

Translation and Adaptation of Stroke Aphasia Depression Questionnaire-10 to Hindi

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Abstract

Background: Depression is one of the most researched emotional responses after stroke and shows that the emotional impact of aphasia can have a marked negative impact on recovery, response to rehabilitation, and psychosocial adjustment. There is an evident dearth of validated instruments to assess depression in people with aphasia including Hindi, the national language of the country. **Aims:** The aim of this study was to translate and adapt the original English version of widely used hospital version of Stroke Aphasia Depression Questionnaire (SADQ-10) to Hindi. **Subjects and Methods:** English version of SADQ-10 was translated and adapted for the use in Hindi-speaking population in concordance to the WHO guidelines. **Statistical Analysis Used:** The intraclass correlation coefficient (ICC) analysis of the data was performed using SPSS, version 16, to compute the test-retest reliability. **Results:** The Hindi version of SADQ-10 yielded an overall high test-retest reliability (ICC = 0.91) as well as internal consistency ($\alpha = 0.98$), which in turn were comparable to the original instrument in English. **Conclusions:** SADQ10-Hindi may assist the identification of depressed mood in patients with speech and language impairment in an Indian population as well. It is an easy to administer and quick test which can be used by health-care professionals in a hospital- or community-based settings.

Keywords: Aphasia, depression, Hindi, India, stroke

INTRODUCTION

India like other developing countries is in the midst of a stroke epidemic. While stroke incidence has declined by over 40% in the past four decades in developed countries, the incidence rate in India has doubled.^[1] According to the India stroke fact sheet, the estimated age-adjusted prevalence rate for stroke ranges between 84/100,000 and 262/100,000 in rural and between 334/100,000 and 424/100,000 in urban areas.^[2] It contributes to the disability-adjusted life years, including paralysis, language problems, and other cognitive deficits, in 30%–40% of cases, and therefore, 0.45–0.6 million people with disability will be added to the population annually.^[3] Stroke care units and rehabilitation are predominantly available in urban areas, particularly in private sector hospitals. As the first step, the Government of India has started the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke which is focusing on early diagnosis, management, infrastructure, public awareness, and capacity building at different levels of health care for all the noncommunicable diseases including stroke.

Acknowledging the fact that about 1/3 of the total stroke victims experience aphasia, it may be inferred that several thousand experience aphasia in India.^[4,5] The relationship between the impact of aphasia and emotional well-being has been immensely reviewed upon. Depression is one of the several types of emotional response that has been researched most and shows that the emotional impact of aphasia can have a marked negative impact on recovery, response to rehabilitation, and psychosocial adjustment.

The multilingual status of the country makes it necessary to develop language-specific tools for the assessment of poststroke depression. Seemingly, there is a visible dearth of published assessment measures for depression following aphasia in many Indian languages. Considering the potential risk in the mere translation of tools from culturally and linguistically distinct populations (for instance, European and American),

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there have been recent attempts to adapt and validate tools assessing the quality of life poststroke in the Indian context but not depression.^[6,7] Several languages in India experience the dearth of validated instruments to assess poststroke depression in people with aphasia including Hindi, the national language of the country. In this context, we decided to fill this lacuna by adapting and validating the original English version of widely used hospital version of Stroke Aphasia Depression Questionnaire (SADQ-10) to Hindi.^[8]

SUBJECTS AND METHODS

The present adaptation and validation of the questionnaire was done as a part of an ongoing clinical trial (CTRI/2014/04/004554). Formal ethical approval from the Institute's Ethical Committee was obtained for the study. SADQ-10 is free to use test, and the needful acknowledgments to adapt the hospital version of SADQ-10 to Hindi have been given.

The steps of translation that were followed were in concordance to the WHO guidelines laid for translation and adaptation of instruments where the focus is on cross-cultural and conceptual, rather than on linguistic/literal equivalence.^[9] To judge the sociocultural adequacy of original items to the Hindi-speaking communities, four clinical neuropsychologists (CNPs) hailing from northern India were employed as translators having Hindi as their mother tongue. They were instructed to examine each item for its social and cultural suitability and translate and adapt the items in colloquial Hindi. We retained all items as in the original version for the purpose of use in Hindi. This followed with the forward translation of the questionnaire wherein they were instructed to emphasizing conceptual rather than literal translations as well as the need to use natural and acceptable language for the broadest audience. Translators also considered issues of gender and age applicability and avoid any term that might be considered offensive to the target population.

A bilingual expert panel was formed which constituted of experienced faculty members working as CNPs and clinical psychologists. The goal in this step was to identify and resolve the inadequate expressions/concepts of the translation as well as any discrepancy between the forward translation and the existing or comparable previous versions of the questions.

The result of this process produced a complete translated version of the questionnaire.

Using the same approach as that outlined in the first step, the back translation of the questionnaire was done where the Hindi-translated questionnaire was translated back to English by four independent translators. As in the initial translation, emphasis in the back translation was on conceptual and cultural equivalence and not linguistic equivalence. There were not many discrepancies found in this process.

After the forward-backward translations and discussion by the bilingual expert panel, the final satisfactory version was reached. Since it is necessary to pretest the questionnaire on the target population, the Hindi version of SADQ-10 was

administered on a group of 43 people with aphasia from several Central and North Indian regions. (see Table 1: Sociodemographic details). All had the history of ischemic stroke minimum 1 month before their participation in the current study. Further, those with known/reported history of any psychiatric disorder, any major neurological disorder affecting cognition, use of psychoactive drugs, and active participation in other stroke recovery trials testing experimental intervention about cognition were excluded from the current study. Within 21 days (3 weeks) from the initial administration, the scale was re-administered on a small group of twenty participants to assess the test-retest reliability.

The results obtained from the final version of the questionnaire are discussed below.

RESULTS

Test-retest reliability

Within 21 days from the initial administration, the scale was re-administered on a small group of 19 participants to assess the test-retest reliability. The intraclass correlation coefficient (ICC)

Table 1: Sociodemographic details

Domains	n (%)	Mean ± SD
Age (years)		
20-35	6 (14.6)	50.95±14.63
36-55	22 (53.6)	
56-75	12 (29.4)	
76 above	1 (2.4)	
Education (years)		
Illiterate	4 (9.7)	9.73±4.58
1-5	3 (7.3)	
6-9	10 (24.4)	
10-12	13 (31.8)	
13-15	9 (21.9)	
15 above	2 (4.9)	
Sex		
Males	37 (90.2)	
Females	4 (9.8)	
Handedness		
Right	41 (100)	
Marital status		
Married	36 (87.8)	
Unmarried	4 (9.8)	
Widowed	1 (2.4)	
Languages		
Monolingual	21 (51.2)	
Bilingual	14 (34.2)	
Multilingual	6 (14.6)	
Family type		
Joint	29 (70.7)	
Nuclear	12 (29.3)	
Location of stroke (hemisphere)		
Left	35 (85.4)	
Right	6 (14.6)	

SD=Standard deviation

analysis of the data was performed using Statistical Package for the Social Sciences (SPSS; version 16) to compute the test–retest reliability. The results of ICC analysis showed a high test–retest reliability (ICC = 0.9) of the Hindi version of SADQ-10.

Using the Stata 10, the difference between the available English and the developed Hindi version of the test was calculated by computing the error rate and confidence interval that was 0.24 (1.08–0.60). A similar trend was also observed at retest, i.e., the error rate was 0.52 (1.53–0.47). This shows that there is a minimum error rate indicating no difference between the available English and the Hindi version.

DISCUSSION

The present study aimed to adapt and validate the most widely used SADQ-10 scale to Hindi, the Indian national language. The need for translating this scale to Hindi arises as the available English version was quite often being used by health providers to assess post-stroke depression. Different versions for each item are being used as per the convenience of the one assessing, therefore, individual differences on the part of the assessor during its administration make it nonuniform and highly subjective. Along with that mere translation of the scales and tests developed in the Western countries may prove to be culturally inappropriate, we examined the suitability of the original English items to Hindi-speaking communities. After the initial step of forward and backward translation of the items to the Hindi language, the test followed the validation of the developed Hindi version of the scale to assess depression in persons suffering from poststroke aphasia.

The pretesting of the Hindi version of SADQ-10 was subsequently administered to a group of 43 persons with aphasia following the stroke. (see Table 1: Sociodemographic details). These scores were used for the computation of the psychometric properties of the instrument. The Hindi version of SADQ-10 yielded an overall high test–retest reliability (ICC = 0.91) as well as internal consistency (α = 0.98), which in turn were comparable to the original instrument in English 4 weeks' test–retest reliability was reported to be 0.69 for the SADQ-10.^[8] Internal consistency has been reported as α = 0.80.^[7]

With recent developments in assessing the quality of life in stroke patients specific to the Hindi- and Kannada-speaking population, the SADQ-10-Hindi may assist the identification of depressed mood in patients with speech and language impairment in an Indian population as well.^[6,7] The Hindi SADQ-10 offers health-care professionals working in the community or hospital a more reliable approach in assessing the likelihood that a patient with speech or language

impairment is suffering from depressed mood. It assists with the decision whether to refer a person to a specialist for advice and management of their mood problem in an Indian context.

Even though the present translation of the test is not a true translation, a colloquial translation of Hindi which can be understood by majority of the Hindi-speaking population; the effect of subcultures on the accuracy of the test cannot be ruled out. Therefore, as future directions, the developed Hindi translation can be used as a measure for adapting and translating the questionnaire in other languages for screening of poststroke depression by health providers working in the community settings. Left-handed individuals have less predictable deficits for lesion size but due to limited sample size and lack of left-handed individuals in the study population, the same could not be ascertained. Taking into account the above limitations, further studies can be planned to overcome the pitfalls.

CONCLUSIONS

The developed Hindi version of SADQ-10 is easy to administer and quick test which can be used by health-care professionals in a hospital- or community-based settings.

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Conflicts of interest

There are no conflicts of interest.

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