



ORIGINAL ARTICLE

# Cross-cultural adaptation and validation of the Karitane Parenting Confidence Scale of maternal confidence assessment for use in Brazil<sup>☆</sup>



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## Abstract

**Objectives:** To transculturally adapt and validate the Karitane Parenting Confidence Scale to the Brazilian Portuguese language and culture and verify the combination of the results with the maternal sociodemographic characteristics.

**Methodology:** This is a validation and transcultural adaptation nestled in a longitudinal and observational study in Porto Alegre, RS, Brazil, assessing mother–infant pairs from different gestational and perinatal environments. The original authors authorized the translation into Brazilian Portuguese, unified version creation, back-translation, analysis by specialists, final version implementation, and acceptance. Cronbach's alpha analysis was performed. The Kruskal–Wallis test with post-hoc Dunn's test was used to compare the study groups. Socioeconomic and demographic characteristics, obtained through a questionnaire in the first 24–48 h of the newborns' life, were associated with maternal results by the Brazilian version of the scale, using Spearman's correlation and Mann–Whitney's test.

**Results:** The sample consisted of 251 postpartum women, with the confidence maternal questionnaire being applied at 15 days postpartum. The median score of the mothers' confidence was 40.00 (37.00–43.00). The protocol obtained a Cronbach's alpha of 0.717. There were significant weak positive correlations between maternal confidence and age ( $p=0.013$ ,  $r=0.157$ )

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**PALAVRAS-CHAVE**

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and between maternal confidence and schooling ( $p=0.048$ ,  $r=0.125$ ). Additionally, a significant association was observed between maternal confidence and parity ( $p=0.030$ ).

**Conclusion:** The transcultural adaptation and validation of the confidence maternal questionnaire into Brazilian Portuguese language and culture showed good reliability for this sample. The results of its use demonstrated that maternal confidence was associated with schooling, age and parity.

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### Adaptação transcultural e validação da *Karitane Parenting Confidence Scale* para avaliação da confiança materna para uso no Brasil

**Resumo**

**Objetivos:** Adaptar transculturalmente e validar a ferramenta *Karitane Parenting Confidence Scale* para a língua portuguesa e cultura brasileira além de verificar a associação de seus resultados com as características sociodemográficas maternas.

**Metodologia:** Trata-se da validação e adaptação transcultural aninhada a estudo observacional longitudinal realizado em Porto Alegre (RS), contendo puérperas com diferentes condições gestacionais e perinatais. Os processos ocorreram mediante autorização dos autores originais da escala *Karitane Parenting Confidence Scale* para a tradução para o português brasileiro, montagem de versão unificada, retradução, análise por *experts*, aplicação da versão final e validação. Realizou-se a análise *Alpha* de *Cronbach*. Para a comparabilidade entre os grupos do estudo utilizou-se o teste *Kruskal-Wallis* com *post hoc* de *Dunn*. As características socioeconômicas e demográficas das puérperas, obtidas através de questionário estruturado nas 24-48 h pós-parto, foram relacionadas com a confiança materna obtida através da aplicação da escala, utilizando-se a correlação de *Spearman* e o teste *Mann-Whitney*.

**Resultados:** A amostra foi composta por 251 puérperas, com a aplicação do questionário sobre confiança materna aos 15 dias pós-parto. A mediana da pontuação de confiança materna foi 40,00 [37,00-43,00]. O protocolo obteve valor de *Alpha* de *Cronbach* de 0,717. Houve correlações fracas significativas positivas entre confiança e idade materna ( $p=0,013$ ;  $r=0,157$ ) e entre confiança e escolaridade materna ( $p=0,048$ ;  $r=0,125$ ). Além disso, houve associação significativa entre a confiança materna e a paridade ( $p=0,030$ ).

**Conclusão:** A adaptação transcultural e validação da ferramenta sobre a confiança materna para o português brasileiro mostrou boa confiabilidade. Os resultados de sua aplicação demonstraram que a confiança materna esteve associada à escolaridade, à idade e à paridade.

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**Introduction**

Maternal confidence is a very important characteristic for adequate growth and development of infants. Its absence in the beginning of the postnatal period can negatively influence the mother's ability to care for her child. Parental confidence contributes to the child-mother relationship, to the mother's commitment and energy demanded in teaching, playing with, and relating to her child, as well as in many other aspects of child development.<sup>1</sup>

The feelings of maternal confidence and self-efficacy are determined by a number of different factors, including contextual characteristics such as social support, infant behavior styles, and maternal mental alterations.<sup>2</sup> Additionally, higher levels of maternal confidence have been indicated as a protection factor against maternal depression, relationship difficulties, parental competence, stress, and child development impairment.<sup>3</sup>

Given this context, effective measures are required to estimate the feeling of maternal confidence and, in

Brazil, there are still scarce tools available for this purpose. The Breastfeeding Self-Efficacy Scale (BSES), a scale that measures the woman's confidence in her breastfeeding potential,<sup>4</sup> and the Postpartum Bonding Questionnaire (PBQ), which aims to assess disturbances in the relationship between parents and their children,<sup>5</sup> comprise the national scenario of scales aimed at evaluating the relationship between parents and their infants.

Thus, content validation allows the researcher to verify whether the scale and the questions that constitute it are adequate predictors of the subject it is intended to assess.<sup>6</sup> Moreover, when questionnaires validated in different languages are used, they allow reliable data collection and facilitate the comparison and discussion of the results of several studies, including international ones.<sup>7</sup>

Considering this context, the use of a tool that can assess maternal confidence can be useful, contributing to the child's healthy development. In this sense, the *Karitane Parenting Confidence Scale* (KPCS),<sup>8,9</sup> designed to measure parental self-efficacy in parents of children between 0 and

12 months of age, was shown to be a tool capable of performing this evaluation. It is a protocol still little known and used in the Brazilian context, feasible for the addressed topic, and has proven use in its country of origin.

Moreover, its use is recommended in the first year of the child's life, when most of the doubts and difficulties arise for the parents, thus helping them to understand that moment. Therefore, the aim of the present study was to transculturally adapt and validate this tool for the Brazilian Portuguese language and culture in puerperal women with different gestational and perinatal conditions, allowing the evaluation of its applicability in different contexts, as well as verifying the association of its results with maternal sociodemographic characteristics.

## Methods

This study consists in the validation and cross-cultural adaptation of a protocol that was applied during a longitudinal observational study entitled "Impact of Perinatal Different Intrauterine Environments on Child Growth and Development in the First Six Months of Life" (IVAPSA), a thematic cohort of births whose main objective was to investigate the interactions between the maternal genotype during gestation (with the inclusion of women from different groups of intrauterine and perinatal environments), the maternal and fetal genotype, and their influence on growth, behavior and neurodevelopment in the newborn's first six months of life.

The study protocol has been previously published.<sup>10</sup> The aim of this study was to validate the scale, evaluating its applicability in puerperal women with different gestational and perinatal in order to confirm its applicability in several contexts.

Sample selection was carried out in three public hospitals of Porto Alegre: Hospital de Clínicas de Porto Alegre (HCPA), Hospital Fêmina and Hospital Nossa Senhora da Conceição, the last two belonging to the Grupo Hospitalar Conceição (GHC). The project was approved by the Research Ethics Committees of HCPA and GHC, in protocols 11-0097 and 11-027, respectively.

The KPCS protocol consists of 15 multiple-choice questions with four possible answers that are scored as 0, 1, 2, or 3; its total score range from 0 to 45, which is used to classify mothers as being confident or not about caring for their children. Mothers with a total score  $\geq 40$  are classified as confident.<sup>8</sup>

The validation process of the KPCS questionnaire, previously validated in its native language, started by contacting its original authors and obtaining their authorization. Subsequently, transcultural translation and adaptation were performed in five stages: 1) translation, 2) creation of a unified version, 3) back-translation, 4) analysis by experts and original authors of the questionnaire, and 5) final version use.

The first stage, translation into Brazilian Portuguese, consisted of two translations of the original tool, independently performed by a professional with experience in the questionnaire application area, fluent in the English language, and by a professional with a university degree in languages, specialized in the English idiom. As a result of the first stage, two different versions of the KPCS questionnaire were obtained.

After the translations were performed, the next stage was the creation of a unified version, in which professionals from the protocol application area discussed the most appropriate questions and answers adapted to Brazilian Portuguese, the best context of sentences, as well as their understanding in relation to the different levels of schooling of the target audience. Thus, it was possible to include all of the questions to obtain a unified version that was adequate for the purposes of the questionnaire.

The back-translation, which was the process of translating the unified version in Brazilian Portuguese back into English, was performed by a professional with a university degree in languages, with an English idiom specialization, fluent in the Brazilian Portuguese idiom, with no knowledge of the protocol purpose.

For the final interpretation of the assembled questionnaire, after the Brazilian Portuguese versions and back-translation into English, the next step was the analysis by experts and original authors of the questionnaire. This step was carried out through a consensus consisting of different opinions of five experts in the area of the protocol application, in which they discussed the understanding of the questionnaire and its adequacy for the intended purpose. In parallel to this discussion, the unified version was sent by e-mail to the author of the original protocol (Dr. Rudi Črnčec), for evaluation of the translated version into Brazilian Portuguese, commentary on the final product, and to obtain authorization for its use.

Once the protocol was translated, unified, back-translated, discussed, and approved by all those involved in this process, the Brazilian version of the KPCS was finally applied by the researchers participating in the IVAPSA study with the target audience to test its applicability.

This aforementioned study selected a convenience sample, in which puerperal women living in the city of Porto Alegre were included between 24 and 48 h after delivery. HIV/AIDS-positive women and mothers of newborns from twin pregnancies, premature infants with congenital diseases or those requiring hospital admission were excluded.

The mothers selected for the study were classified into five different groups, according to the conditions shown during pregnancy: 1) diabetes mellitus (DM), 2) systemic arterial hypertension (SAH), 3) smokers, 4) idiopathic intrauterine growth restriction with small for gestational age infants (IUGR/SGA), and 5) the control group. Participants preferably had only the clinical-obstetric conditions that were characteristic of each of the different groups.

If there was overlap regarding more than one study group, preference was given to the primary gestational condition. This heterogeneity of the sample allowed an evaluation of the protocol in puerperal women that developed different clinical and metabolic conditions during pregnancy. Maternal socioeconomic and demographic information (age, level of schooling, income, marital status, and self-reported ethnicity), as well as pre- and perinatal data (pregnancy planning, previous pregnancy, and type of delivery) were obtained through a structured questionnaire during the postpartum (PP) interview between 24 and 48 h after delivery, and by reviewing hospital medical records. The final version of the KPCS scale (Appendix 1) was applied to the puerperal women on the 15th day after delivery.

The protocol validation procedure was complete when the analyses of internal consistency of the translated version adapted to the Brazilian culture were performed. For that purpose, some of the originally used analysis procedures, previously described in the KPCS manual in its original Australian version were followed.<sup>8</sup> Thus, Cronbach's alpha coefficient, which is considered one of the main questionnaire reliability estimators, was used to evaluate the internal consistency of the KPCS protocol. The variance scale of this analysis ranges from 0 to 1, and 0.7 is the minimum acceptable value for considering a questionnaire as being qualified for use.<sup>11,12</sup> It is noteworthy that question number 12 ("Being a mother is very stressful for me"), as it showed in its response structure a format that was opposite to the others in the scale, required reversing the answers to perform the Cronbach alpha analysis, by attributing a higher score to those with a more positive nature, thus making them equivalent to the other questions.

For data presentation, the continuous variables were shown as median and interquartile range (P25–P75) and categorical variables as absolute and relative numbers, according to the results of the Shapiro–Wilk normality test. Statistical analyses to compare data from the sample groups included Spearman correlation, Kruskal–Wallis test with Dunn's post-hoc and Mann–Whitney's test. Statistical analyses were performed using the SPSS software (SPSS Inc. Released 2009. Statistics for Windows, Version 18.0. Chicago, USA). The level of significance was set at 0.05 for all analyses.

## Results

The study population consisted of 251 postpartum women at the time of the protocol use, on the 15th day postpartum.

**Table 1** describes the socioeconomic and demographic data of the general study sample and the distribution of intrauterine and perinatal environment groups. The median family income (in Brazilian Reais) was 1.5 minimum wages (R\$ 1322.00 [1000.00–2000.00]), which is equivalent to approximately US\$ 377.00 per month, and that median maternal schooling was ten years of study.

Postpartum women who had a total score of 40 or more were considered confident (55.8% [ $n = 140$ ]), while those who had a total score of 39 or lower were classified as non-confident (44, 2% [ $n = 111$ ]), according to the scoring system of the original protocol (data not shown in table).

**Table 2** shows data on the sample maternal confidence. The final median of the score was 40.00 (37.00–43.00). It should be noted that there was no statistically significant difference between the scale scores and the analyzed intrauterine and perinatal environments groups ( $p = 0.575$ ). When correlating maternal confidence with socioeconomic and demographic data, a weak correlation was observed between confidence and maternal schooling ( $p = 0.048$ ,  $r = 0.125$ ) as well as between confidence and maternal age ( $p = 0.013$ ,  $r = 0.157$ ). Moreover, a significant association was observed between confidence and parity ( $p = 0.030$ ), showing that mothers who had previous children had greater confidence.

The analysis of the protocol's internal consistency was carried out using Cronbach's alpha. All the questions that

comprised the questionnaire were used and, in the end, a value of 0.717 was obtained, which classified the protocol as comprehensible and qualified for subsequent use in the Brazilian population. Cronbach's alpha values per question are described in **Table 3**.

## Discussion

This study demonstrated that the KPCS protocol is an applicable tool for the measurement of maternal confidence level and adequate for use in the Brazilian Portuguese language, within the Brazilian cultural context. Maternal confidence levels showed a weakly significant correlation between maternal age and schooling and association with parity. Corroborating these findings, a study carried out in Australia with a group of women in the first postnatal year, voluntarily followed-up by a multiprofessional team in a private unit, used the KPCS scale and observed that multiparous mothers were more confident in relation to their children, as well as older mothers. These associations may reflect better established social support among older mothers when compared to their younger peers.<sup>13</sup>

From a perspective of health integrity, the most relevant aspects of care to the puerperal woman are the inseparability of care for the mother and child, maternal breastfeeding, family planning, and maternal and infant morbidity and mortality.<sup>14</sup> Thus, when the parental confidence, measured by other characteristics such as the practice of breastfeeding is taken into account, a study carried out in Feira de Santana, Bahia, Brazil, showed that the children of multiparous mothers had higher chances of being exclusively breastfed and an even higher prevalence of this type of breastfeeding was observed in comparison to the children of primiparous mothers.<sup>15</sup> In another birth cohort in Pelotas, Rio Grande do Sul, Brazil, which evaluated maternal nutrition and breastfeeding duration, the prevalence of breastfeeding was significantly higher as maternal age increased, in addition to the fact that primiparous women breastfed for less time.<sup>16</sup> Moreover, in 2011, Hernandez et al., in an analysis of trends in infant mortality rates and their risk factors in Porto Alegre, Rio Grande do Sul, Brazil, observed that the increase in maternal schooling was the major impact factor for the decrease in infant mortality rates between 1996 and 2008.<sup>17</sup> These results reinforce that it is important for the mother to receive support and guidance during the first weeks of the child's life, decreasing feelings of insecurity and anxiety, benefiting the practice of breastfeeding for a longer period of time<sup>18</sup> and, consequently, providing better care for children's health.

The process of translation and cross-cultural adaptation of the KPCS protocol made it possible to adapt a tool and make it suitable for use in the Brazilian culture. According to the International Test Commission,<sup>19</sup> when adapting tools, it is crucial to consider, in the new culture, the coherence of concepts and properties attained by the original version, as well as the adequacy of each item of the initial protocol in terms of potential representation of these questions in the new target audience, considering semantic, linguistics, and contextual equivalence between the versions.

The validation stage fully consolidated the process, allowing the assessment of whether the tool is, in fact,

**Table 1** Maternal socioeconomic, demographic, and perinatal characteristics, IVAPSA, Porto Alegre, Brazil.

Variables	Median (P25–P75)	Total (%)
<i>Study groups</i>		
DM		49 (19.5)
SAH		27 (10.8)
TB		52 (20.7)
IUGR/SGA		26 (10.4)
CTL		97 (38.6)
Age (years)	26.0 (21.0–32.0)	251 (100.0)
Educational level (years of schooling) <sup>a</sup>	10.0 (8.0–11.0)	250 (100.0)
Income (Brazilian Reais) <sup>a</sup>	1322.0 (1000.0–2000.0)	225 (100.0)
<i>Marital status (n, %)</i>		
With partner		203 (80.9)
Without partner		48 (19.1)
<i>Planned pregnancy (n, %)</i>		
Yes		91 (36.3)
No		160 (63.7)
<i>Has been pregnant before (n, %)</i>		
Yes		151 (60.2)
No		100 (39.8)
<i>Self-reported ethnicity (n, %)</i>		
Caucasian		155 (61.8)
Non-Caucasian		96 (38.2)
<i>Type of delivery (n, %)</i>		
Cesarean-section		88 (35.1)
Vaginal		163 (64.9)

IVAPSA, impact of perinatal different intrauterine environments on child growth and development in the first six months of life; DM, diabetes mellitus; SAH, systemic arterial hypertension; TB, tobacco; IUGR/SGA, idiopathic intrauterine growth restriction with small for gestational age infant; CTL, control; P, percentile.

<sup>a</sup> The total *n* was lower for these variables due to lack of information and answers (does not know/did not answer).

**Table 2** Analyses between maternal confidence and socioeconomic and demographic data, IVAPSA, Porto Alegre, Brazil.

Variables	Median (P25–P75)	<i>p</i> -value	Correlation <i>r</i>
<i>Maternal confidence<sup>a</sup> (study groups)</i>	40.0 (37.0–43.0)	0.575	–
DM	41.0 (38.0–42.0)		
SAH	39.0 (37.0–43.0)		
TB	40.0 (37.0–43.0)		
IUGR/SGA	39.0 (35.8–40.3)		
CTL	41.0 (36.0–43.0)		
<i>Maternal schooling<sup>b</sup></i>	26.0 (21.0–32.0)	<b>0.048</b>	<b>0.125</b>
<i>Maternal age<sup>b</sup></i>	10.0 (8.0–11.0)	<b>0.013</b>	<b>0.157</b>
<i>Parity<sup>c</sup></i>	–	<b>0.030</b>	–

Bold values are statistically significant.

IVAPSA, impact of perinatal different intrauterine environments on child growth and development in the first six months of life; DM, diabetes mellitus; SAH, systemic arterial hypertension; TB, tobacco; IUGR/SGA, idiopathic intrauterine growth restriction with small for gestational age infant; CTL, control; P, percentile.

<sup>a</sup> Kruskal–Wallis test with Dunn's post hoc.

<sup>b</sup> Spearman's correlation.

<sup>c</sup> Mann–Whitney's test.

capable of achieving its goal according to its original target audience. Especially in cross-cultural studies, the use of tools that have only been translated does not ensure reliable results. That is because the mere translation of the tool does not guarantee criteria for measuring whether the

achieved results refer to differences or similarities between the several samples or whether they originate from translation errors.<sup>20</sup>

In the validation of tools in different cultural and linguistic contexts, some authors affirm that cross-cultural



**Table 3** Cronbach's alpha values per question of the Karitane Parenting Confidence Scale tool (KPCS), IVAPSA, Porto Alegre, Brazil.

Question	Cronbach's alpha
1. I am confident about feeding my baby	0.714
2. I can settle my baby	0.688
3. I am confident about helping my baby to establish a good sleep routine	0.709
4. I know what to do when my baby cries	0.689
5. I understand what my baby is trying to tell me	0.678
6. I can soothe my baby when he/she is distressed	0.683
7. am confident about playing with my baby	0.684
8. If my baby has a common cold or slight fever, I am confident about handling this	0.699
9. I feel sure that my partner will be there for me when I need support	0.731
10. I am confident that my baby is doing well	0.701
11. I can make decisions about the care of my baby	0.691
12. Being a mother/father is very stressful for me	0.754
13. I feel I am doing a good job as mother	0.699
14. Other people think I am doing a good job as a mother	0.701
15. I feel sure that people will be there for me when I need support	0.713

IVAPSA, impact of perinatal different intrauterine environments on child growth and development in the first six months of life.

studies allow not only verifying differences between individuals and cultures, but also assessing the similarities and common characteristics between them.<sup>20</sup> Thus, the use of appropriate tools is crucial, as they can provide measurement equivalence, regardless of the context where they are used.<sup>21</sup>

The KPCS tool, previously validated in its native language and place of origin, Australia, was also translated and validated for use in the Nepalese population.<sup>22</sup> Thus, it was possible to compare the procedures carried out by the researchers responsible for this task in Nepal and in the scale's country of origin, as well as to compare the results found in the different contexts.<sup>8-22</sup>

The population studied in the original validation<sup>8,9</sup> and in the cross-cultural adaptation and validation carried out in Nepal<sup>22</sup> for the study performance consisted of puerperal women without gestational, pre-, and postnatal adverse events. Diversely, in the present study, in addition to the women in the control group, the authors also assessed postpartum women who developed several gestational and perinatal conditions distributed in groups, including women with DM, SAH, smokers, and children with IUGR/SGA. It

is noteworthy that when comparing these groups of the present study, the diverse conditions occurring during gestation did not imply statistically significant differences in relation to maternal confidence. Thus, the fact that the sample included participants with different gestational conditions allowed the assessment of how the scale behaves in different health contexts, which differentiates the validation of the tool into Brazilian Portuguese from the original and Nepalese validations, increasing its applicability.

In addition to the aforementioned differences regarding the translation and validation processes in the different contexts, it is also worth mentioning that the participants in the present study were recruited from three different public hospitals in the same municipality. In the other KPCS studies, participants were selected from a single hospital in the outpatient clinic and/or post-natal unit of the Maternity Hospital of the Kathmandu Women's Hospital in Nepal<sup>22</sup> and the Karitane Medical Clinic in Villawood, New South Wales, Australia.<sup>8</sup>

The results found in the present study were not similar to those in other studies regarding internal consistency values, which showed a discrepancy from the original and Nepalese scales when compared with the present validation for Brazilian Portuguese. This could be justified by the differences between the methods used in the comparison of these studies. Nonetheless, the results are within the required statistical range for a classification to be considered reliable. Internal consistency values measured by Cronbach's alpha  $\geq 0.7$  are required for a new scale<sup>12</sup>; the exposed cross-cultural adaptation and validation presented in this study a value of 0.717, while in Nepal it was 0.87 and in its original version, 0.81.<sup>21,22</sup> The association between maternal confidence, schooling, age, and parity corroborates other results already described in the literature. It has been shown that a higher level of maternal education improves the quality of child care, while low socioeconomic and educational levels are associated with worse child health status.<sup>23,24</sup>

Olafsen et al.<sup>25</sup> recommend that the variable maternal confidence be assessed as early as the neonatal period, since the existence of low levels of parental confidence may represent a vulnerability that must be addressed as soon as it is identified. In the present study, as suggested in the literature, the scale was applied on the 15th day postpartum, still in the neonatal period, when the parents are still adapting to the newborn, and are sensitive to the new feelings that are emerging.

Within the context involved in carrying out this study and considering that the results corroborate the literature, it is necessary to reinforce the importance of maternal confidence in the concept of motherhood. Given that low levels of parental confidence may affect parent-infant interactions, the promotion of parental competence feelings becomes very relevant. Thus, it is imperative to consider the clinical relevance of the maternal feeling of confidence, which is crucial for the development of adaptive and rewarding fatherhood and motherhood.<sup>26</sup>

Among the limitations of the present study is the fact that the sample was selected by convenience, something that facilitates the researcher's grasp of the volunteer participant and meets the previously established requirements, but results in a certain inefficiency when external generalizations and claims are made with statis-

tical precision. Similarly, another limitation is the fact that the validation did not have a pilot study, a stage in which relevant topics could have been observed, improving the experts' discussions and decisions. However, the literature shows several other validation studies carried out in the same manner.<sup>22,27-29</sup>

The strong points of the study include the sample size ( $n=251$ ), considerably larger than the other studies carried out with the scale, which had 187 (original validation) and 100 (Nepalese validation) individuals, in addition to the diversity of the research subjects, due to their different health characteristics, increasing the variance of responses and showing that the tool, in its Brazilian version, is reliable to be applied in different contexts.

The proposal of a cross-cultural adaptation and validation of the KPCS tool was shown to be reliable, reaching the initially outlined goals. The results indicated the questionnaire is understandable by the target audience, being able to achieve the described objectives. Moreover, the relevance of the research object as measured by the scale was observed during the entire process within the mothers' reality, when associating the results obtained with age, schooling, and parity, and by obtaining outcomes already described in the literature at other times and locations. The capability of the maternal confidence assessment developed during this important stage of the woman's life cycle was thus established.

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## Conflicts of interest

The authors declare no conflicts of interest.

## Appendix 1. Final version of the scale applied by IVAPSA researchers.

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### KPCS

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#### Am I confident about feeding my baby?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.
- (88) Someone else feeds the baby

#### Can I settle my baby?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

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#### Am I confident about helping my baby to establish a good sleep routine?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Do I know what to do when my baby cries?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Do I understand what my baby is trying to tell me?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Can I soothe my baby when he/she is distressed?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Am I confident about playing with my baby?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### If my baby has a common cold or slight fever, am I confident about handling this?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Do I feel sure that my partner will be there for me when I need support?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.
- (88) I don't have a partner.

#### Am I confident my baby is doing well?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Can I make decisions about the care of my baby?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

#### Is being a mother very stressful for me?

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

**Do I feel I am doing a good job as a mother?**

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

**Do other people think I am doing a good job as a mother?**

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

**Do I feel sure that people will be there for me when I need support?**

- (0) No, hardly ever.
- (1) No, not very often.
- (2) Yes, some of the time.
- (3) Yes, most of the time.

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