Reliability and Validity of the Modified Japanese Version of the Short-Form Eysenck Personality Questionnaire

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Abstract: We examined the reliability and validity of the Japanese version of the modified short-form of the Eysenck Personality Questionnaire (MS-EPQ). The MS-EPQ measures two dimensions of personality (neuroticism and extroversion) and comprises 12 questions with 4 response choices. Since it takes about 3 minutes to complete, this test can be used even when time is limited or when patients are suffering from concentration disturbances due to depression or comorbid physical disorders. High test-retest correlations, high internal consistency and high correlation with the original EPQ support the reliability and validity of the MS-EPQ. We conclude that the MS-EPQ is a suitable method for quickly assessing these two dimensions of personality.

Key words: Eysenck Personality Questionnaire (EPQ), neuroticism, extroversion, validity, reliability

Introduction

The Eysenck Personality Questionnaire (EPQ)1), which originated from the Maudsley Personality Inventory, is a frequently used tool for the dimensional assessment of personality. The EPQ comprises 90 yes-no questions, including 23 items related to neuroticism (N), 21 to extroversion (E), 25 to psychoticism (P) and 21 to lying (L). The main disadvantage of the EPQ is that it takes a long time to complete. When questionnaires are used for practical purposes, they need to be brief and easily completed in a short time, because patients with mental disorders, especially those with depression or comorbid physical disorders, often have difficulty concentrating for long periods of time.

Eysenck developed a shorter form of the questionnaire (S-EPQ) for the measurement of neuroticism (N) and extroversion (E)2) (Appendix). This shortened version, containing only 12 questions (6 for N and 6 for E), can be answered in about 3 minutes. Two items in the S-EPQ can be found in the EPQ (1975) version. We studied the reliability and validity of the modified Japanese language version of the S-EPQ (The Japanese language version is available on request to the authors.).

Materials and Methods

The subjects were 119 university students (55 men and 64 women; mean age 22.4, range 20–31 years) and 55 patients diagnosed as having panic disorder, generalized anxiety

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disorder or somatization disorder according to the DSM-III-R\textsuperscript{3}) (25 men and 30 women; mean age 43.2, range 16–65 years).

The questions in the S-EPQ were translated into Japanese, and three bilingual people have confirmed the equivalence of the original version and the Japanese one. The original S-EPQ comprises yes-no questions. The Japanese version (MS-EPQ), however, was slightly modified, using four response choices. The subjects were asked to what degree (4: markedly, 3: moderately, 2: slightly, 1: never) they agreed with each of the statements with respect to their personality. The scores of neuroticism and extroversion range from 6 to 24. The MS-EPQ was given to all the subjects with the original EPQ, and the MS-EPQ was administered alone again to 68 subjects (50 students and 18 mental disorder patients) after an interval of approximately 2 months.

A test-retest reliability study was performed in the 68 subjects, to whom MS-EPQ was administered twice. The other 3 studies (item-remainder correlations, correlation between the scores of the two personality dimensions and criterion-related validity) were performed in all 174 subjects. In the 68 subjects who responded to the MS-EPQ twice, the results of the first test were also used for the latter 3 studies.

Results

(1) Test-retest reliability (Table 1)

The mean scores of each item and the two dimension subscales did not differ statistically between the two occasions (Wilcoxon matched-pairs signed ranks test). High correlations were seen between the first and second occasions ($r=0.42–0.89$).

(2) Item-remainder correlations (Table 2)

To evaluate the data from the first occasion, we examined the internal consistency of the two subscales by calculating the Spearman correlation coefficients between the score of each
item and the total score of the remaining items in the subscale where the item was involved, and between the score of each item and the subscale score which did not comprise the item. For the N items, the correlations with the total score of the remaining items in the neuroticism subscale ranged from 0.59 to 0.79, while those with the E scores ranged from 0.01 to 0.18. For the E items, the correlations with the total score of the remaining items in the extroversion subscale ranged from 0.36 to 0.80, while those with the N scores ranged from 0.05 to 0.21. The internal consistency of the two dimension subscales was supported, because the N and E scores and their related items showed high correlations.

(3) Correlation between the scores of the two personality dimensions

The correlation between the N and E scores should be low if MS-EPQ properly measures the two dimensions of personality. The Spearman correlation coefficient between the scores
of the two dimensions was $-0.05$ (N=174 ; $p=0.27$), which matched our expectations.

(4) Criterion-related validity

Spearman correlation coefficients of the N score and the E score between the MS-EPQ and the original EPQ were 0.72 ($p<0.01$) and 0.70 ($p<0.01$), respectively. Both the N and E scores of the MS-EPQ showed high correlations with those of the original EPQ.

Discussion

The results of this study support the reliability and validity of the MS-EPQ. The MS-EPQ seems to be suitable for use in the Japanese population. The amount of time required to complete the questionnaire is an important consideration. Since it takes about 3 minutes to fill in the MS-EPQ, it can be used even when time is limited or when patients are suffering from concentration disturbances due to depression or comorbid physical disorders.

The S-EPQ was modified to provide four response choices (MS-EPQ), because in the pilot study subjects often complained that yes-no questions were difficult to answer in assessing their own personalities. This may be partly related to the tendency of the Japanese people to avoid making definitive assessments in general.

This study did not examine all types of reliability and validity. Other types of reliability and validity and the applicability of our results to other cultures remain to be investigated.

References


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