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Research Paper

Psychometrics and Standardization of the Extended Persian Version of the Knowledge of Parenting Strategies Scale

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ABSTRACT

Objective: This study seeks to validate and standardize the extended version of the knowledge of parenting strategies scale (KOPSS) among Iranian citizens.

Methods: This paper is a descriptive measure validation study, which falls in the category of quantitative research. The statistical population consisted of Iranian parents with children aged 3-12, living together. Thirty parents were selected through convenience sampling and were tested using the Persian KOPSS in order to estimate the standard deviation of the total KOPSS score and obtain the sample size for validation and standardization (n=725). Then, thirty parents were studied at an interval of three weeks to calculate the test-retest reliability. Furthermore, 330 other parents were selected through convenience sampling to measure internal consistency reliability and concurrent criterion validity. To calculate concurrent criterion validity, the Persian KOPSS scores were correlated with the scores of Robinson's Parenting Styles and Dimensions Questionnaire (PSDQ). To obtain the standardized scores and percentile ranks of the raw Persian KOPSS scores, an online survey was conducted on 725 eligible parents (including 532 mothers and 193 fathers).

Results: The correlation of the total Persian KOPSS-20 score with the PSDQ sub-scales was found to be larger than 0.40 (0.417-0.508).The standardized KOPSS-20 was obtained by converting the raw scores into normed z and T-scores and calculating the percentile ranks of the entire group (n=725).

Conclusion: KOPSS-20 was found to yield reproducible and reliable results with satisfactory validity coefficients.

1. Introduction

Parenting refers to a complex set of activities that independently or interactively influence the growth of a child. These activities include specific practices and behaviors pursued by parents. In other words, parenting practices are the attempts of parents to control and socialize their children (Ryan & Ahmad, 2018). Furthermore, parenting has different styles, which are the dominant emotional atmospheres created by parents to socialize their children (Belschner et al., 2020). Hence, parenting can be described as a combination of parental behaviors in different conditions that create a sustainable atmosphere.

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The main components of parenting include 1) acceptance and close relationships, 2) control, and 3) independence. The interaction of these three components determines the parenting style (Gouveia et al., 2018). The authoritative style is characterized by acceptance, close relationships, adaptive control practices, and a balance of sufficient yet limited independence. The authoritarian style is characterized by low levels of acceptance and close relationships, a high level of strict control, and low levels of independence. The permissive parenting style, however, is affective and compassionate, with no expectation of children and low control. Permissive parents allow their children to make decisions regardless of their ages, even if they are still unable to do so (Moreira et al., 2018).

Apart from the parenting styles and approaches chosen by parents, the knowledge of parenting, including parents' knowledge of fundamental parenting principles, is of greater importance. The parenting knowledge of parents may influence the choice of parenting styles. Research has shown that parents and their parenting knowledge are major factors that affect the psychological well-being of children. Baumrind (1991) showed that parents and trainers should focus on enhancing efficient parenting practices and the parent-child interaction to improve desirable outcomes in the lives of their children (Hembree-Kigin & McNeil, 2013). Knowledge of parenting can be viewed as a social cognition aspect of adults, which includes an individual's understanding of child growth processes, child care and nurture skills, and growth norms (Dichtelmiller et al., 1992).

Considering the importance of parenting knowledge in the well-being of children, scales have been designed to measure it, and the extended version of the knowledge of parenting strategies scale (KOPSS) is among the latest measures of parents' knowledge of parenting. Kirkman (2015) developed and validated KOPSS with 40 items in an English form at the University of New South Wales, Australia. Cronbach's alpha was calculated to be 0.84 for KOPSS. It was mainly aimed at focusing on how parents encountered the conduct problems of children aged 3-12 (e.g., continuous aggression, disobedience, and violation). The items have four choices. There is only one choice for each item. The items are classified into four groups: 1) strategies to encourage positive child behavior, 2) discipline strategies to set misbehavior limits, 3) managing high-risk situations (such as contexts outside the home) and sibling conflict, and 4) partner support strategies and parental self-care (Kirkman, 2015). Three years later, an extended version of KOPSS was introduced by Kirkman et al. (2018) with 33 items. It was calculated to have good validity and reliability. They also reported a shorter version of KOPSS with 16 items.

Apart from KOPSS, several measures have been developed, including Schaefer's Parenting Styles Questionnaire (1965), Baumrind's Parenting Styles (1972), Bavolek's Adult-Adolescent Parenting Inventory (1984), and Robinson's Parenting Styles and Dimensions Questionnaire (PSDQ). As can be seen, the measures were mostly developed a long time ago, while parenting can undergo substantial changes over time due to social evolution in societies. Therefore, a more recent measure remains to be introduced. Furthermore, these measures are parental self-report tools; a parent responds to the items on the Likert scale (or other scales) based on their judgment, and parents are not asked to choose from a number of strategies and solutions. This could impede an effective and efficient evaluation of the knowledge of parenting.

Parents with a positive authoritative parenting style induce better outcomes than ordinary authoritative parents in children (Kuppens & Ceulemans, 2019). This is also the case with adolescents; however, the behavior of adolescents would have a greater effect on their parents (Soenens et al., 2019). Cross-sectional studies have reported a poor to moderate positive relationship between authoritative parenting and higher self-esteem and between authoritarian or permissive parenting and lower child self-esteem (Pinquart & Gerke, 2019). Furthermore, parent warmth significantly influences aggressive adolescents. This suggests that parent behavior and parenting style are even more important for children at higher ages (Perez-Gramaje et al., 2020). Secure attachment to a reliable and sustainable caregiver who provides the child with care, support, and compassion during the early ages plays a key role in effective child growth (World Health Organization, 2005). This role is played by the parents in most cases. The parenting method can also explain the quality of the parent-child relationship, which is important in various fields (Hajkhodadadi et al., 2024). Thus, it is essential to evaluate and control the knowledge of parenting among parents. The effects of parents on children can be measured in many aspects, including cognitive aspects (e.g., language). A meta-analysis work revealed a significant relationship between sensitive-responsive parenting and child language development (Madigan et al., 2019). By increasing parenting knowledge, parenting stress can be reduced, which will reduce problems in co-parenting (Miladi et al., 2024).

A parenting style may yield different outcomes in children who are raised in different cultures (Davidov, 2021). A number of questionnaires and scales on the knowledge of parenting and parenting styles have been translated into Persian; however, a review of the literature indicated that none of such measures have been standardized in Iranian communities.

This remains a substantial gap in evaluating the knowledge of parenting in a Persian context. This research was done in the target society because we have a reliable and standardized tool available in Iranian society and culture to measure the knowledge of parenting strategies. Having such a tool can be used in different fields. For example, in child and adolescent counseling centers, kindergartens, schools, welfare organizations, and research and academic centers. In this way, parents who need to be trained in parenting skills can be identified and given the necessary training. This will improve the quality of life of parents and their children and prevent future psychological damage in children.

2. Materials and Methods

This paper is descriptive measure validation research, which falls in the category of quantitative research. The statistical population consisted of Iranian parents with children aged 3-12, living together. Purposive sampling was performed online to protect the health of the participants in the first and second waves of the COVID-19 pandemic. The inclusion criteria involved being Iranian, being married, having at least one child aged 3-12, and having a normal marital life (living together). The exclusion criterion, on the other hand, was not responding to 20% or more of the items of the Persian version of KOPSS.

Translation and Face Validity: The original English KOPSS was translated into Persian by three translators. Then, the best translations were selected from the three translated texts. The translated KOPSS was revised by two professors of psychology at the University of Guilan. To ensure the readability of the translation to the participants, the translated KOPSS was checked by ten master's students of psychology at the University of Guilan.

The meaning and objective of one item were ambiguous in the translation. It was clarified by communicating with the developers of the original KOPSS. The final Persian version of KOPSS was reviewed by three expert psychologists, and its face validity was guaranteed.

The final questionnaire

Preliminary Study and Sample Size Estimation: Thirty parents of elementary students at the Saeb School, Rash, were selected as the pilot test participants using convenience sampling. They were evaluated using the Persian-translated KOPSS to estimate the standard deviation of the total KOPSS score and find the sample size to standardize the KOPSS. The formula for estimating the mean was used to find the sample size (Lemeshow et al., 1990). The standard deviation was calculated to be 2.78 for the 28 participants (two of the thirty parents returned incomplete questionnaires). The sample size was estimated to be 659 for this standard deviation at a confidence level of 99% (z=2.58) and a tolerable error of 0.28 (0.1 of the standard deviation of the KOPSS score and 0.28 of the score difference from the real mean). A sample size of 725 was used to ensure accuracy under a 10% dropout.

Procedures: Thirty of the parents receiving services from the Marlik Innovation Center for Students were selected using convenience sampling. The parents underwent two rounds of KOPSS at a three-week interval under the same conditions. The tests were carried out at 19:00 within a class of this center in a peaceful environment. Internal consistency, reliability, and concurrent criterion validity were studied by correlating the KOPSS scores with the PSDQ scores, as PSDQ is the most similar measure to KOPSS, among other measures, e.g., the Parenting Scale of Arnold and O'leary (1993) and Bavolek's Adult-Adolescent Parenting Inventory (1984). The similarity between KOPSS and PSDQ was evaluated by the first author and two professors at the University of Guilan (i.e., the second and third authors).

PSDQ is a 62-item instrument that is used to determine the parenting style. This tool includes three subscales of authoritative parenting (with a Cronbach alpha of .91), authoritarian parenting (with a Cronbach alpha of .86), and permissive parenting (with a Cronbach alpha of .75), and the subject receives a specific score for each of these three subscales (Robinson et al., 2001).

This sub-survey was conducted online using convenience sampling on *Porsline.ir*, which is an Iranian platform for creating and publishing online questionnaires. The online questionnaire was distributed on online platforms that were mostly used by parents with children of ages 3-12, including online kids' clothing shops, online psychology communities of parents, and student news pages. To calculate the normed scores and percentile ranks of the raw scores of the Persian-translated KOPSS and its sub-scales, a descriptive cross-sectional design was implemented through an online survey of 725 parents. To avoid re-participations, the online questionnaire of each section was distributed on a unique online platform. Furthermore, repeated devices (IP addresses) were not allowed on *Porsline.ir*.

3. Results

Test-retest reliability (Over time): The correlation coefficient of the total scores of the thirty participants in the double Persian-translated KOPSS tests was obtained to be r=0.89 (p<0.001). As the correlation coefficient was larger than 0.8, the Persian version of KOPSS was ensured to have good test-retest reliability.

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The intraclass correlation coefficient (ICC) was used to measure the stability and reliability of KOPSS based on the absolute agreement method with a two-way random model. The test-retest method assumes that the variables or concepts and participant characteristics remain unchanged during the test period. ICC is the most accepted measure of stability (reliability test). An ICC larger than 0.8 represents high stability reliability, an ICC of 0.6-0.7 implies moderate reliability, and an ICC below 0.6 is suggestive of poor reliability (Munro, 2004).

The ICC of the Persian-translated KOPSS in the test-retest scheme at a three-week interval was obtained to be 0.943 (CI: 0.88-0.943) at a confidence level of 95%. The test and retest were ensured to be correlated ($p<0.001$).

Internal Consistency Reliability: Internal consistency was measured through 330 citizens in Iran. The participants had an average age of 32.46±7.36 in an age range of 20-58. Females accounted for 65.8% of the participants (217), and the remaining 34.2% (113) were males. Furthermore, 57 of the participants (17.3%) were school dropouts, 91 (27.6%) had a diploma, 27 (8.2%) had an associate degree, 99 (30%) had a bachelor's degree, 37 (11.2%) had a master's degree, and 19 (5.7%) had a Ph.D.

Item-Total Score Correlation and Cronbach's Alpha Analyses: Table 1 provides the descriptive statistics, item-total score correlation, and reliability of the Persian version of KOPSS. As can be seen, the items were found to have poor to moderate correlations with the total score, implying poor internal consistency in the Persian KOPSS. The standardized Cronbach's alphas were calculated to be 0.570-0.625 after the exclusion of each item. Furthermore, the overall Cronbach's alpha was estimated to be 0.595. This suggests that KOPSS did not have acceptable internal consistency (< 0.70). Therefore, the items reducing the overall consistency were excluded, as shown in Table 1.

Table 1. Mean, standard deviation, item-total score correlation, and reliability of KOPSS items (n=330)

Items	Mean	SD	corrected item-total correlation	Cronbach's alpha if an item is deleted
1	0.22	0.41	0.087	0.595
2	0.29	0.45	0.051	0.599
3	0.74	0.44	0.325	0.570
4	0.14	0.34	0.090	0.593
5	0.15	0.36	0.018	0.600
6	0.54	0.49	0.306	0.570
7	0.71	0.45	0.354	0.566
8	0.56	0.49	0.279	0.573
9	0.48	0.50	0.343	0.565
10	0.47	0.50	0.110	0.594
11	0.12	0.33	0.037	0.603
12	0.06	0.23	0.154	0.597
13	0.72	0.44	0.363	0.565
14	0.47	0.50	0.269	0.575
15	0.54	0.49	0.358	0.563
16	0.16	0.37	0.058	0.606
17	0.31	0.46	0.067	0.598
18	0.45	0.49	0.406	0.557
19	0.13	0.33	0.107	0.608
20	0.16	0.37	0.158	0.588
21	0.23	0.42	0.053	0.608
22	0.07	0.25	0.141	0.606
23	0.05	0.21	0.227	0.609
24	0.30	0.45	0.024	0.602
25	0.34	0.47	0.225	0.580
26	0.49	0.50	0.298	0.571
27	0.28	0.45	0.144	0.589
28	0.66	0.47	0.382	0.562
29	0.61	0.48	0.350	0.565
30	0.04	0.18	0.016	0.596
31	0.62	0.48	0.286	0.573
32	0.23	0.42	0.226	0.592
33	0.23	0.42	0.110	0.625

The standardized Cronbach's alpha of the Persian version of KOPSS increased to 0.717 (acceptable) upon the exclusion of items 16 and 33. Hence, only items 16 and 33 were excluded in this stage. Since the KOPSS had bi-level scores, the Kuder-Richardson 20 (KD-20) coefficient was calculated before this analysis by

assuming difficulty levels in the items; however, the indices were lower than the standardized Cronbach's alpha. Table 2 reports the descriptive statistics and correlation coefficients between the total score of the Persian KOPSS and PSDQ sub-scales.

Table 2. Descriptive statistics of the variables (n=330)

(Sub)Scales	Mean	SD	Range	skewness	Kurtosis	1	2	3	4
1-Total score of KOPSS	8.92	3.24	0-16	-0.334	-0.571	-			
2- Authoritarian	23.01	7.68	11-54	1.148	1.437	-0.508**	-		
3- Permissive	11.34	3.86	5-25	0.801	0.425	-0.417**	0.701**	-	
4- Authoritative	48.13	9.03	16-65	-0.620	0.040	0.434	-0.417**	-0.209**	-

**p< 0.01

Concurrent Criterion Validity: Table 3 provides a set of simple linear regression analysis results to evaluate concurrent criterion validity and the extent to which the total KOPSS score (as the predictive variable) could explain changes in the authoritative, authoritarian, and permissive parenting styles (as criterion variables).

Table 3. Simple linear regression analysis results

criterion variables	Model Summary	B	β†	p-value
Authoritarian	R^2 = 0.25 (F [1,328] = 114.22, P<0.0001)	-1.204	-0.908	0.0001
Permissive	R^2 = 0.17 (F [1,328] = 68.97, P<0.0001)	-0.497	-0.417	0.0001
Authoritative	R^2 = 0.18 (F [1,328] = 76.161, P<0.0001)	1.210	0.434	0.0001

B: Unstandardized regression coefficient

† Standardized regression coefficient

According to Table 3, the total KOPSS score significantly explained the variances of the authoritative, authoritarian, and permissive parenting scores. Based on the standardized regression coefficient β, it can be said that individuals with higher knowledge of parenting strategies reported lower degrees of authoritarianism and permissiveness and higher levels of authoritativeness. Cohen (1992) described coefficients of determination (R^2) of 0.26, 0.13, and 0.02 as strong, moderate, and weak in structural equations. Therefore, the KOPSS had moderate to strong explanatory performance. Table 4 reports the demographics of the 702 participants in the KOPSS standardization phase.

Table 4. Demographics of the participants (n=725)

Variables	Groups	n	%
Gender	Man	193	26.6
	Woman	532	73.4
Marital status	Married to first wife/husband	683	94.2
	Remarriage	19	2.6
	Divorced	22	3
	Widow	1	0.1
Occupational status	Employed	373	51.4
	Unemployed	17	2.3
	Housekeeper	335	46.2
Level of Education	High school	21	2.9
	Diploma	172	23.7
	technician	65	9
	Bachelor	311	42.9
	Masters	129	17.8
	Ph. D	27	3.7
Number of children	1	456	62.9
	2	250	34.5
	3	18	2.5
	4	1	0.1
A kind of child born	With agreement	605	83.4
	Against the wishes of the wife/husband	22	3
	Against their will of himself/herself	14	1.9
	Accidentally	84	11.6
Income (million toman)	<4	264	36.4
	4-9	225	31
	9<	67	9.2
	No answer	169	23.3

Norms and Percentile Ranks: Table 5 provides the standardized Persian version of KOPSS by converting the raw scores into normed *z* and T-scores and percentile ranks, with the divorced and widowed participants excluded.

Table 5. Normed scores and percentile ranks (n=702)

Percentile rank	Raw score	z	T
1>	3-4	-2.95 – -2.58	20.5 – 24.2
6	5-6	-2.21 – -1.84	27.9 – 31.6
18	7-8	-1.47 – -1.10	35.3 – 39
25	9	-0.736	42.64
40	10	-0.367	46.33
50	11	0.002	50.02
70	12	0.371	53.71
75	13	0.740	57.40
90	14	1.11	61.10
97	15	1.47	64.7
99	16-17	1.84 – 2.21	98.4 – 72.1
99<	18	2.58	75.8

The fraction of the population with higher knowledge of parenting than a given individual can be found based on their raw score and Table 5. For example, the participant with a score of 13 in KOPSS-20 has a normed z-score of 0.740; i.e., they have higher knowledge of parenting strategies than 75% of the participants.

4. Discussion and Conclusion

To evaluate retest validity, the coefficient correlation between the pretest and posttest scores was found to be r=0.892 and significant (p<0.001). As the correlation coefficient was larger than 0.8, the Persian version of KOPSS was verified to have acceptable retest or stability validity based on Pearson's correlation analysis. Furthermore, ICC was calculated to be 0.943 for the test-retest reliability at a three-week interval and a confidence level of 95% (p<0.001). This supported the sufficient stability validity (reproducibility) of KOPSS-20 over time (Munro, 2004). These findings are in agreement with Kirkman et al. (2018) for the 33-item version of KOPSS. They reported a high positive pretest-posttest correlation at a one-week interval (r=0.88, p<0.001).

As mentioned, the correlations of the items with the total score were found to be weak to moderate, suggesting poor internal consistency for KOPSS. The standardized Cronbach's alpha was calculated to be 0.570-0.625 upon the exclusion of each item. Cronbach's alpha was estimated to be 0.595 for KOPSS, representing insufficient internal consistency (<0.7) for the Persian version of KOPSS without any item excluded. Items 16 and 33 were found to diminish inconsistency and were thus excluded, with the standardized Cronbach's alpha rising to an acceptable value of 0.717 (Tavakol & Dennick, 2011). Kirkman et al. (2018) measured the internal consistency of the 40-item version of KOPSS and reported a score of 0.84. This demonstrated that the 40-item KOPSS had acceptable validity and a variance of 16% (error). They evaluated the items individually and found that seven of the items could be excluded, leading to the 33-item version of KOPSS. For the remaining 33 items, the chi-squared value was obtained to be 195.38 (p>0.05), with a degree of freedom (DOF) of 66. The mean and standard deviation of each item in the 33-item KOPSS were 0.02 and 2.10, respectively (Kirkman et al., 2018). The low internal consistency of the Persian version of KOPSS before the exclusion of items 16 and 33 could be attributed to the different cultural contexts and raising habits between Iranian and Australian parents.

The inconsistency of item 16 may be attributed to its bi-level response. It expected the participants to choose the most important aspect of parenting from four choices, while both choices A (make sure that the kid exactly understands what they did wrong) and C (make the same reaction to the kid's misbehavior in all the cases) could be correct based on the training content of the Positive parenting program; the designer of the questionnaire assumed choice C to be the correct one, while most of the participants chose A.

Item 33 was about developing good study habits in children. Concerning the reduced internal consistency in the presence of item 33, it can be said that Iranian parents' views of study for educational development at higher grades should be further investigated. Iran has experienced numerous economic, educational, and health challenges in recent decades, and many of these challenges remain unaddressed. Only societies that handled food, clothing, healthcare, and education challenges had been able to have high education levels. Iran is no exception; this may be the main explanation for the massive parental insistence on the education of children to higher levels. This might be the reason that Iranian parents differ from Australians in encouragement and punishment concerning education.

Hence, item 33 had poor internal consistency in the context of Iran, and an Iranian parent with even sufficient knowledge of parenting is most likely to choose a different choice from the one intended by the designer of KOPSS. However, research has shown that the Parental mastery goal emphases and parental performance goal emphases are significantly correlated with students' self-regulated learning. Parental performance goal emphases positively and significantly predicted motivation, while Parental mastery goal emphases negatively and significantly predicted motivation (Ghasemi & Fooladchang, 2010). This implies that Iranian parents require training in this respect.

To evaluate the criterion validity of KOPSS-20, the correlations of the total score with PSDQ sub-scales (i.e., authoritarian parenting, permissive parenting, and authoritative parenting) were measured. To control the multilinearity of the sub-scales, the correlation coefficients between the four factors were calculated. The correlation coefficients between the KOPSS-20 score and PSDQ sub-scales were all smaller than 0.85, ensuring that no multilinearity existed.

To examine concurrent validity, simple linear regression was employed, in which the PSDQ sub-scales were treated as dependent variables (criteria). It was found that knowledge of parenting strategies (i.e., total KOPSS-20 score) significantly explained the variances of the authoritative, permissive, and authoritarian parenting scores. Therefore, it can be said that parents with higher knowledge of parenting strategies have lower authoritarianism and permissiveness and higher authoritativeness.

This study used a sample size of 725 for the standardization of KOPSS. The participants had an average age of 36.48 ±5.94, ranging from 20 to 60. To collect data, a standardization matrix was constructed to convert the raw scores into normed z and T-scores, with divorced and widowed participants excluded. This allowed for determining a measure to interpret the raw scores of parents through comparison to the standardization results of KOPSS-20. Percentile ranks (distribution quartiles) are a measure to interpret and classify the knowledge of parenting strategies among parents in Iran; raw scores equal to or smaller than nine would represent poor parenting strategies, a raw score between 9 to 11 stands for moderate knowledge of parenting strategies, and raw score between 11 to 13 suggests acceptable knowledge of parenting strategies, and raw scores equal to or greater than 14 are representative of good knowledge of parenting strategies.

As mentioned, the chi-squared value of the 33-item KOPSS was reported to be 195.38 ($p>0.05$), with a DOF of 66. The mean and standard deviation were found to be 0.02 and 2.10, respectively. Fathers and mothers showed significant differences in the mean and standard deviation in the original version of KOPSS (Mothers: M=23.97 and SD=5.89; Fathers: M=19.87 and SD=7.03) (Kirkman et al., 2018). Consistent with Kirkman et al. (2015), the mothers had a significantly larger mean (13.79) than the fathers (13.21) in the present work.

The difference between the mean scores of mothers and fathers would not be unexpected. Research has shown that mothers are more sensitive than fathers to how children should be raised and treated. Steenhoff et al. (2019) reported the same result for a survey of 93 Danish parents (52 mothers and 41 fathers) with five-year-old preschool children. Thus, the difference between mothers and fathers can be explained by the higher sensitivity of mothers than fathers.

Apart from sensitivity, mothers often play a greater role than fathers in raising children and, therefore, have more experience and knowledge of how children should be raised. Mothers are expected to have access to more resources, such as online training content, print magazines, and TV shows. This may be an explanation for mothers' higher knowledge of parenting. Cheung et al. (2018) studied 217 families with eight-year-old children (101 male and 116 female children) and showed that mothers' emotional socialization had a positive, significant correlation with child adjustment. They also showed that fathers' unreasonable regulation and positive parenting styles were better predictors than mothers' parenting styles for children's adjustment problems. Although the father's presence is necessary and useful for the growth of children in many dimensions, the mother spends a longer time raising and establishing a relationship with the children in most families (Cano, 2019).

The standardization phase of the present study neglected the number, ages, and genders of the participants. This could affect the results. Furthermore, a majority of the participants were selected online due to the COVID-19 pandemic. Therefore, the limitations of online surveys should be considered; for example, it would be impossible to ensure that the participants expressed accurate information. To minimize the probability of misinformation, screening questions (e.g., province and having a child aged 3-12) were incorporated. It should be noted that the scheme was not designed to develop cut-off points of the raw scores.

The Persian version of KOPSS (KOPSS-20) showed good test-retest reliability and reproducibility, and its internal consistency was increased to an acceptable level by excluding the items influenced by the cultural differences between Iranian and Australian parents. The KOPSS-20 scores showed a strong agreement with the PSDQ scores. It was found that the knowledge of parenting strategies had negative, significant relationships

with permissive and authoritarian parenting and a positive, significant relationship with authoritative parenting. The correct choices of the KOPSS items mostly relate to the characteristics of authoritative parents. Therefore, it is reasonable that the KOPSS scores had a positive, significant correlation with the authoritative score of PSDQ. As a result, the knowledge of parenting strategies (i.e., total KOPSS-20 score) can significantly explain the variances of the authoritative, authoritarian, and permissive parenting scores. It can be said that the Persian version of KOPSS had good psychometrics and could be used in future research and clinical applications.

5. Ethical Considerations

Compliance with ethical guidelines

All ethical principles were considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured of the confidentiality of their information and were free to leave the study at any time. If desired, the research results would be made available to them.

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Authors' contributions

All authors have participated in the design, implementation, and writing of all sections of the present study.

Conflicts of interest

The author(s) declared no conflicts of interests.

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