

The psychometric properties of parenting styles and dimensions questionnaire-short form in Indonesia

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ABSTRACT

Parenting style was a set of parental attitude and behavior communicated by parents to children, forming an emotional climate condition used by parents to raise children. The study on parenting style had been conducted for a long time, but measurement of parenting style in Indonesia was still experiencing problem due to lack of sufficient and proper instrument, despite the monumental need for a valid and reliable instrument. The aim of this study was to examine the factor structure, internal consistency and others psychometric properties of the Indonesian version of the parenting styles and dimensions questionnaire-short form (PSDQ-SF). The instrument comprises 32 items (12 questions regarding the authoritative style, 15 questions regarding the authoritarian style, and five questions regarding the permissive style). The research sample consisted of 169 mothers with children of 5-7 years of age. Research was conducted in Sukoharjo, Central Java, Indonesia. Structural equation modelling (SEM) with LISREL 9.20 was utilized as the data analysis technique. Data analysis results by CFA second order showed that construct validity testing fulfilled the minimum criteria, with the factor loading range of 0.51-0.99. The reliability score's Cronbach's alpha also fulfilled the requirement, including the authoritative parenting style 0.86; the authoritarian parenting style 0.76 and the permissive authoritarian parenting style 0.67. These findings support the PSDQ-SF original structure. The results showed that the adaptation of PSDQ-SF in Indonesia was valid and reliable to use in measurement of parenting styles of parents of children of 5-7 years of age in Indonesia.

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1. INTRODUCTION

Parenting styles refer to the typical ways parents think, feel and behave in terms of child-rearing [1]. Baumrind [2] explained that parenting style included two important elements, being responsiveness (warmth/support) and demandingness (demand/control). Responsiveness referred to affective warmth and autonomic support on the children, which were actions deliberately used by parents to develop individuality and rationality through children's involvement in decision making. While demandingness referred to demands from parents to children, so children could be a part of the family. Demandingness was given through guidance and discipline of the children by parents. Based on the two elements, Baumrind [2]

differentiated parenting styles into three types, which were authoritative, authoritarian, and permissive parenting style. Demandingness and responsiveness are independent dimensions: Thus, highly demanding parents can be nonresponsive (authoritarian) or responsive (authoritative), and highly responsive parents can be nondemanding (permissive) or demanding (authoritative).

Authoritative parenting style implemented high levels of responsiveness and demandingness in a fair manner [2]. The practice of parenting with authoritative parenting style was conducted through high implementation of control and demand on the children, but also accompanied with parental attitudes full of warmth. There was more support than punishment given to the children by parents with authoritative parenting style. Authoritarian parenting style was a condition when parents extremely implemented the principal of demandingness with many demands and guidance to the children, but with very little of the principal of responsiveness [2]. Parents with authoritarian parenting style demanded children to always obey the parents' every order, without the accompaniment of warmth or reciprocal communication. Obedience, for parents with authoritarian parenting style was the manifestation of respect, while disobedience was a sign of opposition to parents' authority. The practice of authoritarian parenting style provided an orderly and structured environment with clearly stated rules, so if there was violation, there was a tendency of verbal hostility and also physical punishment. Permissive parenting style was a condition when parents implemented the principal of responsiveness more than the principal of demandingness [2]. Permissive parenting style was conducted with children as the focus, with parents implemented the principal of high levels of warmth but with very little control. This condition was usually used by parents to avoid confrontation.

Previous researches showed that parenting style implemented by parents on children affected children's development, both cognitive and social emotional development. Research on the effect of parenting style on children's cognitive development conducted by Zarbakhsh *et al.* [3] obtained the results of significant relation between parenting styles and ability of critical thinking with the cognitive learning styles of field-independence and field-dependence. The parenting style with a close relation with the increase of children's cognitive ability was the authoritative parenting style [4]–[6], while authoritarian and permissive parenting style negatively predicted academic achievement [5]. Another study conducted by Novita and Budiman [7] got the results that there was a significant relationship between authoritative parenting style given by parents to children's higher order thinking skills, imagination and creativity. This statement further proves the relationship between parenting style and cognitive development of children.

Parenting style also affected children's socio-emotional development. Children whose parents implemented authoritative parenting style had better socio-emotional condition compared to children whose parents implemented authoritarian or permissive parenting style [8]–[10]. This better socio-emotional condition can be seen through the level of problem behavior in children. Tyas and Sumargi [11] stated that children with authoritarian and permissive parenting tend to have problematic behavior when compared to children raised with authoritative parenting. The more often parents use authoritarian and permissive parenting styles, the higher the level of problematic behavior in children, and conversely the less often parents use authoritarian and permissive parenting styles, the lower the level of problematic behavior in children [11]. In addition to being related to the tendency of problematic behavior, parenting style also affects children's moral intelligence [12]. Authoritative and permissive parenting style have been shown to have a significant effect on children's moral intelligence, while authoritarian parenting style has no effect on early childhood moral intelligence. Another influence that has been studied between parenting style on children's socio-emotional development is the mental health [13]. Authoritative parenting style had a positive impact on children's mental health, while authoritarian parenting style had a negative impact on children's mental health [13]. This condition can occur because authoritative parenting style is characterized by warm treatment from parents and always pays attention to the needs and development of children. Meanwhile, authoritarian parenting style is characterized by harsh treatment by parents and unresponsive to children.

Research results showed that children whose parents implemented the authoritative parenting style had better social competence and prosocial behavior, compared to children whose parents implemented authoritarian parenting style, which had the tendency of causing problematic and anti-social behavior [14]–[17]. Other researches showed results that authoritarian and permissive parenting style affected externalizing problems on children [18]. In detail, Hosokawa and Katsura [19] stated that the implementation of authoritarian parenting style affected externalizing problems on both sons and daughters, while the implementation of permissive parenting style only affected externalizing problems on sons.

Results of various researches from various countries showed the effects of parenting style to be variative on children's development. As a whole, authoritative parenting style seemed to be the one with the most positive contribution on children's development, even though the size of effect could vary based on different cultural effects of each country. Even so, the effect of different types of parenting style on children's development still needed further research, to obtain the best concept of parenting style to implement on children, for optimal children's development. Related to the research on parenting style, it was important to pay attention on the assessment of parenting style implemented by parents on children. The

assessment was paramount because the result could be used as the base for decision making related to the intervention, both to parents and children, for better children's development.

Robinson *et al.* [20] had developed parenting styles and dimensions questionnaire–short form (PSDQ-SF) for parenting style assessment measurement on children, which could be utilized by both parents of preschool and/or school-age children. Parents were requested to answer statement items in the questionnaire, which items would be scored. The total of the scores would portray the parenting style tendency of parents, using authoritative, authoritarian, and permissive as bases. Measurement on the first version of PSDQ on authoritative parenting style consisted of four dimensions: warmth & involvement, reasoning/induction, democratic participation, and good natured/easy going; on authoritarian consisted of four dimensions: verbal hostility, corporal punishment, non-reasoning & punitive strategies, and directiveness; on permissive parenting style consisted of three dimensions: lack of follow through, ignoring misbehavior, and self-confidence. PSDQ was further developed for ease-of-use and flexibility, resulting in PSDQ-SF [21]. Robinson *et al.* [21] stated that PSDQ-SF was easier to use due to a simpler measurement system. The measurement on authoritative parenting style consisted of three dimensions: connection, regulation, and autonomy granting. Authoritarian parenting style also consisted of three dimensions: physical coercion, verbal hostility, and non-reasoning/punitive strategies. Hence, permissive parenting style consisted only one dimension named indulgence.

The adaptation of PSDQ-SF had been conducted on many countries, such as in Lithuania [22], Brazil [23], Portugal [24], and Israel [25]. All results of adaptation of PSDQ-SF showed good psychometric properties, despite several differences related to cultural effects in each country. The wide usage of PSDQ-SF would benefit researchers, as it provided easy of data communication with information sharing related to parenting in various countries. In Indonesia, there had not been numerous reports of the instrument and data exchange would be easier to conduct if an adapted version of PSDQ-SF was already available, while also considering the possibility of collaboration between countries. Another benefit of the adaptation was to improve the implementation of parenting style by children, optimizing it sooner with the help of the instrument in determining ones being used. This would also provide more ease for intervention for the better. With these conditions as considerations, the adaptation research of PSDQ-SF in Indonesia was extremely required in order to obtain a valid and reliable parenting style assessment instrument.

2. RESEARCH METHOD

2.1. Participants

This research involved the sample of 169 mothers with children 5-7 years of age. This research was conducted in Sukoharjo, Central Java, Indonesia. The research sample was decided based on previous research's review that stated that there was a positive correlation between parenting style [18]. This condition meant that both mothers and fathers implemented the same parenting style on children, so the assessment of parenting style from mothers could be considered to have represented the assessment of parenting style from fathers.

2.2. Method of collecting data

Research population was mothers with children 5-7 years of age in Sukoharjo. Considering the wide area of Sukoharjo (administratively divided into 12 smaller administrations), the sampling technique utilized multistage sampling. The process conducted was divided into three main phases: i) Grouping samples based on the 12 administrative areas; ii) Collecting samples in random on each area, with the proportions of 35 samples per area; and iii) Collecting samples as per research criteria, resulting in 169 mothers with children 5-7 years of age (87 male children and 82 female children).

2.3. Instrument

Robinson *et al.* [20] was developed PSDQ-SF based on parenting practices questionnaire constructs [21]. PSDQ-SF was used to assess the parenting style implemented by parents on children aged 4-12 years old, consisting of authoritative, authoritarian, and permissive parenting style. Authoritative parenting style consisted of 15 statement items with three dimensions, being the connection dimension that reflected the warmth and support condition, the regulation dimension that reflected reasoning/induction, and the autonomy granting dimension that reflected democratic participation. Authoritarian parenting style consisted of 12 statement items with three dimensions, being the physical coercion dimension, the verbal hostility dimension, and the non-reasoning/punitive strategies. Permissive parenting style consisted of five statement items with one dimension, being the indulgent dimension.

The assessment system of PSDQ-SF used the five point Likert, moving from 1 (never) to 5 (always). The parenting style assessment was conducted separately based on the mean score of each parenting style.

The highest mean score showed the tendency of the parenting style implemented by parents on children. Robinson *et al.* [20] stated that the psychometric properties of PSDQ-SF were decently good, shown through the reliability Cronbach alpha score of: authoritative parenting style (0.86), authoritarian parenting style (0.82), and permissive parenting style (0.64).

2.4. Procedure

2.4.1. Study 1: Linguistic and cultural adaptation of PSDQ-SF

This research used the International Test Commission (ITC) guidelines for test adaptation [26]. The scheme of the adaptation process of PSDQ-SF can be seen in Figure 1. The ITC consisted of 18 guidelines are organized into six categories: pre-condition, test development, confirmation, administration, scoring and interpretation, and documentation. This research conducted pre-condition, test development and confirmation phase of the ITC guidelines.

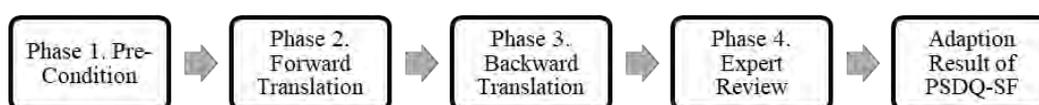


Figure 1. Phases of adaptation process of PSDQ-SF

Phase 1 (Pre-condition): The request for permission to the original developer of the instrument for adaptation process of PSDQ-SF in Indonesia. In this phase there were three process to be conducted: i) Obtained permission from the original test developer to adapt PSDQ-SF into the Indonesian language (*Bahasa Indonesia*) by using proper e-mail correspondence; ii) Three experts in early childhood psychology and education, conducted literature reviews on the concept of parenting style in Indonesia, in order to avoid construct bias; iii) Conducted focus group discussion involving two kindergarten teacher and two parents for minimizing the influence of any cultural and linguistic differences.

Phase 2 (Test development): There were five processes in this phase: i) Forward translation was the process of transforming PSDQ-SF 18 into *Bahasa Indonesia* by two translators that were fluent in the language and English, and they further understood the cultural characteristics of the research sample; ii) Backward translation was the process of translating the synthesis of the two forward translations back into English. This was conducted to ensure that the translated version does not depart from the intended meaning of the original scale. This process was performed by two translators (different from the ones that conducted the forward translation) fluent in both English and the *Bahasa Indonesia* but without knowledge of the PSDQ-SF; iii) Expert review to provide evidence that instruction and item content have similar meaning for early childhood in Indonesia. This review was conducted by three psychologists, all experts in the field of education and child development; iv) Provide evidence that item formats and other procedures are suitable for Indonesian population; v) Collecting pilot data, confirming evidence about psychometric quality of the adapted test.

The translation of PSDQ-SF to Bahasa Indonesia by two translators who proficient in both English and *Bahasa Indonesia* to avoid misperception. The two translators were chosen to be strangers of one another, in order to obtain comparable translation results. The translators were informed of the meaning and goal of the translation of PSDQ-SF. Results of the forward translation of the PSDQ-SF by these two translators were then synthesized.

The synthesis of the forward translation of PSDQ-SF was retranslated into English by two translators proficient in English and *Bahasa Indonesia*, both strangers of each other, to ensure the results did not stray away from the original scale of PSDQ-SF. Results of the backward translation of PSDQ-SF by these two translators were then synthesized.

The synthesis of the backward translation of PSDQ-SF was given to three expert reviewers to obtain validation on the translation. Expert reviewers were chosen from academicians, with the practical profession in early child education, with the goal of being able to obtain appropriate input in accordance to the condition of parenting on children in Indonesia. Validation of the translation of PSDQ-SF was conducted through comparison of statement items of the original version of PSDQ-SF with the statement items of the synthesis of the forward and backward translation result of PSDQ-SF. The validation from expert reviewers is needed to obtain suggestions regarding statement items that will be filled out by mothers, bearing in mind the mothers in this research come from diverse educational backgrounds, occupations and socioeconomic status. Notes from expert reviewers are used to perfect the prior statement items.

2.4.2. Study 2: Research data collection

The second research is the collection of research data. Data were collected using the PSDQ-SF instrument from study 1. The purpose of data collection was to determine the structure of the PSDQ-SF adaptation factors in Indonesia. Data collection is also useful for obtaining psychometric properties consisting of the validity and reliability of the PSDQ-SF in Indonesia.

2.5. Data analysis

Adaptation research of PSDQ-SF with CFA analysis had been conducted on other countries, such as in Lithuania [22], Brazil [23], and Portugal [24]. In Lithuania, the data analysis used was CFA second order, with authoritative and authoritarian parenting styles using the three second-order sub-dimensions and the permissive parenting style using the no associated sub-dimension [22]. Adaptation of PSDQ-SF in Portugal was conducted by Martins *et al.* [24] by comparing the CFA first order with CFA second order analysis. It confirmed that CFA second order analysis being a more appropriate analysis for adaptation of PSDQ-SF because of a supportive model goodness of fit. Oliviera *et al.* [23] also conducted adaptation of PSDQ-SF in Brazil by comparing the four models of CFA analysis: i) First model, three-factor analysis, second-order solution; ii) Second model, three first-order factors solution; iii) Third model, two first-order factors solution; and iv) Fourth model, unidimensional first-order factor solution. From the four CFA analysis models, only the first model, being the three factor second order solution was proven to be appropriate to be used in adaptation of PSDQ-SF because of the satisfactory psychometric properties [23]. Based on the results, this research would use CFA second order analysis with LISREL 9.20 program.

3. RESULTS AND DISCUSSION

3.1. Descriptive

The analysis process with CFA second order was started with model testing. If the model testing, in an unfit model, then the model must be modified [27]. After the model is declared fit, it is necessary to look at the criteria for goodness of fit indices [28]. The general criteria used to determine the fit of the model are Chi-square with an insignificant value ($p\text{-value} > 0.05$) because this value indicates that the empirical data obtained does not differ from the theory, so it can be said that the empirical data fits the model [29]. Other common criteria are root mean square error of approximation (RMSEA) with a value range of $0.05 < \text{RMSEA} < 0.08$ [29]. Furthermore, the values of the goodness fit index (GFI), comparative fit index (CFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), non-normed fit index (NNFI) and incremental fit index (IFI) are said to be model fit if it has a value > 0.90 [27], [29]–[31]. The results of the analysis in this study stated that the first model was unfit, therefore model modification was required. Modification was conducted according to the modification indices program guideline of LISREL 9.20. The results of the pre- and post-modification model are available in Table 1.

Table 1. Goodness of fit of adaptation of PSDQ-SF

Fit indices value	Pre-modification value	Post-modification value	Post-modification decision	
p-value	>0.05	0.000	0.082	Good fit
RMSEA	<0.08	0.105	0.051	Good fit
GFI	>0.09	0.660	0.916	Good fit
CFI	>0.09	0.352	0.928	Good fit
AGFI	>0.09	0.607	0.902	Good fit
NFI	>0.09	0.316	0.963	Good fit
NNFI	>0.09	0.297	0.982	Good fit
IFI	>0.09	0.360	0.989	Good fit

Results of goodness of fit testing of the adaptation of PSDQ-SF showed that the p-value score was higher than 0.05, meaning it was in the good fit category [29]. RMSEA score was also in the good fit category, being < 0.08 [29]. The scores of GFI, CFI, AGFI, NFI, NNFI and IFI had fulfilled the requirement of the good fit criteria, being > 0.90 [27], [29]–[31]. Based on the goodness of fit test results, the path diagram was obtained, as shown in Figure 2.

The path diagram of the adaptation of PSDQ-SF on Figure 2 was post-modification. It was shown that all statement items had the factor loading score of > 0.5 , meaning that all items were significant [21]. Figure 2 shows that three items were rejected, being one item of the autonomy granting dimension from authoritative parenting style, one item of the physical coercion dimension from the authoritarian parenting style, and one item of the indulgent dimension from the permissive parenting style. The item rejection was based on the advice of modification indices by LISREL 9.20, because the three items had low factor loading

scores. Data analysis conducted in this study was not including the t-value was due to LISREL 9.20 not providing the scores. In LISREL 9.20, the score used in determining the acceptance and rejection of items was the factor loading score and not the t-value score. The factor loading scores are shown in Table 2.

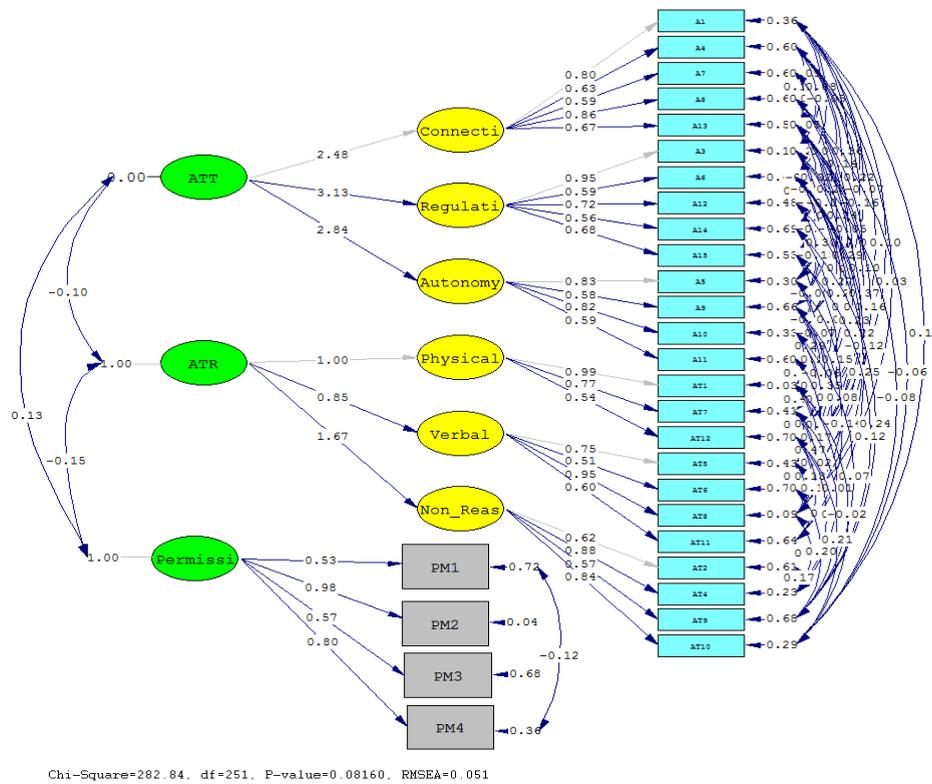


Figure 2. Path diagram of the adaptation of PSDQ-SF

Table 2. Items and factor loading scores of PSDQ-SF

Dimension (item)	Factor loading score	Dimension (item)	Factor loading score	Dimension (item)	Factor loading score
Authoritative parenting style		Authoritarian parenting style		Permissive parenting style	
Connection dimension		Physical coercion dimension		Indulgent dimension	
A1	A1	AT1	AT1	PM1	PM1
A4	A4	AT3	AT3	PM2	PM2
A7	A7	AT7	AT7	PM3	PM3
A8	A8	AT12	AT12	PM4	PM4
A13	A13	Verbal hostility dimension		PM5	PM5
Regulation dimension		AT5	AT5		
A3	A3	AT6	AT6		
A6	A6	AT8	AT8		
A12	A12	AT11	AT11		
A14	A14	Non-reasoning/punitive dimension			
A15	A15	AT2	AT2		
Autonomy granting dimension		AT4	AT4		
A2	A2	AT9	AT9		
A5	A5	AT10	AT10		
A9	A9				
A10	A10				
A11	A11				

The calculation of the reliability of the three parenting styles, based on Cronbach’s alpha score and CR showed satisfactory results that meet the requirements (Cronbach’s alpha score of >0.60, CR score of >0.70, and AVE score of >0.50) [30]. The calculation results on the adaptation of PSDQ-SF are shown in Table 3. Results of the calculation of discriminant validity also showed that it was in accordance to the requirements, being higher AVE root score than the inter-dimension correlation score [30]. The calculation results are shown in Table 4.

Table 3. Reliability of adaptation of PSDQ-SF

Parenting style	Dimension	Cronbach alpha	CR	AVE
Authoritative parenting style	Connection	0.72	0.84	0.51
	Regulation	0.63	0.83	0.51
	Autonomy granting	0.70	0.80	0.51
Total for authoritative		0.86	0.93	0.51
Authoritarian parenting style	Physical coercion	0.61	0.82	0.62
	Verbal hostility	0.62	0.81	0.52
	Non-reasoning/punitive	0.68	0.83	0.55
Total for authoritarian		0.76	0.93	0.56
Permissive parenting style	Indulgent	0.67	0.82	0.55

Table 4. Discriminant validity of adaptation of PSDQ-SF

	Connection	Regulation	Autonomy granting	Physical coercion	Verbal hostility	Non-reasoning/punitive	Indulgent
Connection	0.716						
Regulation	0.287	0.715					
Autonomy granting	0.354	0.334	0.716				
Physical coercion	0.326	0.396	0.355	0.787			
Verbal hostility	0.336	0.282	0.475	0.319	0.724		
Non-reasoning/punitive	0.294	0.334	0.378	0.432	0.366	0.742	
Indulgent	0.422	0.284	0.353	0.216	0.417	0.260	0.744

3.2. Discussion

Research results of the adaptation of PSDQ-SF showed satisfactory psychometric properties, shown in the fulfillment of requirements, being the model testing fulfilling the goodness of fit criteria (p -value >0.05), RMSEA <0.08 , GFI, CFI, AGFI >0.90 [27], [29]–[31]. Construct validity also showed satisfactory result based on the criteria of all statement items' factor loading >0.5 [21]. This condition showed that all statement items of the adaptation of PSDQ-SF were proven to be significant and able to measure the construct as developed. Results of the reliability testing based on Cronbach alpha had also fulfilled the criteria of >0.60 , with the CR reliability score of >0.70 and the AVE reliability score of >0.5 [30]. The testing of discriminant validity also showed good result, statement items on the dimensions being able to measure as the dimensional constructs. This condition could be seen from the AVE root score being higher than the inter-dimensional correlation score [30]. The overall analysis result showed that the adaptation of PSDQ-SF had fulfilled the validity and reliability requirements as per required criteria.

Previous researches related to the adaptation of PSDQ-SF showed different results in psychometric properties. Martins *et al.* [18] in his research in Portugal obtained the reliability Cronbach alpha score to be 0.88 for authoritative parenting style, 0.81 for authoritarian parenting style, and 0.56 for permissive parenting style. The research by Kern and Jonyniene [22] in Lithuania obtained similar results, with the reliability Cronbach alpha score of 0.85 for authoritative parenting style, 0.76 for authoritarian parenting style, and 0.58 for permissive parenting style. Similarly on the adaptation research conducted by Oliveira *et al.* [23] in Brazil, a same result was obtained, being a good reliability Cronbach alpha score as per methodologically advised criteria: 0.86 for authoritative parenting style, 0.84 for authoritarian parenting style, and 0.64 for permissive parenting style. Previous researches had low reliability Cronbach alpha score for the permissive parenting style. In this research in Indonesia, good reliability Cronbach alpha score as per advised criteria was obtained: 0.86 for authoritative parenting style, 0.76 for authoritarian parenting style, except the permissive scale which had a low value ($\alpha=0.67$). Yet, they are similar to others studies [22], [23] and also the original questionnaire research [20], [21]. According to Kern and Jonyniene [22], the low score was affected by culture. While according to Martins *et al.* [24], the low score required further investigation, related to the content of the statement item and the tendencies of current parenting practices. The psychometric properties of the adaptation of PSDQ-SF conducted in Indonesia were similar to the psychometric properties of the original version of PSDQ-SF [21].

The various results in psychometric properties of PSDQ-SF in multiple countries was caused by how instrument adaptation was strongly influenced by the effects of local culture. Similarly, the samples in the adaptation research of PSDQ-SF being individuals related to the culture and sociocultural context of where they live, making the response also undetachable from the effects of local culture. Even so, the variety of results in the psychometric properties of adaptation of PSDQ-SF was not an obstacle for adaptation research in other countries. In fact, more adaptation researches in other countries were paramount, in order to obtain supporting references for the psychometric properties, and also to obtain a valid and reliable parenting style instrument, to support the communication between researches in different countries.

The PSDQ-SF adaptation carried out in this study obtained very satisfactory results. The satisfactory psychometric properties in this adaptation of PSDQ-SF was because the adaptation process in this research was conducted in accordance to the phases in ITC guidelines for test adaptation [26] with expert translators proficient in two languages, being English and *Bahasa Indonesia*, therefore the results of the translation was suitable with the conditions in Indonesia without changing the original content of PSDQ-SF. Moreover, the involvement of expert review that fully understood the condition of early age children parenting in Indonesia also affected the success of the adaptation of PSDQ-SF in Indonesia.

4. CONCLUSION

Based on the results of the research conducted, it can be concluded that the PSDQ-SF adaptation can be used to conduct an assessment of parenting style on children aged 5-7 years old in Indonesia. The adaptation of PSDQ-SF as the result of this research would be extremely beneficial in future research related to parenting in Indonesia. Through this adaptation and the resulting valid and reliable instrument, future measurements would be easier to conduct, with better accuracy in both measurement and results as well. The better availability and accuracy would be beneficial in implementing correct interventions, in order to support the optimal development of children in Indonesia.

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