Original Article

Translation of the Revised Dyadic Adjustment Scale (RDAS) into the Malay Language and Its Psychometric Qualities among Healthy Married Malay Women

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Background: In Malaysia, the problem of marital distress is fast becoming an important public health concern. A major shortcoming is inadequate marital evaluation. There are, however, very few localized instruments for married women in Malaysia. The objective of this study was to translate the original version of the Revised Dyadic Adjustment Scale (RDAS) and to evaluate for its psychometric properties. Multiple aspects of validity and reliability were also assessed. Materials and Methods: The questionnaire was first translated into the Malay language (RDAS-M). In this cross-sectional study, healthy married Malay women in Kota Bharu, Kelantan, were recruited from January to April 2018. Participants were asked to complete the RDAS-M that consists of three domains, that is, dyadic consensus, dyadic satisfaction, and dyadic cohesion with a total of 14 items. The concept, content, and construct validity using exploratory factor analysis (EFA) and reliability of the RDAS-M were assessed. Results: Of the 164 recruited participants, 150 consented to participate. The mean age of the participants was 34.1 years (standard deviation [SD], 9.5 years), ranging from 20 to 57 years. All 14 items were considered comprehensible by more than 95% of the subjects. Based on EFA, total variance extracted was 69.08%, and the original three factors were retained. The Malay version of the RDAS was valid based on factor loadings for dyadic consensus, dyadic satisfaction, and dyadic cohesion, which ranged from 0.64 to 0.80, 0.79 to 0.98, and 0.37 to 0.78, respectively. The internal consistency was good with coefficient α of 0.87 for dyadic consensus, 0.93 for dyadic satisfaction, and 0.78 for dyadic cohesion. Conclusions: The Malay version of the RDAS is easy to understand, and is a reliable and valid instrument for married women. It is also comparable with the original version of the RDAS in terms of structure and psychometric properties.

Keywords: Marital relationship, married women, Revised Dyadic Adjustment Scale questionnaire, validation questionnaire

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Introduction

Marital relationship quality can be defined as a multidimensional measure that assesses the subjective and objective features of a marital relationship. A number of self-report measures have been developed to assess the quality of the marital relationship. Marital adjustment can be considered as a multidimensional construct that includes dyadic consensus, dyadic satisfaction, and dyadic cohesion. The Revised Dyadic Adjustment Scale (RDAS) is a well-validated instrument developed by Spanier and Goetz (1976) to assess marital adjustment. The RDAS was designed to provide a multidimensional assessment of marital adjustment, including dyadic consensus, dyadic satisfaction, and dyadic cohesion. The purpose of this study was to translate the original version of the Revised Dyadic Adjustment Scale (RDAS) into the Malay language and to evaluate for its psychometric properties. Multiple aspects of validity and reliability were also assessed. Materials and Methods: The questionnaire was first translated into the Malay language (RDAS-M). In this cross-sectional study, healthy married Malay women in Kota Bharu, Kelantan, were recruited from January to April 2018. Participants were asked to complete the RDAS-M that consists of three domains, that is, dyadic consensus, dyadic satisfaction, and dyadic cohesion with a total of 14 items. The concept, content, and construct validity using exploratory factor analysis (EFA) and reliability of the RDAS-M were assessed. Results: Of the 164 recruited participants, 150 consented to participate. The mean age of the participants was 34.1 years (standard deviation [SD], 9.5 years), ranging from 20 to 57 years. All 14 items were considered comprehensible by more than 95% of the subjects. Based on EFA, total variance extracted was 69.08%, and the original three factors were retained. The Malay version of the RDAS was valid based on factor loadings for dyadic consensus, dyadic satisfaction, and dyadic cohesion, which ranged from 0.64 to 0.80, 0.79 to 0.98, and 0.37 to 0.78, respectively. The internal consistency was good with coefficient α of 0.87 for dyadic consensus, 0.93 for dyadic satisfaction, and 0.78 for dyadic cohesion. Conclusions: The Malay version of the RDAS is easy to understand, and is a reliable and valid instrument for married women. It is also comparable with the original version of the RDAS in terms of structure and psychometric properties.

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relationship. A few known measures include the Dyadic Adjustment Scale (DAS), the Marital Adjustment Test (MAT), the Revised Marital Adjustment Test (RMAT), and the Kansas Marital Satisfaction Scale (KMSS). More recently, the Revised Dyadic Adjustment Scale (RDAS), a modified version from the previous DAS, is a more improved instrument to assess the quality of a marital relationship.\(^1\)

The RDAS, unlike DAS, has a more acceptable level of construct validity, demonstrated by several confirmatory factor analyses with more than one sample. Besides, although RDAS has half the items of DAS, it remains equally discriminative.\(^2,3\) A study on marital distress was performed among couples attending marriage and family therapy at Brigham Young University and Montana State University in the United States.\(^4\) Comparing the RDAS and the DAS, the discriminant analyses demonstrated that RDAS and DAS were equal in their ability to discriminate distressed from nondistressed individuals. Both scales correctly classified 81% of cases.

Although marital relationship quality has been extensively studied in Western countries, there are limited studies that investigate such topic in Asian populations. In Malaysia, the problem of marital distress is growing and fast becoming an important public health concern. A study by Ismail et al.\(^5\) revealed that the Malaysian population generally showed a moderate level of marital satisfaction and quality of life. To the best of our knowledge, inadequate marital evaluation is one of the major shortcomings in marital distress management. There are, however, very few localized instruments to evaluate marital distress for married couples in Malaysia. Thus, this study aimed to translate and validate the RDAS questionnaire into the Malay language.

**MATERIALS AND METHODS**

The cross-sectional study was conducted at Hospital Universiti Sains Malaysia (USM), Kota Bharu, Kelantan, Malaysia, from January 2018 to April 2018. Using convenience sampling, within the compound of the university hospital, women were first screened through a short interview to determine whether they satisfied the inclusion and exclusion criteria. Inclusion criteria included Malay women as defined according to the Constitution of Malaysia (Article 160), at least 18 years old and above, married and sexually active, can understand, read, and write in the Malay language. Exclusion criteria were as follows: women of non-Malay origin married to a Malay man, overt medical illness including malignancy, severe neurological illnesses (e.g., stroke and other degenerative diseases such as multiple sclerosis), severe psychiatric illnesses (e.g., schizophrenia and other psychotic disorders), previous history of major surgeries, and complicated current pregnancy.

The translated RDAS-M questionnaire was administered to the participants using an investigator-directed approach.

The study was reviewed and approved by the Human Research and Ethics Committee of USM (JEPeM Code: USM/JEPeM/17050272). All participants signed the informed consent form.

**RESEARCH INSTRUMENT**

RDAS has three domains, that is, dyadic consensus, dyadic satisfaction, and dyadic cohesion and 14 items.\(^6\) Dyadic consensus (RDAS-DC) is a 6-item domain that measures the degree to which couples agree on matters of importance to their relationships. Dyadic satisfaction (RDAS-DS), with four items, measures the degree to which couples are satisfied with their relationships. Finally, the 4-item Dyadic cohesion (RDAS-DCh) measures the degree of closeness and shared activities experienced by couples. Responses are in numeric Likert scales, from 0 to 5, with responses of RDAS-DC, RDAS-DS, and RDAS-DCh being 0 = always disagree to 5 = always agree; 0 = all the time to 5 = never; and 0 = never to 5 = more often, respectively. The total or maximum RDAS score is 69, with “distress relationship” having a lower score. The original instrument has a high internal consistency (\(\alpha\) coefficient = 0.90) and valid constructs.\(^6\)

**PROCEDURES**

**Translation process and face validity of the questionnaire**

A standardized “forward-backwards” translation was first utilized to translate the original English RDAS into the Malay language. Forward translation from English to Malay version was performed independently by one clinical expert (M.S.W.) and a native linguistic teacher (S.A.M.Z.K.A.), both well-versed in the two languages. These two translated documents were reconciled at a meeting attended by the primary investigator and the two translators. The reconciled Malay version was then back-translated by a different clinical expert (Z.O.) and a native linguistic translator (N.R.N). Likewise, the back-translated versions were discussed and reconciled during a meeting. The final translated Malay version (RDAS-M) was subsequently piloted among 10 married volunteers to determine the face validity, which is a measure on the constructs of interest.\(^7\)
Data and statistics analysis

Firstly, the content validity relates to the choice, appropriateness, importance, and representativeness of the instrument's content. Individual items in the questionnaire must be comprehensible and relevant to the respondents. In this context, five experts reviewed the RDAS-M questionnaire and calculated for content validity index (CVI) among the experts. After that, it was followed by face validity. Thirty participants were asked to complete the questionnaire to check if the items in the questionnaire were incomprehensible and irrelevant. Secondly, for the examination of construct validity, exploratory factor analysis (EFA) using the principal axis factor (PAF) extraction method with direct oblimin rotation was used. Oblimin rotation allows a factor to be placed closer to groups of variables as the groups are usually not independent. Loading of items with the factor was also examined. An ideal factor loading >0.5 is recommended by Hair Jr. et al. (2009) although a cut-off value of 0.3 is commonly used in EFA. When loading exceeds 0.45, it is considered meaningful for the items in the considered factor. Thirdly, the reliability or internal consistency of the RDAS-M subscales was examined by computing the corrected item-total correlation and Cronbach α coefficient. A Cronbach α ≥0.70 was considered sufficient evidence of an acceptable internal consistency, whereas a corrected item-total correlation ≥0.20 for each item was considered acceptable. Data analysis was performed using the SPSS software, version 22.0 (SPSS, Chicago, Illinois). Frequency and percentages were computed for categorical variables, and for numerical variables, mean and standard deviation (SD) were reported.

Results

Of 164 recruited participants, 150 were consented participants. The mean age of the participants was 34.1 years (SD, 9.5 years), ranging from 20 to 57 years. Fourteen participants were not included in this study because of missing data and refusal to participate in this study. Based on the experts’ opinion, CVI of all

| Table 1: Factor loading and internal consistency of Revised Dyadic Adjustment Scale |
|----------------------------------------------------------------------------------|
| Domains and items | Mean scores (SD) | Factor loading | Internal consistency |
| Domain 1: Consensus | | Factor I | Factor II | Factor III | Corrected item total correlation | α if item deleted | Cronbach α |
| 1a. Religious matters | 25.37 (4.94) | 4.41 (1.09) | −0.071 | 0.773@ | 0.038 | 0.701 | 0.842 |
| 1b. Demonstrations of affection | 4.33 (1.01) | 4.33 (1.01) | −0.052 | 0.802@ | 0.089 | 0.744 | 0.835 |
| 1c. Making major decisions | 4.03 (0.99) | 0.138 | 0.777@ | −0.172 | 0.705 | 0.842 |
| 1d. Sex relations | 4.32 (0.99) | 4.32 (0.99) | −0.058 | 0.635@ | 0.170 | 0.594 | 0.860 |
| 1e. Conventionality# | 4.11 (1.10) | 0.068 | 0.698@ | −0.080 | 0.639 | 0.853 |
| 1f. Career decisions | 4.17 (1.16) | 4.17 (1.16) | 0.006 | 0.682@ | 0.031 | 0.641 | 0.854 |
| Domain 2: Satisfaction | 9.96 (4.41) | 4.42 (5.17) | 0.860@ | 0.062 | 0.097 | 0.796 | 0.924 |
| 2a. How often do you discuss or have you considered divorce, separation, or terminating your relationship? | 4.28 (1.77) | 0.884@ | −0.051 | 0.043 | 0.851 | 0.905 |
| 2b. How often do you and your partner quarrel? | 1.48 (1.30) | 1.48 (1.30) | 0.884@ | −0.051 | 0.043 | 0.851 | 0.905 |
| 2c. Do you ever regret that you married (or lived together)? | 0.67 (1.48) | 0.67 (1.48) | 0.984@ | 0.018 | −0.115 | 0.884 | 0.891 |
| 2d. How often do you and your mate “get on each other’s nerves”? | 1.41 (1.34) | 1.41 (1.34) | 0.790@ | 0.041 | 0.159 | 0.825 | 0.912 |
| Domain 3: Cohesion | 9.96 (4.41) | 9.96 (4.41) | 0.442 | −0.126 | 0.371@ | 0.464 | 0.780 |
| 3a. Do you and your mate engage in outside interests together? | 1.79 | 0.442 | −0.126 | 0.371@ | 0.464 | 0.780 |
| 3b. Have a stimulating exchange of ideas | 2.69 (1.33) | 2.69 (1.33) | 0.036 | −0.008 | 0.742@ | 0.665 | 0.691 |
| 3c. Work together on a project | 2.52 (1.56) | 2.52 (1.56) | 0.061 | 0.016 | 0.684@ | 0.634 | 0.698 |
| 3d. Calmly discuss something | 2.95 (1.56) | 2.95 (1.56) | −0.095 | 0.072 | 0.783@ | 0.599 | 0.718 |

#Correct or proper behavior, @factor loading above 0.3
14 items were considered comprehensible by more than 95% of the five experts.

The mean total scores for domains of consensus, satisfaction, and cohesion were 25.37 (4.94), 4.42 (5.17), and 9.96 (4.41), respectively. Table 1 shows the scores for individual items of the three domains. Results of factor loadings and internal consistencies of items and domains in RDAS-M are also detailed in Table 1. The Cronbach $\alpha$ coefficients for dyadic consensus, satisfaction, and cohesion domain were 0.87, 0.93, and 0.78, respectively, and all were above 0.70, the level of acceptable internal consistency. Similarly, factor loadings for domains and items were all above 0.5, the acceptable level, except for item 3a [Table 1].

**DISCUSSION**

In this study, we have translated the original English version of RDAS into the Malay language version (RDAS-M), and the translated RDAS-M has been face-validated before further validation of its psychometric properties. On the validation front, we reported similar results on internal consistency as the original English version, with Cronbach $\alpha$ of dyadic consensus, dyadic satisfaction, and dyadic cohesion of 0.81, 0.85, and 0.80, respectively. The RDAS-M has two domains, that is, consensus and satisfaction, with Cronbach values more than the original version but not the cohesion domain [Table 1].

RDAS has been translated into other languages including the Persian language. The translated Persian version was self-administered to 135 hemodialysis patients, and the tested Cronbach $\alpha$ coefficients for consensus, satisfaction, and cohesion were 0.683, 0.827, and 0.836, respectively. These findings are consistent with previous studies on the factor structures of translated and original RDAS.

A principle that is related to both reliability and validity is construct hierarchy. Construct hierarchy is related to reliability because the consistency of a scale is closely tied to the homogeneity of items within the scale. Homogeneous subscale items would have high correlations, and therefore, high-reliability coefficients but hybrid subscales that contain more heterogeneous items would often have lower reliability coefficients.

A questionnaire is vital in research as domains or items often serve as independent and/or dependent variables; therefore, the instrument must be valid and reliable. This is especially so if the survey is used to assess therapeutic effectiveness. In this context, the translated RDAS-M could be useful to assess the impact of chronic disease on marital distress and to assess if there has been improvement or adjustment on marriage after treatment or intervention of the disease. The translated RDAS-M has a satisfactory content validity, and it would serve as a good tool to assess marital distress in the Malay-speaking population, a widely spoken language in the southeast Asian region.

Our study has several strengths. By making the RDAS-M available to researchers all over the world, this increases the possibility for the Malay population to further the research on the nature of marriage. The RDAS-M could be used to address the research gap in social science about marital relationship. However, our study has a few limitations that should be considered in the interpretation and generalization of our findings. Nonrandom sampling could be considered a limitation of this study. It must be noted that the RDAS-M is useful to assess distress or quality in the interpersonal relationship of married couples, especially for the female counterpart, and may not be suitable in other nonmarital or extramarital relationship or in males. Obviously, this is due to differences in nature of interpersonal issues in a marriage compared to other relationships.

**CONCLUSION**

Our study demonstrated that the translated Malay language version of RDAS-M with its three-factor structure has appropriate validity and reliability among the married Malay women.

**Approval of ethics committees**

Ethical approval was obtained from the Human Research Ethics Committee, Universiti Sains Malaysia (USM) in Kelantan, Malaysia (Reference number: USM/JEpE/M/17050272).

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**Conflicts of interest**

There are no conflicts of interest.
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