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A Japanese version of the Rosenberg Self-Esteem Scale: Translation and equivalence assessment

Chizu Mimura*, Peter Griffiths

Florence Nightingale School of Nursing and Midwifery, King's College London, London, United Kingdom

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Abstract

Objective: A Japanese version of the Rosenberg Self-Esteem Scale (RSES) was developed through the forward–backward translation procedure. **Methods:** Married couples consisting of a native English speaker and a native Japanese speaker acted as translators to enhance the representativeness of language in the target population. Multiple translations were produced, and a panel of reviewers identified problems in conceptual and semantic equivalence between the original scale and the translated version. The Japanese version was altered accordingly with reference to alternate Japanese forms from the original English to Japanese translations. The altered translation was again retranslated into English, and problematic differences were checked. This forward–backward process was repeated until satisfactory agreement had been attained. The RSES was administered to 222 native English speakers, and the developed Japanese version (RSES-J) was administered to 1320 native Japanese speakers. **Results:** Factor analysis revealed nearly identical factor structure and structural coefficients of the items between two sets of data. Target rotation confirmed the factorial agreement of the two scales in different cultural groups. High Cronbach's α coefficients supported the reliability of test scores on both versions. **Conclusion:** The equivalence between the RSES and the RSES-J was supported in this study. It is suggested that the RSES and the RSES-J are potential tools for comparative cross-cultural studies.

Keywords: Construct validity; Cross-cultural translation; Equivalence; Factor structure; Internal consistency reliability; Rosenberg Self-Esteem Scale

Introduction

This paper describes the translation of the Rosenberg Self-Esteem Scale (RSES) [1] from English to Japanese and equivalence assessment between the original RSES and the translated version (RSES-J) for use in a cross-cultural study of antecedents of occupational stress among trainee health professionals.

This scale defines self-esteem as a global concept of the self and a sense of worth or value, not as possession or accumulation of specific qualities or abilities [1]. There has been conflicting assertions as to whether self-esteem is global or domain-specific and whether it is stable or changeable. Many theories, however, regard it as global [2–8], and research has also suggested that it is global and stable [9–11]. Thus, this conception of self-esteem is widely accepted.

The RSES [1] is, by far, the most recognized and widely used measure of the concept. It was devised by Rosenberg to quantify global positive and negative attitudes towards the self. It comprises 10 items that allow four responses in a Likert scale: *strongly agree*, *agree*, *disagree*, and *strongly disagree*. These score 1, 2, 3, and 4, respectively, for negative items, but these score in reverse for positive items. Total possible scores range from 10 to 40; the higher is the score, the higher is the level of self-esteem.

Construct validity using factor analysis and concurrent validity using theoretically relevant variables have been reported [12]. Reported Cronbach's α coefficients have ranged from .83 [13] to .99 [14]. A 1-week test–retest reliability of .82 has been reported by Fleming and Courtney [15].

* Corresponding author. Himorogi Psychiatric Institute, Floor 5 Housei Daiichi Building, 1-20-10 Sugamo, Toshima-ku, Tokyo 170-0002, Japan. Tel.: +81 3 5940 5547; fax: +81 3 5940 5488.

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The RSES had been used in empirical research for exploring the association between self-esteem and a wide range of issues concerning human beings (e.g., smoking cessation [16], breast cancer [17], neuroticism [18], eating disorders [19,20], and abusive experiences in childhood [21,22]).

The RSES has been translated into the Japanese language (e.g., Kawabata et al. [23]). However, translation methods suffered from many limitations (e.g., the translation was completed via a simple discussion between a native English speaker and a native Japanese speaker, and lacked empirical data for reliability and validity). Given these problems and lack of supporting evidence or widespread use of previous versions, we undertook to develop a new Japanese translation of the RSES and to examine its reliability, validity, and equivalence. The study was conducted under the aegis of a wider study, which had been ethically scrutinized and approved by the authors' institutional ethical committee.

Translation

In the wider study, a number of other scales were also translated from English into Japanese at the same time with the same translation method. A preliminary testing study in relation to another scale, in which translation issues and approaches were described in detail, was published elsewhere [24]. Translation procedures were based on European Research Group on Health Outcome recommendations [25] and International Test Commission Guidelines [26]. The repeated forward–backward translation procedure was adopted as the most suitable and pragmatically possible strategy.

In Phase 1, four married couples of British and Japanese origin were separately asked to translate the original scale into Japanese, with each couple discussing among themselves the conceptual, semantic, and content equivalence between the original and their translation. The four couples were selected in accordance with the following criteria:

1. One member of the couple was a native English speaker and the other member was a native Japanese speaker.
2. Both members were reared and educated either in English in an English-speaking country or in Japanese in Japan until at least 18 years of age.
3. They have spent more than 5 years together since they were married.

These criteria were used to identify translators who were familiar with both their own language and cultural background and the alternative language. The use of married couples was based on the opportunity such couples presented for turning a native speaker's insights into expressions in a different language among an intimate couple without the bias of representativeness introduced by restricting translators to those with formal academic training. None of the individuals involved was a professional translator. Thus, it was hoped that an equivalent translation, which was potentially more representative of wider cultures than that produced by a bilingual person or a highly trained translator, would be produced. All four couples happened to comprise a British male and a Japanese female. They were fully informed of the objectives of their role in the whole procedure and were asked to discuss conceptual, semantic, and content equivalence and to emphasize meaning rather than word-to-word translation. One of the authors (C.M., whose first language is Japanese) unified the four Japanese translations created by this process into a single translated version. Selection among alternative Japanese translations was based upon the perceived "naturalness" of linguistic expression in the Japanese language version.

In Phase 2, an additional couple was identified using the same criteria. The couple, blinded to the original version, were asked to backtranslate the Japanese version produced in Phase 1. In Phase 3, five university lecturers at the authors' college (native English speakers) compared the original scale and the backtranslation produced in Phase 2, and checked for semantic discrepancies. In Phase 4, the author altered the Japanese expression of parts found to be problematic in Phase 3 with reference to any alternative rejected in Phase 1. The couple who participated in Phase 2 retranslated them into English. One of the panel members who participated in Phase 3 checked for discrepancies between the original scale and the retranslation. A detailed discussion of cultural differences and nuances aimed to ensure semantic equivalence and to overcome conceptual differences by identifying parallel concepts. This process was repeated until problems had been resolved.

Equivalence assessment

Respondents

Data were collected in the UK using the original English language RSES and in Japan using the translated version, which we refer to as the RSES-J. Subjects were recruited from full-time bachelor of science in nursing and pharmacy students of all year levels (Years 1–4) at single university institutions in central London and Tokyo. Non-native English/Japanese speakers were excluded, as appropriate to the version of the scale being tested. Data were obtained from 131 nursing and 91 pharmacy students in the UK (n=222), of whom 28 were male (12.6%) and 194 were female (87.4%). Ages ranged from 18 to 45 years, and the mean age was 22.1 years (S.D.=4.5). The Japanese sample comprised 344 nursing and 976 pharmacy students (n=1320), of whom 296 were male (22.4%), 1018 were female (77.1%), and 6 (0.5%) did not indicate their gender. Ages ranged from 18 to 44 years, and the mean was 20.6 years (S.D.=2.8). Differences in sample size were largely dictated by the size of the student cohort in each institution. The response rate was 70.3% in the UK and 83.6% in Japan.