

THE LITHUANIAN VERSION OF THE PARENTING STRESS INDEX (PSI): A PSYCHOMETRIC AND VALIDITY INVESTIGATION

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Abstract

It is important to have a valid measure of parenting stress in the Lithuanian language as parenting can be a problematic field of family life in Lithuania. According to the results of an international study dealing with 24 countries, Lithuania is the second country (and has the leading position in Europe) where parents have evaluated their children as having the most behavioral and emotional problems (Rescorla, Achenbach et al., 2011). The reliability, factor structure, concurrent and discriminant validity of the Parenting Stress Index (PSI, Abidin, 1995) was examined for 1228 mothers of children aged between 2.5 and 6 years. Methods: Parenting Stress Index, Child Behavior Checklist 1.5–5 (CBCL 1.5–5, Achenbach & Rescorla, 2000), Parenting Styles and Dimensions Questionnaire (PSDQ short form, Robinson et al., 2001). An exploratory factor analysis of the 13 PSI scales indicated that the original two-factor solution (Child and Parent characteristics domains) fits the data best. Concurrent and discriminant validity was supported. The Lithuanian version of the Parenting Stress Index is a valid and reliable measure for assessment of distress related to parenthood.

Keywords: Parenting Stress Index, Psychometrics, Validity

Parenting stress as a psychological reaction to the demands of being a parent has been identified as one of the most common daily concerns faced by parents. Parenting stress arises when the parent's expectations about the resources needed to meet the demands of parenting are not matched by available resources (Deater-Deckard, 2004, p. 5). Furthermore, parents of younger children tend to neglect their own needs because of parenting

commitments. Parenting stress is closely linked to the child's and parent's health (Brummelte et al., 2011; Deater-Deckard, 1998; Deater-Deckard, 2004; Lowitzer, 1988; Spiegelhoff, Ahia, 2011), the child's behavioral and emotional problems (Abidin, Jenkins, McGaughey, 1992; Ashford et al., 2008; Goldberg et al., 1997; Theule et al., 2011), the child's physical abuse (Begle, Dumas, Hanson, 2010; Guterman et al., 2009; Shutay, 2009), marital adjustment (Lavee et al., 1996). Parenting stress is perceived not only by parents but also other persons of child's close environment who are child's primary caregivers (Kelch-Oliver, 2008).

Parenting stress index (PSI, Abidin, 1995) is the most widely used measure of parenting stress. It is based on the Parent-Child-Relationship stress theory which posits separate components: 1) aspects of parenting stress that arise from the child's behavior (such as behavioral, emotional, learning difficulties, the child's temperament, etc.), 2) that arise from within the parent (those aspects may include poor self-efficacy or parenting functioning, mental or physical illnesses, etc.), and 3) those aspects of parenting stress that arise within the parent-child relationship. The PSI was developed in response to the need for a measure to assess important aspects of the parent-child system (Abidin, 1995).

The advantages of the instrument. Parenting stress index is a reliable and valid instrument across many populations. Namely, PSI has been translated into more than 20 languages (based on the information of Psychological Assessment Resources, Inc., the PSI publisher); the full version of the PSI has been validated for Spanish, Chinese, French, German, Portuguese, Swedish and other populations (Hofecker Fallahpour et al., 2009; Lacharité, Éthier, Piché, 1992; Solis, Abidin, 1991; Tam, Chan, Wong, 1994; Zaad, Hermans, Feltzer, 2004). It is used in many studies, presented in scientific articles and doctoral dissertations; therefore, the results of scientific studies are comparable. Furthermore, normative data is available. Clinicians, counselors and researchers may find this instrument useful as it has a good predictive value for child abuse and maltreatment risk (Greenley, Holmbeck, Rose, 2006; Holden, Willis, Foltz, 1989; Lacharite, Ethier, Couture, 1999; Shutay, 2009), behavioral and emotional problems in the future (Ashford, Smit et al., 2008; Deater-Deckard, 2004; Goldberg et al., 1997), evaluating quality of family life, problematic areas of parenting role, parent-child relationships, as well provide information about the strengths in family system (Johnson et al., 2000; Simon, Murphy, Smith, 2005). The primary functions of the PSI are early identification of risk families, individual diagnostics, assessment of parenting stress that has an effect on parent behavior, child development, parent functioning (Abidin, 1995). PSI is often used in studies of clinically referred parents or children as it has good

discriminant validity and is valid in treatment–outcome studies (Acton, During, 1992; Nixon, Sweeney, Erickson, Touyz, 2003).

As far as we know this the first research with Parenting Stress Index in our country. It is important to have a valid measure of parenting stress in the Lithuanian language as parenting can be a problematic field of family life in Lithuania. According to the results of an international study dealing with 24 countries, Lithuania is the second country (and has the leading position in Europe) where parents have evaluated their children as having the most behavioral and emotional problems (Rescorla, Achenbach et al., 2011). Because of high emigration rates of one or both parents (Makaryan, 2012), Lithuanian children may feel unsafe and have behavioral or emotional difficulties, also parents of single parent families face more difficulties raising and taking care of the child. It seems that Lithuanians evaluate their quality of life as worse than people in other EU countries (European Commission, 2007, 2011).

Translation of the instrument does not mean that the instrument is valid and can be applied to another cultural group or has a good item match with the original instrument. Researchers have found that the original two–factor solution describes data better (Abidin, 1990; Birgas et al., 1996; Hofecker Fallahpour et al., 2009; Tam, Chan, 1994). However, some studies have failed to find the original two factors proposed by Abidin (Lacharité, Éthier, Piché, 1992; Solis, Abidin, 1991). The purpose of this study is to perform psychometric and validity investigation of the Lithuanian version of the PSI.

Method

Participants

The sample consists of 1228 mothers with children aged 2.5–6 years, attending kindergartens in Lithuania. The age range of the mothers is 20 to 49 years with a mean 32.2 (SD = 5.5) years. Children who were the focus of the mothers' answers to the PSI were 622 (51%) boys and 606 (49%) girls, with the age means 52 months (SD = 12) and 52 months (SD = 11), respectively. The level of the mothers' education is as follows: 570 respondents had received university education (46.5%), college or vocational training – 293 (23.8%), secondary school – 301 (24.5%), less than a secondary school – 64 (5.2%). Marital status: married 942 (76.7%), never married 162 (13.2%), divorced 120 (9.8%), widowed 4 (0.3%).

Instruments

Parenting Stress Index (PSI) (Abidin, 1995). The 120–item Parenting Stress Index is a Likert type parent self-report questionnaire. The PSI contains 3 major Child, Parent and Total stress domains and has 13 scales:

- Child characteristics domain scales: Child's distractibility/hyperactivity, Child's adaptability, Child reinforces parent; Child's demandingness; Child's mood and Child's Acceptability.
- Parent characteristics domain scales: Parent's sense of competence, Parent's social isolation, Parent's attachment, Parent's health, Role restriction, Parent's depression and Relationship with spouse.
Also, PSI has a Life stress scale that evaluates stressful family life events.

Lithuanian translation of the PSI. To assure the equivalence of instrument between cultures, the PSI was translated into Lithuanian by the authors of the present article. The items concerning parental education were slightly modified in order to suit the Lithuanian context. The instrument was back translated by a philologist of the English language who is very familiar with general psychological terms. The author of the original PSI version R. Abidin reviewed the back translated into English instrument for intelligibility and cultural appropriateness. The revised final version of the Lithuanian PSI and back translation were approved by Richard R. Abidin and the executive assistant of the publisher Psychological Assessment Resources, Inc.

Parenting Styles and Dimensions Questionnaire (PSDQ short form) (Robinson, Mandleco, Olsen, & Hart, 2001). This instrument is based on Baumrind's most commonly used typology of parenting styles (Robinson et al., 1995). The author of the measure Clyde Robinson granted the permission to use the questionnaire in the study. A 32-item Likert type questionnaire has three main factors: authoritative parenting – parents who are controlling but also confident in warmth and support; authoritarian parenting – parents who are less warm in interactions with children and more controlling of their children, who may use physical or verbal coercion; permissive parenting – parents who are non-controlling and indulgent. Cronbach's alphas for parenting styles are as follows: authoritative – .88, authoritarian – .83, permissive – .62 (alphas for the normative sample are .86, .82 and .64, respectively (Robinson, et al., 2001)).

Child Behavior Checklist 1.5–5 (CBCL 1.5–5) (Achenbach, Rescorla, 2000). The Total problems scale of this instrument consists of 99 items evaluating the problems concerning the child's emotional reactivity, anxiety/depressive symptoms, somatic complaints, withdrawal, sleep and attention problems, aggressive behavior. CBCL 1.5–5 has passed standardization procedures and is validated for the Lithuanian sample (Rescorla, Achenbach et al., 2011). Cronbach's alpha for the Total problems scale is .94 (.94 is for international research (Rescorla, Achenbach et al., 2011) and .93 is for the Lithuanian study (Jusiene et al., 2007)).

Procedure

Mothers were asked to answer questions of the Lithuanian PSI, CBCL 1.5–5 and PSDQ, the questions concerning child's health and demographics. The questionnaires were anonymous, participants were familiar with the instructions, the goal of the study and confidentiality terms and gave the questionnaires back in sealed envelopes. Statistical analysis was conducted using the SPSS 16.0 and AMOS 18 statistical packages.

Results

Reliability

The scales of the PSI showed acceptable to high internal consistency (Cronbach's $\alpha = .61-.95$, Table 1) and are appropriate for individual or group testing, it was similar to those of Abidin's (1995) presented for the normative sample. Only Reinforces parent subscale has low internal consistency ($\alpha = .59$).

Table 1. Internal consistency of the Total PSI and its subscales

	Cronbach's alpha				
	Lithuania n sample (N=1228)	PSI normative sample (Abidin, 1995; N=2633) ¹	French version of the PSI (Lacharité et al., 1992; N=122) ²	German version of the PSI (Hofecker Fallahpour et al., 2009; N=372) ³	Chinese version of the PSI (Tam, Chan, Wong 1994; N=284) ⁴
Distractibility/ Hyperactivity	.68	.82	.67	.59	.40
Adaptability	.80	.76	.59	.80	.65
Reinforces Parent	.59	.83	.55	.64	.63
Demandingness	.77	.73	.80	.64	.69
Mood	.69	.70	.97	.69	.41
Acceptability	.79	.79	.70	.70	.65
Child domain	.92	.90	.86	.91	.85
Sense of Competence	.74	.83	.63	.71	.74
Social Isolation	.79	.82	.78	.70	.69
Attachment	.60	.75	.55	.49	.39
Parent Health	.61	.70	.58	.68	.71
Role Restriction	.76	.79	.85	.79	.81
Depression	.79	.84	.76	.82	.75
Relationship with Spouse	.81	.81	.75	.72	.67
Parent domain	.93	.93	.91	.92	.91
Total stress scale	.95	.95	.93	.95	.93

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⁴ Tam, K., Chan, Y., & Wong, C.M. (1994). Validation of the Parenting stress index among Chinese mothers in Hong Kong. *Journal of community psychology*, 22, p. 215. This material is reproduced with the permission of John Wiley & Sons, Inc.

Other authors (Abidin, Solis, 1991; Hofecker Fallahpour et al., 2009; Lacharité, Éthier, Piché, 1992; Tam, Chan, Wong, 1994) also presented lower internal consistency coefficients for other versions of the PSI comparing to the normative data. Internal consistency coefficients mainly are higher in our study comparing to results of the PSI of French, Spanish, German and Chinese cultures, while the Dutch version of the PSI (Zaad, Hermans, Feltzer, 2004) presented higher internal consistency.

Bilingual Test–Retest Reliability

We did not evaluate test–retest reliability for the Lithuanian version of the PSI; however, we tested bilingual repeatability. 13 mothers who also have a good understanding of English were asked to complete the PSI both in Lithuanian and after an interval of four weeks in English. Spearman’s correlations examining the association between the scores of each subscale at the two assessments (Lithuanian and the original English version on the PSI) were 0.53–0.99, most of them exceeded 0.7 ($p < .05$). Relationship with spouse scale was the only one where the scores did not correlate significantly; we think that these results are possible because of the instability of evaluation of relationships between spouses.

Factorial Structure

After performing Principal Axis Factoring with Varimax rotation for the PSI items, 23 factors were extracted and they explained 43.7% total variance. Kaiser–Meyer–Olkin value was 0.947. Bartlett’s test of sphericity reached statistical significance ($\chi^2=45122.7$, $p < .001$). Scree plot suggested 2 factors.

The PSI has strong a priori grounds for the hypothesized subscales and researchers measuring with full form of the PSI use original 13 subscales (presented studies in Abidin, 1995). Many researchers have found that the original two–factor solution describes the data better (Abidin, 1990; Birgas et al., 1996; Tam, Chan, 1994); however some studies have failed to find the original two factors proposed by Abidin (Lacharité, Éthier, Piché, 1992; Hofecker Fallahpour et al., 2009; Solis, Abidin, 1991). As in our study the scree plot suggested 2 factors and after the first attempt of factor analysis too many factors were extracted, we did the second order Exploratory factor analysis (EFA) of 13 subscales. We choose Principal component analysis (PCA) with Varimax rotation so that the results of our study would be

comparable to the results of Abidin's normative sample results (Abidin, 1995). The scree test of the second order PCA suggested 2 factors solution model, also two factors were extracted of 13 subscales: 1st factor (corresponding to Child characteristics domain) explained 48.5% of variance, 2nd (corresponding to Parent characteristics domain) – 10.4% (both factors accounted for 58.9% of the variance). Kaiser–Meyer–Olkin value was 0.936, exceeding the recommended value of 0.6. Bartlett's test of sphericity reached statistical significance ($\chi^2=7682.2$, $p < .001$), this means that variables are correlated and suitable for factor analysis. Inter–scale Spearman correlations ranged from 0.25 to 0.55 ($p < .001$). Factor loadings are presented in Table 2. These results are similar to the normative data of the PSI (Abidin, 1995) are also replicated in Hauenstein, Scarr, Abidin (1987, in Abidin, 1995).

Table 2. Varimax rotated factor loadings following principal components analysis.

Scale	Factor I		Factor II	
	Lithuanian sample	Normative sample (Abidin, 1995) ¹	Lithuanian sample	Normative sample (Abidin, 1995) ¹
Child domain				
Acceptability	.81	.74		
Mood	.74	.76		
Demandingness	.73	.70		
Distractibility/Hyperactivity	.72	.52		
Reinforces Parent	.66	.60		
Adaptability	.66	.63		
Parent domain				
Attachment	.53	.52	(.36)	(.31)
Social Isolation			.80	.73
Relationship with Spouse			.78	.65
Parent Health			.74	.62
Depression			.70	.73
Role Restriction			.69	.72
Sense of Competence	.54	.58	.57	.60

Loadings with absolute value less than .50 are excluded. If loading of the scale in a given domain is less than .50, it presented in parentheses.

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We have done a confirmatory factor analysis (CFA) with AMOS 18 program of the PSI in order to identify whether the data fit the original Abidin's PSI instrument model. 3 models were tested and the summary of the goodness–of–fit analyses are presented in Table 3. The goodness–of–fit of each estimated model was evaluated using the following indices

(recommendations of the index fit presented according to AMOS User's guide (Arbuckle, 2009)): 1) χ^2 test and relative χ^2/df (relative chi-square ratio >2.0 represents an inadequate fit); 2) RMSEA and its lower and upper limits of a 90% confidence interval (root mean square error of approximation – a value of RMSEA .05 or less indicates a close fit of the model; RMSEA less than .08 is still acceptable); 3) CFI (comparative fit index – CFI value close to 1.0 indicates a very good fit).

Table 3. Summary of CFA Goodness-of-Fit statistics for Child characteristics domain model, Parent characteristics domain model and the complete original PSI model.

Model	χ^2	df	χ^2/df	p	RMSEA (90% CI*)	CFI
Child characteristics domain	131.292	9	14.59	< .001	.101 (.090–.121)	.961
Parent characteristics domain	121.927	14	8.71	< .001	.079 (.067–.092)	.968
Original PSI model	580.924	64	9.08	< .001	.081 (.075–.087)	.931

*lower and upper limit of 90% confidence interval for the population value of RMSEA.

We hypothesized that the 6 categories / scales (Child's distractibility/hyperactivity, Adaptability, Reinforces parent, Demandingness, Mood and Acceptability) would adequately define the Child characteristics domain, the next 7 categories/scales (Parent's sense of competence, Social isolation, Attachment, Health, Role restriction, Depression and Relationship with spouse) would adequately define the Parent characteristics domain, and all 13 categories/scales would adequately represent the complete original model of the PSI instrument. The results show (Table 3) that none of the tested models was found to be a good fit of the data; however, Parent characteristics domain model demonstrated the best data-model fit.

Concurrent Validity

When an instrument has good concurrent validity it correlates well with other instruments that are related to the construct measured by the instrument (Cronbach, 1984). To examine the concurrent validity of the Lithuanian version of the PSI we selected 2 instruments to correlate with the PSI – the CBCL 1.5–5 and the PSDQ.

We expect that parenting stress would be positively correlated to child's problems, Authoritarian and Permissive parenting styles and negatively correlated to Authoritative parenting style. Table 4 presents Spearman's correlations coefficients between the Child characteristics, Parent characteristics domains of the PSI and Total problems scale of CBCL 1.5–5, Authoritative, Authoritarian, Permissive parenting style scales of the PSDQ. As we hypothesized, concurrent validity was supported by medium–

to–large positive correlations with the CBCL 1.5–5 and small–to–medium positive and negative correlations with PSDQ.

Table 4. Correlations between the Child and Parent characteristics domains and the CBCL 1.5–5 Total problems scale, PSDQ Authoritative, Authoritarian and Permissive parenting style scales.

Scale	Total problems scale	Authoritative parenting style scale	Authoritarian parenting style scale	Permissive parenting style scale
Child characteristics domain	0.62	–0.27	0.41	0.31
Parent characteristics domain	0.48	–0.30	0.44	0.30

All correlations are significant at level $p < .001$.

Discriminant Criterion Validity

Discriminant validity refers to the ability of an instrument to differentiate successfully among individuals known to be more and less stressful in this case. For discriminant validity we compared perceived parenting stress for mothers with healthy children ($N = 1200$) and mothers who have children with developmental disorders ($N = 28$) as hypothesized that last mentioned would perceive more parenting stress.

As the PSI scales scores did not present the normal distribution (based on results of Kolmogorov–Smirnov test of normality), we used nonparametric Mann–Whitney test when comparing parenting stress levels of 2 mothers' groups. The Lithuanian PSI is a good measure of parenting stress and has fine discriminant validity as mothers who have children with a developmental disorder reported more stress in all areas concerning parenting and parent–child interaction than mothers with healthy children did. Mann–Whitney test indicated significant differences on all PSI subscales (Table 5).

Table 5. Descriptive statistics and means ranks comparing the PSI scales between groups with healthy children and children with developmental.

PSI scale	Sample of healthy children		Sample of children with developmental disorder		Mann–Whitney U test
	Mean rank	Mean (SD)	Mean rank	Mean (SD)	
Distractibility/Hyperactivity	607.0	23.2 (4.9)	934.1	28.0 (4.5)	7850.5*
Adaptability	608.7	24.7 (5.9)	861.2	29.6 (6.4)	9892.5*
Reinforces Parent	609.4	10.1 (3.0)	833.6	12.3 (3.5)	10667.0*
Demandingness	607.2	18.4 (4.9)	926.2	23.5 (4.8)	8071.5*
Mood	610.5	11.4 (3.2)	787.1	13.4 (3.6)	11968.0*
Acceptability	603.9	13.1 (4.5)	1072.4	20.7 (4.3)	3979.5*
Child domain score	605.2	101.1 (20.6)	1015.3	127.4 (18.1)	5576.5*
Sense of Competence	607.9	26.5 (6.2)	897.5	31.8 (5.9)	8875.5*
Social Isolation	608.5	13.2 (4.2)	871.8	16.5 (4.1)	9596.0*
Attachment	610.6	12.1 (3.2)	780.0	14.0 (3.9)	12165.5*

					*
Parent Health	611.0	12.4 (3.3)	766.4	13.9 (2.6)	12548.0* *
Role Restriction	610.2	17.1 (4.5)	797.0	19.6 (4.4)	11690.0*
Depression	609.5	20.9 (5.2)	827.9	24.3 (5.1)	10825.5*
Relationship with Spouse	609.9	16.1 (5.4)	810.4	19.1 (4.9)	11315.5*
Parent domain score	608.0	118.2 (24.1)	893.6	139.1 (23.3)	8985.5*
Total stress score	606.0	219.3 (40.7)	979.5	266.4 (35.6)	6579.0*

Significant at level *p < .01; **p < .05.

Discussion

The present study examined the psychometric properties of the Parenting Stress Index among Lithuanian mothers of preschool children. The results of the Lithuanian version of the PSI indicate that Cronbach's alpha coefficients are acceptable and similar to the original PSI data, most of them are higher comparing to those found in other studies of the PSI validation for other cultures (Fallahpour et al., 2009; Lacharité, Éthier, Piché, 1992; Solis, Abidin, 1991; Tam, Chan, Wong 1994).

The instrument has good test–retest reliability and equivalence with the original instrument when correlations coefficients between two measurements are 0.75–0.80 or more (Aiken, 2003). We assume that most scales of the Lithuanian PSI is a good reflection of the original version and demonstrates item match, also has good bilingual test–retest reliability. Correlation coefficients between the first (Lithuanian version of the PSI) and the second (English version of the PSI) set of scores for Child domain, Parent Domain and Total stress scale were 0.74, 0.77 and 0.77, respectively. Most of the PSI scales have good repeatability – correlations coefficients between Lithuanian and English versions of the PSI were 0.53–0.99. Only Relationship with spouse scale scores of the 1st and the 2nd testing did not correlate significantly. As there is good test–retest reliability for other scales, we assume that instability of the results for Relationship with spouse scale is possible because of the alternation of evaluation of relationships between spouses and the spouse's social support, and the lack of match between the results of the two measurements is not the result of problems with translation or comprehension of the questions (as there is good test–retest reliability for other scales).

Results of the Spanish and German versions of the PSI revealed that the three–factor solution models were better for their data (Fallahpour et al., 2009; Solis, Abidin, 1991), the factorial analysis of the subscales of the French PSI also supported the existence of a hierarchical structure composed of a general factor of parental stress and two specific factors (Lacharité, Éthier, Piché, 1992). EFA of the 13 scales indicated that two factors most

meaningfully describe the data of our study, however the CFA did not prove good data–model fit. The results of EFA are similar to the normative data of the PSI (Abidin, 1995), also replicate results of other studies (Hauenstein, Scarr, Abidin, 1987 in Abidin, 1995; Tam, Chan, Wong 1994). In our study and in the normative sample study (Abidin, 1995) and replication sample study (Hauenstein, Scarr, Abidin, 1987, in Abidin, 1995) the Attachment scale according to factor loading was related to Child domain factor, but was assigned to Parent domain factor as while developing the instrument it was expected to determine the parent’s motivation level to fulfill the role of parenting so it represents parent characteristics rather than child characteristics. According to factor loading values, Competence scale could be assigned for both Child domain and Parent domain, this results are similar to results have found Abidin (1995) and Hauenstein, Scarr, Abidin (1987, in Abidin, 1995) in their studies.

Researchers (Abidin, 1995; Gupta, 2007; Innocenti et al., 1992; Woolfson, Grant, 2006) reported that parents of children with developmental disorders fell in the higher stress categories, especially related to Child characteristics stress. Mothers reported greater levels of parenting stress related to all child characteristics because many children diagnosed as having developmental disorder may require supervision in daily living, because of emotional, social, physical, behavioral or cognitive impairment they may be perceived as more moody, demanding, showing distracting behavior, less adaptable and acceptable for their mothers. We should mention that the severity of the developmental disorder was not very serious in our study as children attended public kindergartens and do not need very special care. Still the results revealed that the Lithuanian version of the PSI is able to discriminate between groups of mothers who raise children of developmental disorder, versus mothers who have healthy children as last–mentioned reported fewer stress on all parenting stress scales.

We hypothesized that parents who show authoritative approaches to child rearing have the least parenting stress. According to Aunola, et al. (1999), Deater–Deckard (2004), and Francis, Wolfe (2008), parents who are themselves distressed and who report greater stress in parenting role are more likely to be punitive, hostile, harsh and rejecting in their behavior toward their children, tend to be more authoritarian in parenting behaviors. Permissive and indulgent parents do not force much control over their child, naturally the more permissive parenting practices they use, the more parenting stress concerning child characteristics (eg. child distractibility, misbehavior, demandingness) they report. Parents of children with more behavioral and emotional difficulties report more parenting stress, even when the child’s problems are not severe enough to result in a diagnosis (Deater–Deckard, 2004). Results of positive correlations of the PSI and Total child

behavioral and emotional problems score, positive correlations of the PSI and Authoritarian and Permissive parenting style and negative correlation with Authoritative parenting style indicated significant convergence of these measurements with the PSI and support concurrent validity of the Lithuanian PSI.

To conclude, the results of this study present that Lithuanian version of the Parenting Stress Index is a valid and reliable measure for assessment of distress related to parenting role and its demands.

Conclusion

An exploratory factor analysis of the 13 PSI scales indicated that the original two-factor solution (Child and Parent characteristics domains) fits the data best. Concurrent and discriminant validity was supported. The Lithuanian version of the Parenting Stress Index is a valid and reliable measure for assessment of distress related to parenthood.

Limitations of the study

Our data was based only on mothers who raise preschool children and whose child attends public kindergarten self-reports. Validity of the PSI with the fathers sample and older children would be praiseworthy. It would be interesting and valuable to evaluate parenting stress of parents with respect to sociodemographic characteristics of the family (parents age, education, employment, parents sex, congruous sex of parent and child (mother-daughter, mother-son, father-daughter, father-son)).

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