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Measuring patient-provider communication skills in Rwanda: Selection, adaptation and assessment of psychometric properties of the Communication Assessment Tool

Vincent Kalumire Cubaka[a,b,*], Michael Schriver[b], Peter Vedsted[c], Gregory Makoul[d,e], Per Kallestrup[b]

[a] School of Medicine and Pharmacy, University of Rwanda, Kigali, Rwanda
[b] Centre for Global Health, Department of Public Health, Aarhus University, Aarhus, Denmark
[c] Research Unit for General Practice, Department of Public Health, Aarhus University, Aarhus, Denmark
[d] PatientWisdom, New Haven, CT, United States
[e] University of Connecticut School of Medicine, Farmington, CT, United States

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ABSTRACT

Objective: To identify, adapt and validate a measure for providers' communication and interpersonal skills in Rwanda.
Methods: After selection, translation and piloting of the measure, structural validity, test-retest reliability, and differential item functioning were assessed.
Results: Identification and adaptation: The 14-item Communication Assessment Tool (CAT) was selected and adapted.
Validity and reliability testing: Content validation found all items highly relevant in the local context except two, which were retained upon understanding the reasoning applied by patients. Eleven providers and 291 patients were involved in the field-testing. Confirmatory factor analysis showed a good fit for the original one factor model. Test-retest reliability assessment revealed a mean quadratic weighted Kappa = 0.81 (range: 0.69–0.89, N = 57). The average proportion of *excellent* scores was 15.7% (SD: 24.7, range: 9.9–21.8%, N = 180). Differential item functioning was not observed except for item 1, which focuses on greetings, for age groups (p = 0.02, N = 180).
Conclusion: The Kinyarwanda version of CAT (K-CAT) is a reliable and valid patient-reported measure of providers' communication and interpersonal skills. K-CAT was validated on nurses and its use on other types of providers may require further validation.
Practice implication: K-CAT is expected to be a valuable feedback tool for providers in practice and in training.

1. Introduction

Adequate communication skills are a core competence of healthcare providers, essential for building an optimal interaction and a relationship with patients that is built on mutual trust [1,2]. Studies have shown the importance of patient-provider communication (PPC) in healthcare by identifying its link with improved patient satisfaction as well as health outcomes including emotional health, less suffering, survival, symptom resolution, pain control, functional ability, vitality, and physiologic measures like blood pressure and blood sugar level [2–6].

Communication skills are a set of non-technical skills that enable the provider to optimize the interaction with the patient. This encompasses a comprehensive set of communicative behaviour such as active listening and effective verbal and non-verbal communication [7,8].

Communication skills and interpersonal skills overlap. They are often referred to as one set of competences, and sometimes as two distinct sets. Communication skills may refer to providers' ability to convey an idea, knowledge, explanation or instruction to the patient as well as the ability to receive, understand and use the patient's message and effectively collaborate with the patient, including for shared decision-making. Interpersonal skills may refer to providers' ability to connect with and understand the

* Corresponding author at: School of Medicine and Pharmacy, University of Rwanda, Kigali, Rwanda.
E-mail address: cukalvin@icloud.com (V.K. Cubaka).

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patient, including building a trusting relationship [9,10]. In this study we use the term communication skills as an umbrella term that includes interpersonal skills.

Providers' communication skills may be assessed from various perspectives, including auto-assessment, patient assessment and third party observation. These perspectives differ in scope and each is known to have inherent pros and cons. For instance, patients' assessments have been reported to be particularly suited for assessing interpersonal skills in surveys while third party observations are often used during training allowing supervisors to assess trainee's performance of several communication behaviours using checklists. Therefore it has been suggested to combine them for more accurate results [9–11].

Validated instruments to measure providers' communication skills may help improve care quality, for instance through feedback to providers. Several measures exist, for various settings, including in-training and in-practice, mostly from developed countries [12], and for various perspectives as mentioned above.

The patient-centred care model is considered as the leading model in the contemporary discourses of PPC [13]. It may be defined by three principal components, i.e. 1) considering patients' needs, wants, perspectives and experiences, 2) offering opportunities to patients to provide input into and participate in their care and 3) enhancing partnerships and understanding in the patient–provider relationship [14]. In developing countries, the concept of patient-centred care is often overlooked, although gaining attention [15,16]. Paternalistic care may be more widespread than in Western countries due to authoritarian cultures [17,18]. An instrument allowing patients to give feedback on the perceived quality of their interaction with providers may help put patients in the centre of healthcare and improve the interaction. Items from such an instrument should therefore relate to the components of the patient-centred model.

In Rwanda, up to 30% of the population are illiterate, and more may be assumed to have limited reading and writing skills [19]. The majority of outpatient consultations take place at health centres with nurses who have a basic (secondary school-based) nursing education, many of them requesting more knowledge and skills, including communication skills [20,21].

A measure of primary health care providers' communication skills would enable feedback and quality assessment in practice and in training. No such measure was available in Rwanda.

This study documents the process of identification, selection, adaptation and validation the most appropriate tool for assessing primary health care providers' (nurses') communication skills, from a patient perspective.

We applied a pre-defined process of 1) systematic search to identify potential instruments; 2) selection of the best suited instrument; adaptation of the instrument, including 3) translation; 4) pilot testing and finally 5) the field testing (Fig. 1) [22].

2. Measure selection, translation and adaptation

2.1. Methods

2.1.1. Measure search and selection

In August 2014, we conducted a systematic search for reviews of instruments to evaluate healthcare providers' communication skills using the databases PubMed, Cinahl, Cochrane, Science Direct and Embase. We focussed on systematic review publications to make optimal use of existing research summarising available and validated tools, assuming this would yield sufficient tools to assess [23].

Four AND-connected keywords were used (1) instrument; 2) patient 3) communication; 4) review publication type); each with OR-connected synonyms; conceptually linked terms or subject headings when applicable. No time or region limit was used. The search string used for PubMed (search strings for other databases available upon request) was:

("Questionnaires"[Mesh] OR Tool*[ti] OR interview[ti] OR instrument*[ti] OR measure*[ti]) AND (patient*[ti] OR consumer*[ti] OR customer*[ti] OR client*[ti]) AND (satisfaction OR consulta* OR provider* OR encounter OR communication OR experience) AND ("Review" [Publication Type] OR review[ti])

The reviewed instruments were screened to retain only publications about instruments validated to evaluate healthcare providers' communication or interpersonal skills. The retained instruments were assessed by two researchers using the following criteria:

- A generic instrument applicable for general, outpatient consultations.
- A patient-reported assessment.
- Focuses on a specific encounter (not a relationship over time) [16,24].
- Available in English.
- Published in a peer reviewed journal.
- Describes content and structural validity.
- Face validity, considering if:.
- No or few items were irrelevant to the construct of PPC skills.
- Items were formulated in an easily understood, non-technical language.
- No or few double-barrelled items [25].
- No or few irrelevant items for a primary healthcare context in Rwanda.

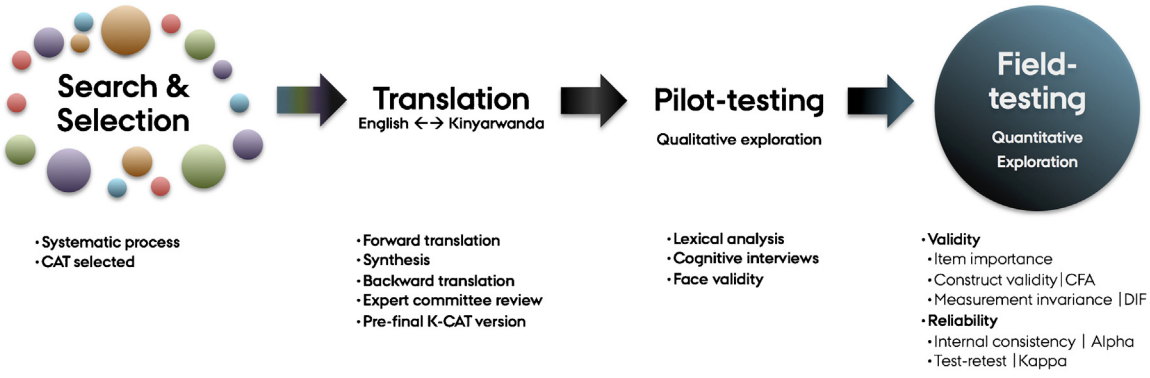

Fig. 1. Overview of study methods.

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