

Psychometric properties of the Persian version of the Parenting Style-Four Factors Questionnaire (PS-FFQ)

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A – Study Design, **B** – Data Collection, **C** – Statistical Analysis, **D** – Data Interpretation, **E** – Manuscript Preparation, **F** – Literature Search, **G** – Funds Collection

Summary Background. Parents are especially important for young teens, and they have a considerable impact on adolescents' development and social adaptation. One of the important factors for understanding parental influence on children's development is the concept of "parenting style".

Objectives. Due to the lack of standard instruments to measure parenting style, this study was conducted to assess the psychometric properties of the Persian version of the Parenting Style-Four Factor Questionnaire (PS-FFQ).

Material and methods. The study included 992 mothers of female students in Tabriz, Iran. Construct validity was assessed by using exploratory factor analyses with varimax rotation and principal component analysis extraction method and by confirmatory factor analysis. In addition, the feasibility of the measure was judged based on ceiling and floor effects. Reliability of the questionnaire was determined using internal consistency.

Results. The exploratory and confirmatory factor analysis confirmed four factors, which included 30 of the 32 items and also accounted for 32.91% of the variance. In the Confirmatory Factor Analysis (CFA), the fit indices indicated: Comparative Fit Index (CFI) = 0.92, Tucker-Lewis Index (TLI) = 0.90, Root Mean Square Error of Approximation (RMSEA) = 0.04, providing a strong fit to the data. The internal consistency for the overall scale was acceptable (Cronbach's alpha = 0.70).

Conclusions. The PS-FFQ provides a more comprehensive assessment of parenting styles of adolescents' parents and may be suitable for wider use. It could also be applicable for psychologists and researchers to examine and identify parenting styles.

Key words: parents, surveys and questionnaires, Persia.

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Background

Adolescents now represent a very large sector of the population. Half of the world population is under 25 years of age, and 20% of the world population consists of 10- to 19-year-old adolescents, who represent 85% of the population in developing countries [1]. In the regional divisions of the World Health Organization, Iran is in the Eastern Mediterranean region or EMRO [2]. Adolescents experience higher levels of mental health problems [3, 4], and about 75% of mental disorders occur before the age of 25 [5, 6]. On the other hand, parents are especially important for young teens [7], and they have a considerable impact on adolescents' development, social adaptation and health [8, 9]. A study by Habibi et al. [10] indicated that the knowledge of Iranian parents is insufficient concerning children's develop-

ment. Therefore, more studies on assessing parents' knowledge in the community and the practical methods for knowledge promotion in this field are recommended [10].

One of the important factors for understanding parental influence on children's development is the concept of "parenting style" [11]. Parenting style is defined as a primary parenting approach that creates an emotional milieu for expressing parental behaviour [12, 13]. Parenting style is a general characteristic of parental behaviour that reflects parents' interaction with their children [14–16]. Additionally, parenting style is one of the influencing factors for socialisation and psychological-behavioural development [15, 17], and numerous studies have recognised the role of parenting style in a child's development [18–21].

The first three parenting styles proposed by Baumrind include "authoritative", "authoritarian", and "permissive" [22,



23]. Later, Maccoby et al. developed a fourth style parenting, namely “uninvolved or neglectful” [14]. Authoritative parenting is accompanied by high emotions and moderate demands of the parent, while authoritarian parenting is a strict parenting style that is distinguished by high demands but low responsiveness of the parent, and consequently, they immediately react to any misbehaviours of their children [5, 6]. On the other hand, a permissive parent shows more affection, responsiveness and support to children and, conversely, has little control over their children [3]. Finally, neglectful parenting does not support or control their children [4].

Parenting style measurement tools are very limited, and most of these scales focus on the three parenting styles suggested by Baumrind [23]. The Parenting Style-Four Factor Questionnaire (PS-FFQ) is mainly constructed as a tool for measuring the four parenting styles of an adolescent's parent [24]. This scale has been developed based on of the theories of Baumrind [23] and dimensions of parenting style proposed by Maccoby et al. [14]. To the best of our knowledge, there is no parenting style questionnaire that measures four dimensions in Iran. We believe this study may facilitate better interventional efforts among adolescents' parents. We believe this study may facilitate better interventional efforts among parents of adolescents.

Objectives

Due to the lack of instruments to assess parenting styles (four factors), we aimed to culturally adapt the PS-FFQ to Persian/Farsi language.

Material and methods

Study design, setting and participants

This cross-sectional study was conducted between February and April 2019 in Tabriz, Iran. Participants consisted of mothers who their daughters were studying in the 7th to 9th grades of middle schools and were recruited by using multistage sampling. Among the five educational districts in Tabriz city, one of the districts was randomly selected. Subsequently, three female high schools with similar local characteristics (i.e. geographic location) were chosen for final recruitment. We excluded mothers who did not have enough literacy. Of the 1,030 invited participants in the study, 992 participants remained in the study. Before completing the questionnaire, the aims of the study were explained to the participants, and all of them completed written informed consent forms. The questionnaire took about 20–30 minutes to complete. Based on Ethical Code Number IR.TBZMED.REC.1397.527, this research was approved by the Ethics Committee of the University of Medical Sciences.

Translation validity

The translation of the original English questionnaire was based on the forward-backward translation method [25]. First, two independent translators who were native Persian speakers translated the PS-FFQ to Persian (forward translation). Second, the translated text was examined by experts. Third, the interim Persian version was translated into English by two native independent English translators (backward translation). Fourth, the translated text was reviewed and compared by experts. Lastly, the final translation to the Persian language was produced.

Data collection

Parenting Style-Four Factor Questionnaire

The PS-FFQ [20] is a self-reported tool, consisting of 32 items rated on a 5-point Likert scale ranging from 1 to 5. There are no negative items (Appendix A). The theoretical range for

the total score is 32 to 160; higher scores reflect higher levels of each parenting style.

Data analysis

In the present study, the data was analysed using SPSS version 20 (Armonk, NY: IBM Corp) and STATA 14 (Stata Corp, College Station, Texas USA). Structural equation modelling (SEM) was also conducted with maximum-likelihood estimates [26]. Skewness and kurtosis were examined to confirm the normality of the distributions (within the range of ± 1.5 and ± 2 , respectively), and the significance level (Alpha) was set at 0.05. Descriptive statistics were used to describe demographic characteristics and study variables.

Construct validity

Construct validity was assessed by a) Exploratory Factor Analysis; b) Confirmatory Factor Analysis, utilizing two subsamples of 496 and 496, respectively.

Exploratory factor analysis

Exploratory factor analysis (EFA) was evaluated by the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity for scale. Values higher than 0.70 were used as an indicator of satisfactory EFA [27]. Principal component analysis (PCA) with varimax rotation was used to extract the factors, and the number of factors was determined by a scree map of the eigenvalues. A factor loading of at least 0.30 was considered acceptable [28].

Confirmatory factor analysis

To assess the structure of the extracted model from exploratory factor analysis, a confirmatory factor analysis (CFA) was performed. Several model fit indices were used to evaluate the suitability of the model structure, including Normed Chi-square (χ^2/df), Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis index (TLI), Comparative Fit Index (CFI) and Standardized Root Mean Square Residual (SRMSR). Acceptable cut-offs for model fit are (χ^2/df) < 5.0, RMSEA < 0.08, TLI and CFI ≥ 0.90 , SRMSR < 0.05 [28, 29].

Reliability

Internal consistency reliability was investigated by calculating the Cronbach's alpha. A Cronbach's alpha coefficient of 0.7 or above was considered to be acceptable.

Feasibility

To assess the feasibility of the measures, the percentages of possible minimum and maximum scores were computed as floor and ceiling effects, respectively, and less than 15% was considered acceptable.

IRT model

Item response theory (IRT) models were applied to characterise the test items. Item response theory (IRT) analysis describes discrimination and difficulty indices [30]. A discrimination index demonstrates the sensitivity of the test to differentiate various severities of symptoms. Additionally, the difficulty index is used to identify the level of a perceived problem needed to achieve a 50% probability of choosing a particular score [31] and contributes to the overall information provided by the test [26].

Results

Descriptive data

In total, 992 mothers of adolescents participated in this study. A majority of the participants were housewives (82.70%) and obtained a diploma (47.30%), and one third did not have spousal help and support to solve a child's mental problems

(33.20%). Approximately one third were unable to identify the child's mental problems (26.30%). Other characteristics are summarised in Table 1.

Variables	Frequency	
Occupation	housewife	820 (82.70)
	employed	172 (17.30)
Literacy level	primary education	82 (8.30)
	secondary education	216 (21.80)
	diploma	469 (47.30)
	university	225 (22.70)
Take time to communicating effectively with child	very good	342 (34.50)
	good	434 (43.80)
	moderate	178 (17.90)
	low	29 (2.90)
	very low	9 (0.90)
	very good	363 (36.60)
	good	367 (37.00)
Ability to identify mental problems of children	moderate	182 (18.30)
	low	59 (5.90)
	very low	21 (2.10)
Spousal help and support to solve children's mental problems	very good	393 (39.60)
	good	270 (27.20)
	moderate	196 (19.80)
	low	83 (8.40)
	very low	50 (5.00)
Willingness to learn children's psychological, emotional and social problems	very good	599 (60.40)
	good	299 (30.10)
	moderate	75 (7.60)
	low	11 (1.10)
	very low	8 (0.80)
History of referring to a psychologist to solve child's problems	yes	120 (12.10)
	no	872 (87.90)

Table 2. Rotated matrix of the items of the parenting style-four factor questionnaire (first half-split sample – n 1 = 496)

Items	F1	F2	F3	F4
PSFFQ 24	0.63			
PSFFQ 28	0.61			
PSFFQ 15	0.52			
PSFFQ 16	0.52			
PSFFQ 4	0.50			
PSFFQ 31	0.46			
PSFFQ 12	0.44			
PSFFQ 19	0.43			
PSFFQ 20	0.41			
PSFFQ 32	0.35			
PSFFQ 8	0.34			
PSFFQ 14		0.62		
PSFFQ 10		0.58		
PSFFQ 22		0.54		
PSFFQ 2		0.53		
PSFFQ 6		0.53		
PSFFQ 11		0.50		
PSFFQ 7		0.35		
PSFFQ 30		0.33		
PSFFQ 18		0.30		
PSFFQ 1			0.61	
PSFFQ 5			0.43	
PSFFQ 29			0.43	
PSFFQ 17			0.42	
PSFFQ 9			0.39	
PSFFQ 21			0.34	
PSFFQ 27				0.69
PSFFQ 26				0.59
PSFFQ 25				0.37
PSFFQ 3				0.36

F1 – uninvolved, F2 – authoritative, F3 – authoritarian, F4 – permissive.

Main results

Exploratory factor analysis

Exploratory factor analysis was performed on 32 items through the principal component analysis method. The EFA portion of the study utilised the data from half of the 992 participants, as we had conceptualised that the underlying constructs were independent of each other. The KMO value was calculated as 0.805. Bartlett's test achieved a value of 2,664.98 at a significant level of less than 0.001. The results of factor analysis showed that the study of this scale by varimax rotation method, including four extracted factors: "uninvolved", "authoritative", "authoritarian", "permissive", which explained 32.91% of cumulative variance. Two items did not load on any of the factors. The results are summarised in Table 2.

Feasibility and reliability

The percentage of the ceiling and floor scores were 0.0% and 0.0%, 0.0% and 0.0%, 0.10% and 0.70% and 0.30% and 1.30%, respectively for subscales of F1, F2, F3 and F4 total scores (all less than 15%), indicating the excellent level of feasibility of the PS-FFQ. Values of skewness (< 3) and kurtosis (< 10) measures in the total and sub-scale scores indicated the normality assumption of the scores (Table 3). Reliability coefficients for the subscales ranged from 0.60 to 0.71. Item total correlation coefficients ranged from 0.01 (items 6) to 0.36 (item 25).

Confirmatory factor analysis

The CFA portion of the investigation utilised the other half of the observations and results showed by these indices (RMSEA = 0.04, χ^2/df = 2.06, TLI = 0.90, CFI = 0.92, SRMSR = 0.05). The results indicated a good fit for the model (Figure 1).

Factors (Subscales)	Number of items	Range	Mean (SD)	Kurtosis	Skewness	Floor effect (%)	Ceiling effect (%)	Cronbach α
F1	11	11–55	22.35 (5.91)	0.09	0.45	0.00	0.00	0.71
F2	10	10–50	40.21 (4.80)	0.78	-0.55	0.00	0.00	0.70
F3	7	7–35	16.62 (3.61)	0.93	0.24	0.70	0.10	0.60
F4	4	4–20	10.77 (2.89)	-0.03	0.11	1.30	0.30	0.66

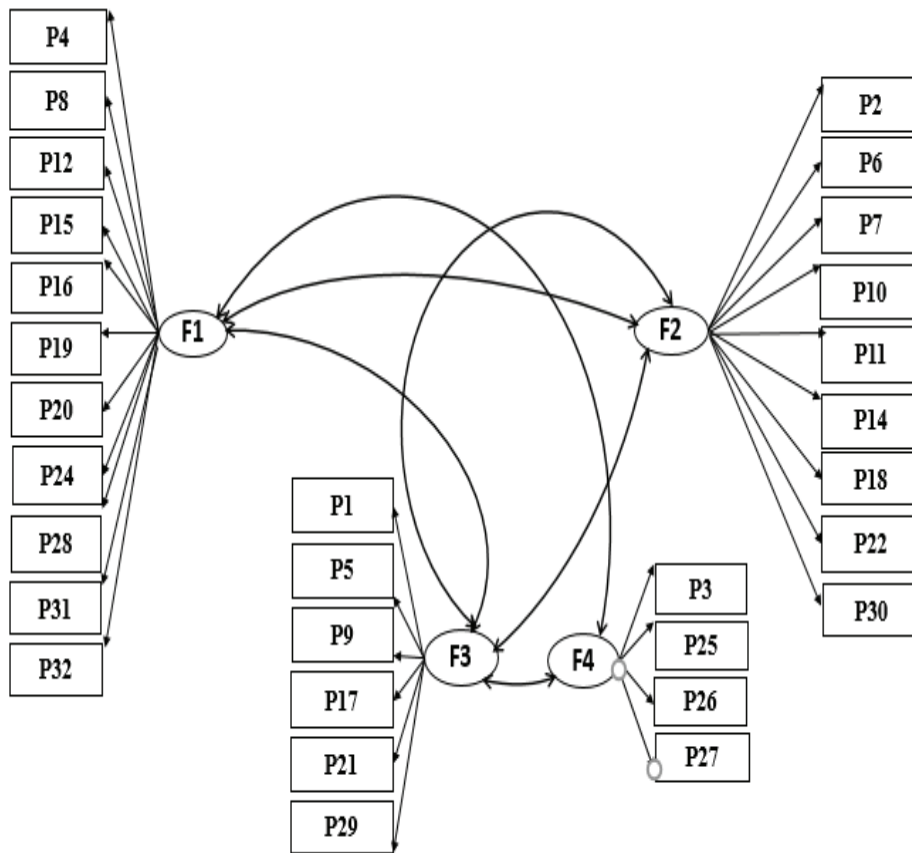


Figure 1. Confirmatory Factor Analysis of the Four-factor Model of the PS-FFQ

Table 4. IRT Calibration results of the PS-FFQ item bank ($n = 992$)

Item-ID	Mean (SD)	Item-total correlation	Cronbach's alpha if item deleted	IRT				
				Discrimination	B1	B2	B3	B4
PSFFQ 1	3.28 (1.00)	0.28	0.68	0.36	-7.64	-4.21	0.90	6.21
PSFFQ 2	4.62 (0.66)	0.03	0.69	-0.69	8.19	6.16	4.22	1.37
PSFFQ 3	3.20 (1.10)	0.25	0.68	0.34	-6.99	-3.40	1.10	6.22
PSFFQ 4	1.98 (0.99)	0.19	0.68	0.63	-0.60	1.42	4.25	7.26
PSFFQ 5	2.83 (1.00)	0.24	0.68	0.86	-2.84	-0.73	1.46	3.97
PSFFQ 6	4.14 (0.82)	0.01	0.69	-0.81	6.25	4.28	2.15	-0.75
PSFFQ 7	4.06 (0.96)	0.04	0.70	-0.80	5.05	3.45	1.78	-0.68
PSFFQ 8	1.76 (0.99)	0.30	0.68	1.32	0.15	1.33	2.37	3.63
PSFFQ 9	2.52 (1.29)	0.28	0.68	0.19	-4.14	0.06	5.51	13.40
PSFFQ 10	4.12 (0.95)	0.05	0.69	-0.87	5.59	3.11	1.68	-0.38
PSFFQ 11	3.25 (1.13)	0.20	0.68	-0.27	9.73	4.02	-0.95	-6.55
PSFFQ 12	2.23 (1.08)	0.26	0.68	1.12	-0.91	0.68	2.01	3.50
PSFFQ 13	3.20 (1.19)	0.15	0.69	-0.07	25.18	13.27	-2.31	-23.60
PSFFQ 14	3.83 (0.83)	0.14	0.69	-0.58	8.71	5.03	1.47	-2.36
PSFFQ 15	2.70 (1.04)	0.32	0.68	0.71	-2.55	-0.62	1.99	4.88
PSFFQ 16	1.63 (0.95)	0.34	0.68	1.73	0.39	1.37	2.17	2.92
PSFFQ 17	1.28 (0.66)	0.20	0.69	2.06	1.08	1.99	2.71	3.16
PSFFQ 18	4.23 (1.06)	0.03	0.70	-0.85	3.86	3.27	2.07	0.24
PSFFQ 19	2.68 (1.30)	0.36	0.67	0.45	-2.40	-0.27	2.10	5.06
PSFFQ 20	2.22 (1.25)	0.30	0.68	0.55	-0.73	1.08	2.91	5.22
PSFFQ 21	1.46 (0.89)	0.22	0.68	1.29	0.95	2.01	2.76	3.46
PSFFQ 22	4.07 (0.86)	0.08	0.69	-0.73	6.47	4.58	1.94	-0.91
PSFFQ 23	3.89 (1.22)	0.10	0.69	-0.21	11.20	8.06	4.70	-1.94
PSFFQ 24	1.74 (0.92)	0.33	0.68	1.08	0.08	1.58	3.24	4.38
PSFFQ 25	2.43 (1.18)	0.36	0.67	1.13	-0.97	0.14	1.55	3.08

Table 4. IRT Calibration results of the PS-FFQ item bank ($n = 992$)

Item-ID	Mean (SD)	Item-total correlation	Cronbach's alpha if item deleted	IRT				
				Discrimination	B1	B2	B3	B4
PSFFQ 26	2.33 (1.21)	0.28	0.68	0.69	-1.13	0.60	2.29	4.32
PSFFQ 27	2.79 (1.26)	0.34	0.67	0.74	-1.98	-0.38	1.13	3.34
PSFFQ 28	1.37 (0.80)	0.33	0.68	1.91	0.98	1.73	2.41	3.06
PSFFQ 29	2.01 (1.00)	0.28	0.68	1.19	-0.48	0.95	2.41	3.95
PSFFQ 30	3.95 (1.17)	0.01	0.70	-0.48	6.02	3.98	2.10	-0.67
PSFFQ 31	2.21 (1.11)	0.31	0.68	0.85	-0.87	0.66	2.51	4.30
PSFFQ 32	1.78 (1.03)	0.24	0.68	0.88	0.21	1.71	3.11	4.45

Abbreviations: Parenting Style-Four Factor Questionnaire (PS-FFQ), item response theory (IRT), graded response model (GRM), B1, B2, ...B4: coefficients of the IRT models.

IRT Model

PS-FFQ items were summed so that higher scores reflect higher levels of each parenting style. The overall fit of the GRM was found to be adequate (Chi-square = 801.262, $df = 383$, $p \leq 0.001$). Setting the level of significance at 0.01 for GRM item fit. The items and parameter estimates are summarised in Table 4.

Discussion

To the best of our knowledge, no prior study has ever examined the psychometric properties of the PS-FFQ since the scale was developed by Shyny [24]. Therefore, the present study is the first to have examined the psychometric properties of the PS-FFQ among mothers of adolescents. Moreover, our study translated, culturally adapted and validated the PS-FFQ scale in Iran. The results indicated that the Persian version of the PS-FFQ is a valid and reliable instrument for assessing parenting styles among Iranian mothers.

The translation procedure of the PS-FFQ was based on international guidelines to achieve equivalence [25]. The internal consistency of the overall scale was acceptable, as reported by Shyny [24]. The Cronbach's alpha coefficient of the two dimensions were less than 0.7. Although the results were satisfactory, the alpha for some factors was not excellent, especially for the third and fourth factors. However, we considered them essential and did not exclude these items due to the importance of the dimensions presented in the factors.

The resulting four-factor solution produced in the current study is similar to the original version [24]. The four factors, "uninvolved", "authoritative", "authoritarian" and "permissive", were satisfactory and together explained about 33% of the total variance. In the factor loading, item number 13 and 23 did not load. It seems that the cultural differences between the two study situations or contextual characteristics could influence these results. We applied CFA to examine whether the hypothesised model identified from EFA fit the data. The CFA results proceeded to support the four factors of the PS-FFQ. This study also confirms the feasibility of the scale. The percentage of the floor and ceiling effect were all less than 15% for the total and

subscale scores. However, future research needs to be conducted to corroborate our findings.

Construct validity, internal consistency reliability and the feasibility of the PS-FFQ were confirmed by a validation data set. Thus, PS-FFQ can be used within the population for research and clinical purposes. Actually, using reliable and valid PS-FFQ will assist researchers and psychologists in effectively and correctly understanding parenting styles among mothers of adolescents. The psychometric properties of the questionnaire were studied for the first time in Iran and could be further supported by conducting various studies in countries with different religions and cultures. Therefore, more research is needed to consider the reliability and validity of the PS-FFQ. It is recommended that the questionnaire be translated into other languages and evaluated for its reliability and validity with a view to its wider implementation in future studies.

Strengths and limitations of the study

The study has the following strengths. First, an accepted standardised translation process was used to counter cultural compatibility and linguistic validity. Second, the sample in our study was extensive. Third, we used comprehensive and robust psychometric testing to evaluate the PS-FFQ. The study also has some limitations. First, the study samples were only collected in one Iranian city, which may not represent all Iranian mothers of adolescents. Second, because the participants were Iranian, the study is unable to directly compare the PS-FFQ between other countries or across various cultures.

Conclusions

The findings of this study displayed that the Persian version of the PS-FFQ is a valid and reliable instrument which can be used by psychologists and researchers to examine and identify the parenting styles of Persian/Farsi-speaking mothers.

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References

1. Marshall A. State of the World Population 2003: Making 1 Billion Count. Investing in Adolescents' Health and Rights. New York: United Nations Population Fund; 2003.
2. Statistical Center of Iran (SCI) Selected Results of General Population and Housing Census Deputy of Strategic Planning and Monitoring. 2011 [cited 18.08.2017]. Available from URL: <http://www.iran.unfpa.org/Documents/Census2011/census-90-results.pdf>.
3. Arnett JJ. *Adolescence and Emerging Adulthood: A Cultural Approach*. Naucalpan de Juárez, México: Pearson Prentice Hall; 2008.
4. Patalay P, Fitzsimons E. Development and predictors of mental ill-health and wellbeing from childhood to adolescence. *Soc Soc Psychiatry Psychiatr Epidemiol* 2018; 53(12): 1311–1323.

5. Burns J, Morey C, Lagelee A, et al. Reach Out! Innovation in service delivery. *Med J Aust* 2007; 187(S7): 31–34.
6. McGorry P, Os J Van. Redeeming diagnosis in psychiatry: timing versus specificity. *Lancet* 2013; 381(9863): 343–345.
7. Sayal K. Annotation: Pathways to care for children with mental health problems. *J Child Psychol Psychiatry* 2006; 47(7): 649–659.
8. Kang SG, Shin JH, Hwang YN, et al. Relations between worry, attachment styles and perceived parental rearing in primary school children. *Korean J Fam Med* 2008; 29(11): 854–866.
9. Ajilchia B, Rezaei Kargarb F, Kalantar Ghoreishia M. Relationship between the Parenting Styles of Overstressed Mothers with their Children's Self-esteem. *Procedia Soc Behav Sci* 2013; 82: 496–501.
10. Habibi E, Sajedi F, Afzali HM, et al. Early Childhood Development and Iranian Parents' Knowledge: A Qualitative Study. *Int J Prev Med* 2017; 8: 84.
11. Baumrind D. Child care practices anteceding three patterns of preschool behavior. *Genet Psychol Monogr* 1967; 75(1): 43–88.
12. Langer SL, Crain AL, Senso MM, et al. Predicting child physical activity and screen time: parental support for physical activity and general parenting styles. *J Pediatr Psychol* 2014; 39(6): 633–642.
13. Rodenburg G, Kremers SPJ, Oenema A, et al. Psychological control by parents is associated with a higher child weight. *Int J Pediatr Obes* 2011; 6(5–6): 442–449.
14. Maccoby EE, Martin JA, Hetherington EEM, et al. Socialization in the context of the family: parent-child interaction. *Handbook of Child Psychology: Socialization, Personality and Social Development* 1983; 4.
15. Baumrind D. Parental disciplinary patterns and social competence in children. *Youth & Society* 1978; 9(3): 239–267.
16. Steinberg L, Elmen JD, Mounts NS. Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Dev* 1989; 60(6): 1424–1436.
17. Young BJ, Wallace DP, Imig M, et al. Parenting behaviors and childhood anxiety: a psychometric investigation of the EMBU-C.J. *J Child Fam Stud* 2013; 22: 1138–1146.
18. Kordi A, Baharudin R. Parenting Attitude and Style and Its Effect on Children's School Achievements. *Int J Psychol Stud* 2010; 2(2): 217–222.
19. Schaffer M, Clark S, Jeglic EL. The Role of Empathy and Parenting Style in the Development of Antisocial Behaviors. *Crime Delinq* 2009; 55(4), doi: 10.1177/0011128708321359.
20. Kaufmann D, Gesten EDP, Santa RC, et al. The Relationship Between Parenting Style and Children's Adjustment: The Parents' Perspective. *J Child Fam Stud* 2000; 9: 231–245.
21. Lim SL, Lim BK. Parenting Style and Child Outcomes in Chinese and Immigrant Chinese Families – Current Findings and Cross-Cultural Considerations in Conceptualization and Research. *J Marriage Fam* 2004; 35(3–4): 21–43.
22. Abdul Gafoor K, Kurukkan A. Construction and Validation of Scale of Parenting Style. *Guru Journal of Behavioral and Social Sciences* 2014; 2(4): 315–323.
23. Baumrind D. Current patterns of parental authority. *Dev Psychol* 1971; 4: 1–103.
24. Shyny TY. Construction and Validation of PS-FFQ (Parenting Style Four Factor Questionnaire). *Int J Eng Res Dev* 2017; 5(3): 426–437.
25. Beaton DE, Bombardier C, Guillemin F. Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures. *Spine J* 2000; 25(24): 3186–3191.
26. Corp S. Stata statistical software: Release 14. College Station. 2015, TX: StataCorp LP.
27. Munro BH. *Statistical methods for health care research*. Philadelphia: Lippincott, Williams and Wilkins; 2006.
28. Tinsley HE. *Handbook of applied multivariate statistics and mathematical modeling*. San Diego: Elsevier Academic Press; 2000.
29. Bentler PM, Bonett DG. Significance tests and goodness of fit in the analysis of covariance structures. *Psychol Bull* 1980; 88(3): 588–606.
30. Samejima F. Estimation of latent ability using a response pattern of graded scores. *Psychometric Monograph* 1969; 17: 5–17.
31. Nguyen TH, Han HR, Kim MT, et al. An introduction to item response theory for patient-reported outcome measurement. *Patient* 2014; 7(1): 23–35.

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