Abstract  Background  This paper describes our work to create and validate a new method for cross-cultural and sex-specific function assessment that avoids the major problems with existing methods.  Methods  We used free listing to learn about tasks important to local people. Community-specific function questionnaires based on these tasks were then created and used in community-based surveys. The survey results were used to assess the questionnaires’ internal reliability (Cronbach’s alpha), combined test-retest and across-interviewer reliability using repeat interviews, and (in Uganda) criterion validity by comparing assessment by self to assessments by cohabiting adults.  Results  Field trials of this approach were conducted in rural Rwanda and Uganda. Differences between tasks identified by free listing were greater between sexes than sites. Cronbach’s alphas for male and female questionnaires were respectively 0.815 and 0.822 in Rwanda and 0.886 and 0.881 in Uganda. Pearson correlations for combined test-retest and across-interviewer reliability were respectively 0.469 and 0.640 for Rwandan men and women and 0.797 and 0.871 in Uganda. Correlation between self-assessment and cohabiting adults was 0.904.  Conclusions  We have developed an alternative to the existing approach of adapting western function instruments to other cultures and situations. The field trials have demonstrated that this approach is rapid, feasible and can yield valid and reliable instruments. Developing instruments locally avoids the problems of limited local relevance and appropriateness associated with adapting western instruments. Although each instrument created in this way is culturally bound, they are ‘cross-cultural’ in the sense that each refers to the tasks most important to local people. This approach should prove useful for both researchers and aid agencies working in non-western countries.

Key words  function – dysfunction – cross-cultural – assessment – methods

Introduction

This work is part of a larger project to develop methods for assessing the prevalence of specific mental health problems in developing countries, and their impact on function. The overall aim is to develop an approach to cross-cultural assessment suitable for use with any population. ‘Suitable’ means that the approach must be within the resources usually available for this type of research. This requires the use of self- or interviewer-administered instruments rather than clinician-administered, since highly trained clinical personnel familiar with the local culture are not available for many non-western cultures (while it is true that some developing countries in Africa do have many well-trained mental health workers, these often represent only a few of the many cultural groups existing in those countries and are usually limited to the larger cities). Suitability also refers to the need for adaptability across many types of cultures, demonstrable scientific validity, and for generating data of practical significance both for researchers and aid agencies that would want to make use of the resulting data.

The approach we developed for assessing the prevalence of mental illness has been described elsewhere [1]. With regard to function, we reviewed the literature for standardized self- or interviewer-administered assessment methods. The most widely used appears to be the SF-36 [2–4] which has been adapted for many developed countries [5]. The desire for brevity has also spawned shorter versions of this instrument, including the SF-20
Other standard instruments include the Work and Social Disability Scale (WSDS) [8], the Disability Scale (DISS) to assess work, social and family problems [9], and the World Health Organization’s (WHO) Brief Disability Questionnaire (BDQ) [10]. With the exception of the BDQ, all were created in developed countries. There has been some work to develop standard instruments less specific to advanced western nations. Attempts have been made to adapt the SF-36, but the major effort has been WHO’s Disability Assessment Schedule, versions I and II [11–12].

Yet none of these standard instruments fulfilled our suitability criteria for cross-cultural work. Those developed in western countries contain too many culture-bound questions that are difficult to adapt to other situations; for example, questions on the ability to climb stairs and go ‘shopping’ are difficult to adapt to situations where these things do not exist. Even responses to less culture-specific questions can be difficult to interpret across populations with varying physical requirements. For example, the ability to walk a mile may represent an acceptable level of function for an American but would be a grossly inadequate standard for an African nomad. Even more problematic is the reliance of both western and non culture-specific instruments on ‘component’ activities such as lifting or walking. This is done in an effort to improve generalizability. It is useful in some types of research but does not directly assess the ability to complete the tasks important to daily existence. Nor do any of the instruments we reviewed acknowledge the major differences in the roles of men and women that still predominate in most developing countries.

This paper describes a new functional assessment approach developed to address these problems and meet our suitability criteria for cross-cultural research. We also describe our experiences using this approach in field trials in rural areas of Rwanda and Uganda.

### Subjects and methods

#### Overview

There are three stages to creating the population-specific function assessment instrument: 1) creation of the template (one time only); 2) free listing and data analysis to identify tasks for the template (for each new population); and 3) use in a survey, including validity and reliability testing (for each new population). We conducted stages 2 and 3 among two African populations. In 1999 we used this approach to develop an assessment instrument for people living in Kanzenze commune in Rwanda, a rural area close to the capital Kigali that was severely affected by the 1994 genocide. The instrument then formed part of a community-based survey of depression. In 2000 we repeated this process in the Masaka and Rakai districts of southwest Uganda, again creating a local function assessment instrument that was also used as part of a community depression survey.

#### Creation of the function assessment template

Prior to conducting any assessments, we developed the template shown in Fig. 1. As the term implies, its form stays the same across assessments while the actual tasks included change with each new community. The template has space for nine tasks and an open-ended ‘other’ category. We chose this number in order to provide sufficient coverage of important tasks while keeping the questionnaire short. For example, the ability to walk a mile may represent an acceptable level of function for an American but would be a grossly inadequate standard for an African nomad. Even more problematic is the reliance of both western and non culture-specific instruments on questions referring to ‘component’ activities such as lifting or walking. This is done in an effort to improve generalizability. It is useful in some types of research but does not directly assess the ability to complete the tasks important to daily existence. Nor do any of the instruments we reviewed acknowledge the major differences in the roles of men and women that still predominate in most developing countries.

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1 In Rwanda, our first field trial site, respondents were asked to assess their level of difficulty compared to a ‘normal person’ of their age and sex. However, this was changed in Uganda, the second trial site, because of concerns that the use of a hypothetical ‘normal’ person was too abstract a concept for the respondents.