

Translation and Reliability of the Malay Parental Stress Scale: A Screening Tool for Malaysian Parents

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ABSTRACT

Background: Malaysians still have limited access to the Bahasa Melayu validated version of the Parental Stress Scale (PSS). This study aims to assess the preliminary psychometric properties of the Bahasa Melayu version of the PSS among Malaysian parents, particularly in the context of urban parental resilience research.

Methods: The study was conducted in two phases. Phase 1 involved the forward-backward translation of the original PSS into Bahasa Melayu. Phase 2 was a pilot test involving 32 Malaysian parents recruited through online distribution. The study examined internal consistency and the distributional properties of the items.

Results: Most participants were female, aged between 30 to 40 years, and from the middle-income group. The Bahasa Melayu PSS demonstrated good internal consistency with a Cronbach's alpha of 0.831, indicating good reliability. Skewness and kurtosis values (0.414 and 0.809) showed that item responses were nearly symmetric and mesokurtic, supporting good normality. Due to the small sample size, confirmatory factor analysis was not conducted.

Conclusion: The translated PSS shows sufficient clarity and internal consistency for use as a screening tool among Malaysian parents. While full psychometric validation is still needed, this version of the PSS holds potential for future large-scale use in assessing parental stress in Malaysia.

Keywords: Bahasa Melayu; Parental stress; Psychometric evaluation; Reliability; Screening tool

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INTRODUCTION

Parents are the core factors in determining the family well-being, as they are the protective factors for the children (1). Higher stress among parents affects children's development as it influences parenting practices and parent-child relationships, including less effective discipline and emotionally unavailable parents, which may lead to poorer children's behavioural, emotional, and cognitive outcomes (2). These long-term negative outcomes have been consistently correlated with externalising and internalising behaviours in children and their future personal resilience (3,4). Given the potential long-term impact of distress parents experience on family dynamics and child well-being, its early identification is essential.

Monitoring is vital for stressed parents who are struggling to fulfil their children's needs. Early identification of families at risk to mitigate the effects and develop effective interventions that support parents is therefore essential (5). The Parental Stress Scale (PSS) developed by Berry and Jones (6) has been widely used in 25 countries and translated into many languages, such as French, Korean, and Spanish (7). Although it has been translated into many languages, no officially validated Bahasa Melayu version is currently available. While Louie and colleagues (7) referred to a Malay translation of PSS by Norizan and Shamsuddin (8), a closer review reveals that it was for a different tool, which is the Parenting Stress Index. This highlights the need for a culturally appropriate translation and reliability testing of the PSS for use with Malaysian parents.

The screening tool in this study was used to identify early signs of parental stress, which can arise from a combination of psychosocial and environmental factors. Yet, despite its importance, there is currently no validated version of the Parental Stress Scale (PSS) in Bahasa Melayu, limiting its utility in local screening and resilience research. This study therefore aimed to translate and examine the internal consistency of the PSS for use among Malaysian parents.

METHODS

Study Design

This study was a cross-sectional study, as it allowed only one data collection at a single time point and assessed a snapshot of a population

without intervention, manipulation and control of the group (9). It was conducted in two phases: 1) the translation of the Parental Stress Scale (PSS) into Bahasa Melayu, and 2) pilot testing to evaluate the internal consistency of the translated instrument.

Description of the Original Instrument

This study used the Parental Stress Scale as the main instrument. The scale consists of an 18-item instrument designed to assess the perceived stress associated with parenting. Each question is evaluated on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The scale has eight reverse-coded components. The total potential score varies from 18 to 90. Higher scores indicate higher parental stress. The original English version of the PSS has been widely used in research across various cultures and languages, with reported good internal consistency (Cronbach's $\alpha=0.83$) and construct validity (6,7).

Translation Procedure for Parental Stress Scale (PSS)

The translation of the Parental Stress Scale (PSS) into Bahasa Melayu was carried out using a structured multi-phase approach to ensure conceptual and cultural equivalence. This process followed international best practices in cross-cultural adaptation.

Step 1: Recruitment of Translation Team

A translation team was assembled comprising four individuals with diverse expertise to ensure high-quality translation with both linguistic accuracy and cultural relevance. The team consisted of i) two qualified English language proofreaders (Language Translator 1 [LT1] and Language Translator 2 [LT2]), and, ii) two field experts (Field Translator 1 [FT1], a health sciences lecturer, and Field Translator 2 [FT2], a doctoral candidate in health sciences, both from the International Islamic University Malaysia). This composition was selected to balance proficiency in language with a deep understanding of parenting, stress, and health-related constructs in the local context.

Step 2: Forward Translation

LT1 and FT1 independently translated the original English PSS into Bahasa Melayu, producing two separate forward translations. These versions (Document T1 and T2) were

reviewed and compared in an online collaborative session. Differences in wording were discussed, and consensus was reached to produce a reconciled Bahasa Melayu version (Document T3), integrating the most appropriate terms culturally and semantically.

Step 3: Back-Translation

The reconciled version (Document T3) was independently backtranslated into English by two new translators: one field expert fluent in Bahasa Melayu (BM2) and one English language expert (L2). They produced Document T4 and Document T5. This step ensured that the translated version retained the original meaning without being influenced by the source text.

Step 4: Committee Review and Consolidation

A review committee comprising the researcher, LT1, and FT1 examined all documents—the original PSS (E0), the forward translations (T1, T2, T3), and the back-translations (T4, T5). Items were reviewed for semantic, idiomatic, and conceptual equivalence. Discrepancies were discussed, and the team agreed on the final Bahasa Melayu version of the PSS while maintaining fidelity to the original scale.

Pilot Study Procedure

Following the translation process, a pilot study was conducted to assess the internal consistency and clarity of the Bahasa Melayu version of the Parental Stress Scale (PSS). The study was carried out from late June to early July 2024, and data collection was closed once the target number of 32 participants was reached—a suitable sample size for small-scale pilot testing.

Participants were recruited online through Google Forms, using voluntary and anonymous self-reporting. Inclusion criteria included being a Malaysian parent, being fluent in Bahasa Melayu, and having at least one child. In addition to completing the 18-item translated PSS, participants provided basic demographic information (e.g., age, gender, number of children, household income, employment sector, housing type, and air conditioner usage).

After receiving the first 23 responses, the researcher added an optional open-ended comment section to collect qualitative feedback on the clarity and language of the questionnaire.

The open-ended question asked participants:

"Adakah anda mempunyai sebarang masalah memahami soalan (setiap item)? Jika tiada, tuliskan tiada, dan jika ada, sila nyatakan."

English translation: "Do you have any difficulty understanding any of the questions (each item)? If none, please write 'none'; if yes, please specify."

All procedures were conducted by ethical standards, and participation was voluntary with implied consent obtained through form submission. Ethical approval for this study was granted by the Kulliyah of Nursing Postgraduate Research Committee (KNPGRC), International Islamic University Malaysia (Reference: IIUM/313/DDPRRI/13/12/8). This translation and reliability testing formed part of the main approved research protocol, and all participants provided implied consent via form submission.

Data Analysis

Quantitative data from the pilot study were analysed using IBM SPSS Statistics IBM SPSS Statistics for Windows, Version 21.0 (10). Descriptive statistics were used to summarise the demographic characteristics of participants. To assess the distribution of item responses, skewness and kurtosis values were computed to evaluate the normality assumption of the translated items. While skewness and kurtosis values between -1 and +1 are often considered highly acceptable for normality (11) broader criteria such as ± 2 for skewness and ± 7 for kurtosis are acceptable for large sample (12,13).

Internal consistency reliability of the Bahasa Melayu version of the Parental Stress Scale (PSS) was examined using Cronbach's alpha coefficient, which is appropriate for Likert-type scales. A Cronbach's alpha value above 0.70 was considered acceptable, while values above 0.80 were considered good. Only raw alpha was reported, as standardisation was not required.

Given the small pilot sample ($n=32$), exploratory and confirmatory factor analyses were not conducted, as these techniques generally require larger sample sizes to obtain accurate and dependable statistical results (14–16).

RESULTS

Translation and Cultural Adaptation Process

Several wording differences emerged during the forward translation of the English Parental Stress Scale (PSS) into Bahasa Melayu. For instance, the original item *"Having child(ren) has meant having too few choices and too little control over my life"* was translated differently by the two translators.

Language Translator 1 (LT1):

"Kehadiran anak menyebabkan saya mempunyai terlalu sedikit pilihan dan terlalu sedikit kawalan terhadap hidup saya."

Field Translator 1 (FT1):

"Mempunyai anak bermakna saya mempunyai terlalu sedikit pilihan dan terlalu sedikit kawalan dalam hidup ini."

The discrepancies involved the choice of expressions such as *"kehadiran anak"* versus *"mempunyai anak"*, and *"terhadap hidup saya"* versus *"dalam hidup ini."* During the reconciliation meeting, the review committee agreed to retain the version that conveyed the same meaning as the original item but sounded more natural in Bahasa Melayu. The harmonised version was therefore finalised as:

"Mempunyai anak bermakna saya mempunyai terlalu sedikit pilihan dan kawalan terhadap hidup saya".

Similar minor differences in phrasing and tone were resolved through consensus to ensure cultural relevance, conceptual equivalence, and linguistic clarity in the final reconciled version (Document T3).

During the committee review, all translated items were examined to ensure semantic, idiomatic, and conceptual equivalence with the original English PSS. Most items, such as Item 11 (*"Having child(ren) has been a financial burden"*) translated as *"Memiliki anak adalah beban kepada kewangan saya"*, were found to be linguistically and culturally appropriate and required no modification.

However, Item 14 (*"If I had it to do over again, I might decide not to have child(ren)"*) prompted a

detailed discussion due to its potential cultural sensitivity within the Malay Muslim context. The committee deliberated on whether the phrase *"Jika masa boleh berputar kembali"* might imply regret or conflict with religious values that emphasise gratitude for children. After careful consideration, the committee decided to retain the translation *"Jika masa boleh berputar kembali, saya mungkin mengambil keputusan untuk tidak memiliki anak"*, as it accurately captured the emotional dimension of parental stress in psychological terms rather than literal regret. The decision reflected a balance between cultural sensitivity and fidelity to the original construct.

Feedback from respondents indicated no major issues in understanding the items in the Bahasa Melayu version of the PSS. This confirmed the face validity and linguistic appropriateness of the translated tool before proceeding to statistical analysis.

Demographic Characteristics

A total of 32 Malay parents participated in the pilot study (Table 1), of whom 81.3% (n=26) were female and 18.8% (n=6) were male. Most participants were aged between 30 and 40 years old (n=23, 71.9%), while 25.0% (n=8) were aged above 40, and 3.1% (n=1) were below 30 years old.

In terms of household income, 56.3% (n=18) were from the middle-income group, followed by the lower-income group (40.6%, n=13) and only 3.1% (n=1) were from the upper-income group. The household income (RM) was categorised according to Malaysia's household income range per month, as follows: B40 - the low income or bottom 40% (less than RM5,249); M40 - middle income or middle 40% (RM5,250 to RM11,819); and T20 - high income or top 20% (more than RM11,820). Regarding the number of children, 59.4% (n=19) had three to five children, 25.0% (n=8) had one or two children, and 15.6% (n=5) had more than five children.

Most participants were employed in the government sector (43.8%, n=14). More than half of the respondents lived in terrace houses (59.4%, n=19), and a significant number reported having air-conditioning at home (81.3%, n=26).

Table 1: Demographic Characteristics of Participants (N=32)

| Characteristic | Category | Frequency (n) | Percentage (%) |
|--------------------|---------------|---------------|----------------|
| Sex | Female | 26 | 81.3 |
| | Male | 6 | 18.8 |
| Age Group | <30 | 1 | 3.1 |
| | 30-40 | 23 | 71.9 |
| | >40 | 8 | 25.0 |
| Income group | Lower | 13 | 40.6 |
| | Middle | 18 | 56.3 |
| | Upper | 1 | 3.1 |
| Number of children | 1-2 | 8 | 25.0 |
| | 3-5 | 19 | 59.4 |
| | >5 | 5 | 15.6 |
| Employment sector | Government | 14 | 43.8 |
| | Others | 18 | 56.2 |
| Housing type | Terrace house | 19 | 59.4 |
| | Others | 13 | 40.6 |
| | No | 6 | 18.8 |

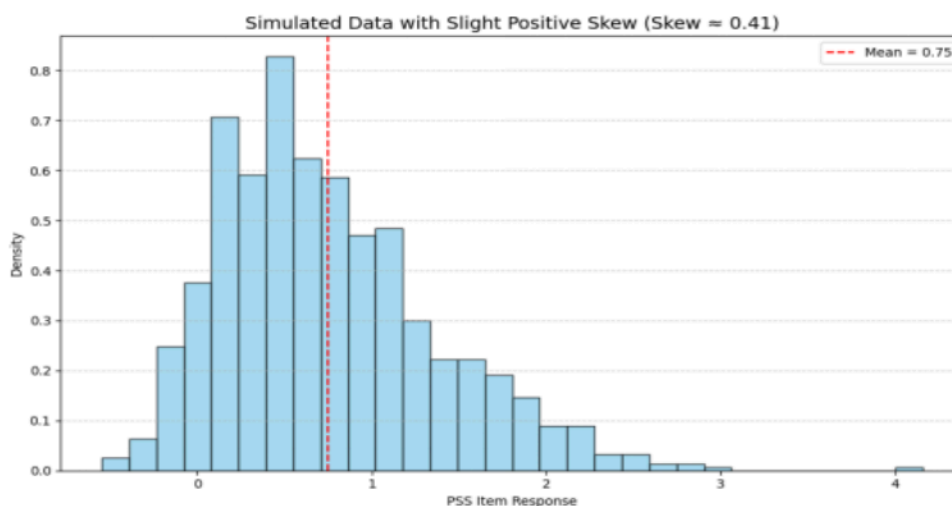
Distribution and Reliability

Item distribution and normality assessment are critical steps in statistical analysis prior to conducting reliability analysis such as Cronbach's alpha. The data screening includes checking for missing values, item distributions, and normality (17). Although the sample size exceeds 30 ($n=32$), which considered as modest sample size (30-50), it is still essential to assess item-level normality and distribution before performing internal consistency analysis. This is recommended by Field (17) and supported by statistical best practices (18). Skewed items may influence Cronbach's alpha and affect construct measurement reliability (19).

The translated items of the Bahasa Melayu PSS

demonstrated acceptable distributional properties. The skewness value was 0.414, indicating near-symmetrical data, and the kurtosis value of 0.809 was within the acceptable range for normality. These findings suggest the item responses were not heavily skewed, making them suitable for reliability analysis. This confirms the uniformity in the distribution of the translated PSS items, which consistently measure similar constructs as in **Figure 1**.

The internal consistency of the translated scale was found to be good, with a Cronbach's alpha of 0.831. This indicates that the items in the Bahasa Melayu version of the PSS were reliably measuring the same underlying construct of parental stress.

Figure 1: Distribution of Bahasa Melayu PSS Total Scores Showing Slight Positive Skewness

*Skewness = 0.41

Table 2: Descriptive and Reliability Statistics of the Bahasa Melayu Parental Stress Scale (PSS)

| Statistic | Value | Interpretation |
|-------------------------------------|----------------|---|
| Sample size (N) | 32 | Number of pilot participants |
| Skewness | 0.414 | Slightly positively skewed; acceptable (± 1) |
| Kurtosis | 0.809 | Mesokurtic; acceptable (≈ 0 for normal distribution) |
| Cronbach's Alpha (α) | 0.831 | Good internal consistency ($\alpha \geq 0.8$) |
| Distribution Shape | Near-normal | Supported by histogram and Q-Q plot |
| Scale Type | 5-point Likert | Consistent with original PSS format |
| Language Adaptation | Completed | Through rigorous translation and back-translation process |
| Item Clarity (qualitative feedback) | Clear | No reported comprehension issues during pilot |

DISCUSSION

Malaysians still have limited access to a validated Bahasa Melayu version of the Parental Stress Scale (PSS). Therefore, this study aimed to assess the preliminary psychometric properties of the Bahasa Melayu version of the PSS among Malaysian parents.

The result indicates that the Bahasa Melayu version of PSS has excellent internal consistency and adequate reliability. The skewness and kurtosis close to zero suggest the items are suitable for psychometric testing. These findings align with previous validations of the original English PSS, supporting the use of the translated scale as a valid screening tool. Despite the promising results, further research with a larger and more diverse sample is recommended to confirm factor structure and generalisability. The internal consistency obtained in this study ($\alpha=0.831$) is comparable to previous translated versions of the Parental Stress Scale. For instance, the Spanish version reported a Cronbach's alpha of 0.89 (20), the Korean version reported $\alpha=0.88$ (21), and the French version reported $\alpha=0.87$ (22). These consistent findings across different cultural contexts suggest that the PSS demonstrates stable internal reliability when adapted into other languages, further supporting its cross-cultural applicability.

This study has several limitations that should be acknowledged. First, the pilot sample was relatively small ($n=32$), which restricted the possibility of conducting more advanced psychometric analyses such as exploratory or confirmatory factor analysis. Second, the participants were predominantly female and mainly from middle-income households living in terrace houses, which may not represent the full diversity of Malaysian parents in terms of gender, socio-economic status, and living environments.

These factors may limit the generalisability of the findings. Future studies involving larger and more diverse samples are therefore recommended to confirm the factor structure and enhance the robustness of the Bahasa Melayu version of the PSS.

CONCLUSION

Based on the results of data analysis and discussion, the following conclusions can be drawn:

1. The translation process of the Parental Stress Scale (PSS) into Bahasa Melayu was conducted systematically, involving forward translation, back-translation, and expert committee review to ensure linguistic and cultural accuracy.
2. The pilot testing demonstrated acceptable item distribution, with skewness = 0.414 and kurtosis = 0.809, indicating that the data followed an approximately normal distribution.
3. The translated Bahasa Melayu version of the PSS demonstrated good internal consistency with a Cronbach's alpha value of 0.831, indicating that the scale items reliably measure the construct of parental stress.
4. As this was a pilot study, the findings provide preliminary evidence that the Bahasa Melayu PSS has acceptable reliability and promising psychometric properties. However, further validation with a larger and more diverse sample is required before the tool can be recommended for widespread screening use among Malaysian parents.

LIMITATIONS AND RECOMMENDATIONS

The main limitation of this study is the sample size. The sample size, which was borderline between moderate and small, restricts the use of confirmatory factor analysis and generalisability. It is recommended that future studies should

include larger sample sizes and more diverse populations to validate the structure of the scale and assess test-retest reliability. It is also recommended to explore the scale's performance across different cultural and socioeconomic backgrounds in Malaysia.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHOR CONTRIBUTIONS

NS: Conceptualisation, methodology, data collection, translation coordination, analysis, interpretation, writing, original drafts, and editing.

MFMI: Methodology, translation review, editing, supervision, and review.

SZS: Translation review and support for psychometric review.

RNHAR: Translation review, supervision, and review.

NII: Supervision, editing, and review.

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