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The reliability of a modified Kalamazoo Consensus Statement Checklist for assessing the communication skills of multidisciplinary clinicians in the simulated environment

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ABSTRACT

Objective: With increased recognition of the importance of sound communication skills and communication skills education, reliable assessment tools are essential. This study reports on the psychometric properties of an assessment tool based on the Kalamazoo Consensus Statement Essential Elements Communication Checklist.

Methods: The Gap-Kalamazoo Communication Skills Assessment Form (GKCSAF), a modified version of an existing communication skills assessment tool, the Kalamazoo Essential Elements Communication Checklist-Adapted, was used to assess learners in a multidisciplinary, simulation-based communication skills educational program using multiple raters. 118 simulated conversations were available for analysis. Internal consistency and inter-rater reliability were determined by calculating a Cronbach's alpha score and intra-class correlation coefficients (ICC), respectively.

Results: The GKCSAF demonstrated high internal consistency with a Cronbach's alpha score of 0.844 (faculty raters) and 0.880 (peer observer raters), and high inter-rater reliability with an ICC of 0.830 (faculty raters) and 0.89 (peer observer raters).

Conclusion: The Gap-Kalamazoo Communication Skills Assessment Form is a reliable method of assessing the communication skills of multidisciplinary learners using multi-rater methods within the learning environment.

Practice implications: The Gap-Kalamazoo Communication Skills Assessment Form can be used by educational programs that wish to implement a reliable assessment and feedback system for a variety of learners.

1. Introduction

Sound interpersonal and communication skills are critical to the provision of quality healthcare. Effective communication with patients, families and physicians has been shown to enhance coping, mitigate grief, improve adherence to treatment, alter perceptions of care and reduce medical errors and litigation [1–6]. The National Board of Medical Examiners (NBME), Association of American Medical Colleges (AAMC), Institute of Medicine, and Accreditation Council on Graduate Medical Education (ACGME) have suitably placed a priority on the teaching and assessment of interpersonal and communication skills in undergraduate and graduate medical education [6–10]. Consequently, in the United States, achieving competency in communication has become a factor for promotion, graduation and licensure [7–9]. Teaching and assessing communication skills remains a complex and historically under-represented component of medical education [10,11]. Fortunately, increased awareness of the importance of communication and relationships in healthcare, and more emphasis on the importance of communication skills training in medical education, has led to an ever growing body of literature regarding the teaching and assessing of communication skills available to educators [10,12–17]. This article reports on the psychometric properties of an assessment tool which was derived from The Kalamazoo Consensus Statement [18], an exemplar in the field of medical communication research, education and assessment.

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The Kalamazoo Consensus Statement was developed in 1999 by 21 North American leaders from the fields of medical education and communication [18]. Their intent was to delineate a list of elements essential to physician–patient communication for the purpose of facilitating the development, implementation and evaluation of communication curricula [18]. The result was a list of seven "essential elements," or communication tasks, that define effective physician–patient communication. This consensus statement has since served as a framework for the development of numerous educational programs [10,15,19–23].

In subsequent years the same group met to create the Kalamazoo Essential Elements Communication Checklist (KEECC), an assessment tool for the purpose of rating learners' competency across the seven essential elements of the Kalamazoo Consensus Statement [10]. The essential elements, or competencies (Builds the Relationship, Opens the Discussion, Gathers Information, Understands the Patient's and Family's Perspective, Shares Information, Reaches Agreement, and Provides Closure), are rated using a categorical 4-option scale across 24 sub-competencies. This tool has applicability to all levels of training and various settings [10]. Two additional iterations of the KEECC, the Kalamazoo Essential Elements Communication Checklist-Adapted (KEECC-A) [10] and the Gap-Kalamazoo Communication Skills Assessment Form (GKCSAF) [10] have been published. The GKCSAF has been adapted for multi-rater use, a powerful method for assessing communication skills that enhances self-insight [11,24]. In combination, these three tools have been used in undergraduate and graduate medical education and healthcare education programs nationally and internationally [10,11,24,25].

Simulation, either through the use of role-play or standardized patients, is an increasingly common and effective educational modality for use in communication skills education [3,13,15]. With the growth of simulation-based training comes the need for reliable assessment tools for use in the simulated environment. While psychometric data exists regarding the KEECC [9], KEECC-A [25] and GKCSAF [11], to our knowledge no study has evaluated inter-rater reliability among the communication elements of the Kalamazoo Tools, nor has there been a psychometric analysis for a multidisciplinary field of learners in the simulated environment. The objective of this paper, therefore, is to build on the work of previous studies, by reporting the internal consistency and inter-rater reliability of the GKCSAF when used for multi-rater assessment of multi-disciplinary learners in a simulation-based communication skills education program.

2. Methods

2.1. Tool development

Three assessment tools based on the Kalamazoo Consensus Statement have been published [10]. The original tool, the KEECC, rated learners categorically (i.e., done well, needs improvement, not done, not applicable) on seven competencies and 24 sub-competencies [10,18]. Rider and colleagues at Harvard Medical School adapted the KEECC by adding a 5-point Likert scale (1 = poor to 5 = excellent) [10]. This adapted version, the KEECC-A, allows for evaluation of the seven Kalamazoo Essential Elements on a global ratings scale and the 24 sub-competencies function as a rubric for this checklist [10]. The Likert scale can also be used to rate each competency and sub-competency. Calhoun, Rider and colleagues modified the KEECC-A to include two more communications elements, Demonstrates Empathy and Communications Accurate Information, creating the GKCSAF [10,24]. This latest Kalamazoo Consensus Statement instrument was also modified for use by multiple raters (modeled after 360° assessment tools) and includes a section for gap analysis [24]. Gap analysis is a novel application of multi-rater feedback that consists of comparing rating scores from different groups of raters, for example faculty or peer observers, with self-score of the participant or participant team [11]. This comparison of scores has been shown to enhance learner self-insight [11]. The GKCSAF contains Likert-scale, forced-choice, and free-text fields, enabling it to provide absolute and relative scores for each aspect of communication and specific comments regarding strengths and areas needing improvement. A similar version of the instrument was created for simulated patients/families using language that was assessed by Microsoft Word as suitable for a reader at the United States 6th grade reading level, which roughly translates to a reading level appropriate for a 10–12 year old (Table 1).

Table 1
Description of the Kalamazoo Consensus Statement assessment instruments.[a]

Kalamazoo instrument	Data type	Instrument description	Psychometric studies
Kalamazoo Essential Elements Communication Checklist	Categorical ratings: Done well Needs improvement Not done Not applicable	Includes the Kalamazoo Consensus Statement 7 core communication competencies and 24 sub-competencies	Schirmer JM, Mauksch L, Lang F, Marvel MK, Zoppi K, Epstein RM, Brock D, Pryzbylski M. Assessing communication competence: a review of current tools. Fam Med 2005;37:184–92
Kalamazoo Essential Elements Communication Checklist-Adapted[b]	5-point Likert scale: 1 = poor to 5 = excellent	Global ratings on the 7 core competencies Second version with ratings on 7 core and 24 sub-competencies	Joyce BL, Steenbergh T, Scher E. Use of the Kalamazoo Essential Elements Communication Checklist (Adapted) in an institutional interpersonal and communication skills curriculum. J Grad Med Educ 2010;2:165–9
Gap–Kalamazoo Communication Skills Assessment Form	Likert-scales, forced-choice and free-text fields to provide absolute and relative scores for each competency; and specific comments on strengths and areas needing improvement	Global ratings on the 7 core competencies and 2 additional competencies: Demonstrates Empathy, and Communicates Accurate Information *Versions*: • Clinician/Faculty (also used by Peer Facilitators) • Self-assessment • Patient/Family (6th grade reading level)	Calhoun AW, Rider EA, Meyer EC, Lamiani G, Truog RD. Assessment of communication skills and self-appraisal in the simulated environment: feasibility of multi-rater feedback with gap analysis. Simul Healthc 2009;4:22–9

[a] The instruments are published in: Rider EA, Nawotniak RH. A practical guide to teaching and assessing the ACGME core competencies, 2nd ed. Marblehead, MA: HCPro Inc.; 2010.
[b] To preserve research integrity, we recommend using the authentic versions of the Kalamazoo instruments. The version of the GKCSAF used in this study is included as an Appendix with this article.