35

Note: Preschool anxiety scale PAS; Obsessive-compulsive disorder OCD; Social anxiety-SA; Physical injury fears-PIF; Generalized anxiety-GA.

Reliability analysis

Most of the Cronbach's alpha coefficients of the PAS total scores and subscales demonstrated a good internal consistency: α =.878 for PAS-TC total (26 items); α =.78 for SA (7 items); α =.72 for PIF (5 items); α =.55 for GA (4 items), α =.71 for OCD (3 items); α =.79 for SPA (7 items). Also, the McDonald's Omega values for internal consistency of the PAS total scores and subscales demonstrated a good internal consistency: ω_t

=.875 for PAS-TC total (26 items); ω_t =.78 for SA (7 items); ω_t =.72 for PIF (5 items); ω_t =.55 for GA (4 items), ω_t =.72 for OCD (3 items); ω_t =.79 for SPA (7 items).

Table 4. Reliabilities and scale intercorrelations for the PAS scales.

PAS	Cronbach's α	Mean Inter-Item Correlations	Correlations				
			PAS total	GA	SA	OCD	SPA
PAS total	.88	.21	-				
GA	.55	.24	.572**	-			
SA	.78	.34	.749**	.434**	-		
OCD	.71	.46	.574**	.118**	.251**	-	
SPA	.79	.36	.844**	.438**	.544**	.414**	-
PIF	.72	.34	.721**	.235**	.363**	.325**	.524**

Note: Preschool anxiety scale PAS; Obsessive-compulsive disorder OCD; Social anxiety-SA; Separation anxiety-SPA; Physical injury fears-PIF; Generalized anxiety-GA. **. Correlation is significant at the 0.01 level (2-tailed).

Internal consistencies in our study ranging from .55 to .88 showed comparable values with values of .64 to .94 as reported in the standardization sample of PAS [21]. The mean inter-item correlations of the PAS total scores and subscales vary between .21 to .46. It revealed that the mean inter-item correlations were within a good range, as each item fell within the acceptable range of .15–.50 [44,45].

Prevalence and scores of anxiety symptoms

The mean total score of anxiety symptoms was 25.3 (SD = 15.5). Overall, 110 children (16.3%) met the criteria for significant anxiety symptoms. Stratified by gender there were more girls that met the criteria that boys (58 vs 52) and children living in the urban areas had more anxiety symptoms than rural children (77 vs 33). Older children showed more significant anxiety symptoms than younger ones (first child=61; second child=30; third child=14; fourth child= 5).

Age, gender, birth order and place of living effects

Significant effects for the correlation between age and the PAS scales were shown for the Separation anxiety scale (r= .135; p=.000), Physical Injury Fears scale (r= .212; p=.000), Social Anxiety scale (r= .109; p=.005), Generalized anxiety (r= .131; p=.001), as well as for PAS total (r= .1; p=.001).

Table 5 shows the gender effects for the PAS scales, where significant differences were found for female preschoolers who scored significantly higher than their male counterparts on the GA [t (674) = -1.993, p < .05, d = .2]. No significant gender differences were found on the remaining subscales or the total scores.

Regarding the living place, children who live in villages scored significantly higher than their counterparts who live in city on the SPA, SA, OCD, PIF as well as on the total scores. Only on GA, no significant differences were found.

The MANOVA analysis showed that there was a statistically significant interaction effect between gender and age only on the Physical Injury Fears scale, *F* (20,2196) = 1.794, *p* = .017; Wilks' Λ = .943. For the other PAS scales, there were no statistically significant differences on the interaction effects of gender and age.

Table 5. Distribution of PAS scores according to gender and living place (N = 676).

Gender and Living Place		PAS Total	GA	SA	OCD	SPA	PIF
Girls (n=330)	*Mean*	33.52	4.99	7.26	6.58	6.06	8.63
	SD	14.55	2.71	4.57	3.23	4.95	4.66
Boys	*Mean*	32.12	5.42	6.85	6.34	6.03	7.48
(n=346)	SD	14.93	2.98	4.95	3.14	4.93	4.20
t(df)		1.239 (674)	-1.993 (674) *	1.127 (674)	.970 (674)	.099 (674)	3.376 (659.03)
Cohen's d		.1	.2	.09	.08	.01	.3
City	*Mean*	31.66	5.17	6.73	6.33	5.82	7.61
(n=550)	SD	14.35	2.83	4.58	3.24	4.76	4.30
Village	*Mean*	37.77	5.37	8.46	7.00	7.02	9.91
(n=126)	SD	15.49	2.96	5.31	2.85	5.53	4.68
t(df)		-4.243 (674) *	-.704 (674)	-3.388 (170.1) *	-2.320 (205.9) *	-2.258(169.9) *	-5.317 (674) *
Cohen's d		.41	.07	.35	.22	.23	.51

Note: Preschool anxiety scale PAS Obsessive-compulsive disorder OCD; Social anxiety-SA; Separation anxiety-SPA; Physical injury fears-PIF; Generalized anxiety-GA. *. Correlation is significant at the 0.05 level (2-tailed).

Table 6. Distribution of PAS scores according to age (N = 676).

Children' age		SPA	OCD	PIF	SA	GA	PAS
3 years	*Mean*	5.05	6.22	6.42	5.511	5.72	28.92
(n=86)	*SD*	3.96	3.28	4.07	3.93	2.71	13.24
4 years	*Mean*	5.60	6.20	6.8448	6.71	5.57	30.92
(n=116)	*SD*	5.06	3.24	4.10430	4.49	2.79	14.54
5 years	*Mean*	5.89	6.52	8.16	6.99	5.25	32.81
(n=187)	*SD*	4.68	3.13	4.434	4.38	2.56	13.77
6 years	*Mean*	6.56	6.53	8.97	7.83	5.08	34.98
(n=202)	*SD*	5.21	3.23	4.59	5.46	3.18	15.92
7 years	*Mean*	6.78	6.71	8.87	7.33	4.44	34.12
(n=85)	*SD*	5.36	3.05	4.35	4.67	2.74	14.93
p-value		.069	.764	.000*	.004*	.023*	.011*

Note: Preschool anxiety scale PAS; Obsessive-compulsive disorder OCD; Social anxiety-SA; Separation anxiety-SPA;
Physical injury fears-PIF; Generalized anxiety-GA.
* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

In terms of age, older children demonstrate notably higher scores compared to younger children on the SA, PIF, GA, as well as on PAS total scores. However, no significant differences were observed on the remaining subscales. The findings in the literature offer varied results. For instance, Spence et al., (2001), and Wang and Zhao (2015) reported higher scores on all scales for younger children, whereas 27-Benga et al., (2010) and 25-Broeren and Muris (2008) found older children to score significantly higher on the SA and the GAD scale.

Table 7. Distribution of PAS scores according to birth order (N = 676).

		SPA	OCD	PIF	SA	GA	PAS
First born	*Mean*	6.01	6.20	7.8615	7.1330	5.3878	32.59
(n=161)	*SD*	4.88	3.241	4.39	4.86	2.85	14.51
2-nd child	*Mean*	5.55	6.56	7.8434	6.6364	4.7525	3134
(n=198)	*SD*	4.46	3.14	4.52	4.58	2.92	14.61
3-rd child	*Mean*	6.93	6.83	8.6739	7.1957	5.3261	34.95
(n=92)	*SD*	5.73	3.04	4.36	4.71	2.52	15.65
4-rth child	*Mean*	7.16	7.84	9.9200	8.5600	5.8800	39.36
(n=25)	*SD*	6.04	2.79	4.94	4.95	3.32	14.30
p-value		.099	.038*	.064	.242	.045	.030*

Note: Preschool anxiety scale PAS; Obsessive-compulsive disorder OCD; Social anxiety-SA; Separation anxiety-SPA; Physical injury fears-PIF; Generalized anxiety-GA.

We also examined the birth order, and according to the table provided, there appears to be a trend of rising anxiety levels among later-born children. Statistically, differences were detected only in OCD and PAS total scores, with fourth-born children displaying higher values.

Table 8. Comparisons of means and standard deviation of the PAS scores: Kosova compared to other countries.

PAS	Kosovo Present study M (SD) N=676	Australia [21] M (SD) N=510	Portugal [29] M (SD) N=561	Romania [28] M (SD) N=514	China [24] M (SD) N=3636	Netherlands- [25] M (SD) N=275	Hong Kong [20] M (SD) N=1317
OCD	6.45 (3.12)	1.23 (2.08)	4.4 (3.1)	4.45 (3.59)	4.1 (3.5)	1.43 (2.19)	1.74 (2.25)
SA	7.05 (4.77)	4.66 (3.74)	6.8 (4.0)	3.92 (3.70)	4.9 (3.8)	5.43 (4.22)	4.31 (3.62)
SPA	6.04 (4.94)	2.73 (2.85)	6.7 (4.2)	3.90 (3.08)	4.4 (3.3)	2.34 (2.41)	3.29 (2.77)
PIF	8.04 (4.46)	6.51 (4.37)	8.9 (5.5)	6.73 (5.39)	8.6 (5.6)	6.69 (4.11)	6.13 (4.53)
GA	5.21 (2.85)	2.15 (2.57)	5.3 (3.4)	1.96 (2.55)	3.2 (2.9)	2.95 (2.91)	2.65 (2.56)
PAS Total	32.80 (14.75)	17.28 (11.83)	31.2 (15.2)	21.01 (13.56)	25.3 (15.5)	18.84 (11.57)	18.12 (12.50)

Note: Preschool anxiety scale PAS; Obsessive-compulsive disorder OCD; Social anxiety-SA; Separation anxiety-SPA; Physical injury fears-PIF; Generalized anxiety-GA.

In general, mean scores on the Kosovar PAS were higher than those reported in Australia [21], Netherlands [25], Hong Kong [20], Romania [28]. Kosovar children scored almost the same as Portugal children [29] and Chinese [24].

DISCUSSION

The comparison of the internal consistencies observed in the current study with those reported in the standardization sample by Spence et al. [21] supports the argument for the reliability of the PAS in the study context. The range of alpha coefficients (.55 to .88) in the current study is comparable to the values reported in the standardization sample (.64 to .94). Specifically, high alpha coefficients for the PAS total score and subscales such as Separation Anxiety (SA), Physical Injury Fear (PIF), Obsessive-Compulsive Disorder (OCD), and School Phobia Anxiety (SPA) indicate that the items within these subscales are closely related and consistently measure the intended construct of anxiety. This suggests that the internal consistency of the PAS in the current study is consistent with established norms and standards, further supporting the reliability of the instrument. The high internal consistencies observed in most subscales, along with the comparison to values reported in the standardization sample, provide confidence in the validity of the PAS for use in research and clinical settings to evaluate childhood anxiety effectively.

The mean inter-item correlations within the PAS total scores and subscales ranged from .21 to .46, indicating strong internal consistency and alignment with established guidelines for reliability in measuring children's perceived anxiety, as supported by consistent and moderate inter-item correlations, consistent with the recommendations [44, 45].

Although the mean inter-item correlations align with the recommended range, the relatively narrow scope (ranging from .21 to .46) might imply restricted diversity in responses across items, potentially indicating some redundancy or overlap in content within each subscale. Such a scenario could raise concerns regarding the discriminant validity of the PAS, and interpretations may differ based on the unique traits of the study group and context.

The comparison of mean scores on the Kosovar Perceived Anxiety Scale (PAS) with those reported in various other countries provides valuable insights into the prevalence of perceived anxiety among children across different cultural contexts. The results indicate that Kosovar children

reported higher mean scores on the PAS compared to children from several other countries, including Australia, the Netherlands, Hong Kong, and Romania. The presence of such disparities underscores the importance of considering cultural and contextual factors in understanding anxiety among children. We assume that part of these results can be explained by the competitive educational environment in Kosovo, since in early childhood there is a tendency to push children for academic achievement [60]. The reporting of general anxiety in children is rarer, perhaps because of its abstract nature and the inability to describe their anxious experiences. Our results suggest that the recognition and reporting of anxiety are influenced by sociocultural contexts and practices as well as parenting styles. We also suggest that this can be related to the fact that parents are less sensitive to the emotional state of the child, as a result of the rather complex dynamics that the Kosovar family is going through, especially in the movements of its internal structure, lowering and possibilities of early diagnosis and intervention. The results achieved may reflect differences in cultural attitudes towards anxiety and mental health, as well as variations in access to mental health services and support systems.

One notable observation is the similarity in mean scores between Kosovar children and Portugal and Chinese children. Despite differences in cultural backgrounds and geographical locations, these findings suggest comparable levels of perceived anxiety among children in Kosovo, Portugal, and China. The discussion of these findings sheds light on potential cultural, socio-economic, and methodological factors influencing children's anxiety levels and has implications for understanding and addressing childhood anxiety globally. We support the speculation that the difference in the anxiety scores is related to parents' socialization practices such as having high demands on their children and using restrictive and punishment-oriented parenting strategies-oriented parenting strategies [46]. This similarity prompts further exploration into potential shared cultural norms, stressors, or socioeconomic factors that may contribute to children's anxiety experiences in these countries

Demographic variables effects

Significant effects for the correlation between age and the PAS scales were shown for the Separation anxiety SPA scale (r= .101;p=.009), Physical Injury Fears scale (r= .203; p=.000), Social Anxiety scale (r= .119; p=.002), Generalized anxiety GA (r= .-137; p=.000), as well as for PAS total (r= .126; p=.000). Younger children displayed higher anxiety levels than older children as found in some studies [23, 39, 40]. The significant effects observed for the correlation between age and various PAS scales provide valuable insights into how perceived anxiety levels may change with age among preschoolers.

The study found no differences in almost PAS scales regarding gender. These results follow the trend of findings from the earliest research in Kosovo about anxiety in this age group [39,40,41]. The variations in scores between preschool females and males only on the Generalized Anxiety (GA) scale may not solely result from gender itself; broader influences such as social expectations and environmental conditions could also play a role, potentially distorting interpretations of gender effects on anxiety levels. Diverse research outcomes, where certain studies found no gender-related differences [21,23,29,47] while others noted a tendency towards higher scores for girls, highlight intricate interactions between gender and various factors [24,25,27,28]. This underscores the necessity for comprehensive investigations to uncover the underlying mechanisms.

Our results showed that there was a statistically significant interaction effect between gender and age only on the Physical Injury Fears scale. This significant indicates that the association between these factors varies across different PAS scales, emphasizing the intricacies of age-related distinctions in anxiety encounters and emphasizing the necessity for additional research to clarify the underlying mechanisms and contextual elements influencing these differences

Regarding the living place, children who live in villages scored significantly higher than their counterparts who live in cities on the SPA, SA, OCD, PIF as well as on the total scores. Only on GA, no significant differences were found. In fact, research that have examined the rural versus urban variable in anxiety in children and adolescents are few and the findings are contradictory providing

inconsistent data. Our findings contrast with those of other studies. While some studies have found no significant difference in the prevalence of anxiety between rural and urban areas [48, 49,50] others indicate that children in urban areas are more likely to experience anxiety compared to those in rural areas [51,52]. However, studies have found evidence that the urban environment seems to have an effect on psychopathology and that the presence of predictors such as parental psychopathology, exposure to parental physical and verbal violence and social and neighbourhoods disadvantage, are related to later psychopathology [53].

The notable variances in perceived anxiety levels among children residing in rural areas versus urban environments offer valuable understanding of the particular facets of anxiety that might be shaped by one's living surroundings. This information can guide professionals in developing interventions customized to address the distinct hurdles encountered by children in various geographical contexts. The observed anxiety differences between rural and urban children may be influenced by various confounding factors beyond geographical location, such as cultural gap between cities and villages [54] and family dynamics in this transition which Kosovo is passing and highlighting potential limitations in generalizability and the need for longitudinal research to elucidate causality.

We also took into consideration the order of childbirth, and as shown in the table above, there seems to be a tendency for an increase in anxiety levels among children born later. These results align with those who observed higher levels of anxiety in older preschool children compared to younger ones [25]. However, other findings contradicted this trend [21,23].

Statistically, differences were found only in OCD and PAS total scores, where fourth-born children have shown higher values. We assume that the absence of significant differences in other PAS scales suggests that the association between birth order and anxiety levels may be domain specific. As the literature shows birth orders may be influenced by factors other than birth order alone, such as parental behavior or family dynamics [55-63]. The complex interplay of birth order with other familial and environmental factors necessitates cautious interpretation and further investigation to elucidate the underlying mechanisms driving this tendency.

Our recommendation is in line with other studies [64-66], which strongly emphasize the importance of the first years of life, underscoring the crucial significance of early interventions in addressing developmental disorders, and taking into consideration the multidimensional approach.

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