ORIGINAL ARTICLE

Evaluating IMU Communication Skills Training Programme: Assessment Tool Development

R Yeap, MSc, Z Beevi, MHSc, H Lukman, PhD

Community Medicine and Behavioural Sciences, International Medical University, Bukit Jalil, 57000 Kuala Lumpur, Malaysia

SUMMARY

This article describes the development of four assessment tools designed to evaluate the communication skills training (CST) programme at the International Medical University (IMU). The tools measure pre-clinical students' 1) perceived competency in basic interpersonal skills, 2) attitude towards patient-centred communication, 3) conceptual knowledge on doctor-patient communication, and 4) acceptance of the CST programme.

> **KEY WORDS:**
> *Communication skills training, Pre-clinical students, Evaluation tools*

INTRODUCTION

Good doctor-patient communication has long been shown to have positive influences on patient and doctor satisfaction, patient understanding, adherence, and symptom resolution[1]. Conversely, ineffective communication contributes to medical errors and malpractice litigation[2]. To underscore the importance of communication skills in clinical practice, CST in medical education, once viewed as a "minor or non-essential" component, has become an important part of medical school curricula[3].

Recently, medical institutions in Malaysia are beginning to introduce CST programme in the curriculum. Although information on CST programme, e.g. delivery method, assessment, and training duration is well documented in the West[4-6], to date, there is limited published information on how CST programme is implemented in Malaysia. Even fewer reports describe the tools used to evaluate the efficacy of CST programmes. Recognizing the importance of programme evaluation, the International Medical University (IMU) has developed four assessment tools to evaluate the efficacy of its recently revised CST programme at the pre-clinical phase.

The revised CST programme is deemed effective if students' perceived competencies in interpersonal communication, attitude towards patient-centred communication, and the conceptual understanding of communication skills are enhanced following the training[7]. In addition, students' acceptance of the training programme will also be considered as another aspect of programme effectiveness. This article aims to describe the development of the assessment tools designed to evaluate the programme effectiveness within this context.

MATERIALS AND METHODS

The evaluation tools comprise of the Interpersonal Communication Inventory (ICI), Communication Skills Attitude Measures (CSAM), Communication Skills Video Assessment (CSVA) and the Communication Skills Training Evaluation (COSTE).

ICI is an eight-item self-reporting inventory developed to assess students' perceived competence in basic interpersonal skills, i.e. Greetings, Listening, Observational, Cultural Sensitivity, Reflection, Fluency, Personal Support and, Empathy. Each item is accompanied by a short description defining the skill, upon which the students are asked to rate their perceived ability to perform the behaviour encompassed in each skill using a four-point Likert scale: 1=Poor; 2=Need improvement; 3=Good; and 4=Excellent. A student who consistently rate the ICI items as either 3 or 4 indicates perception of adequate competency in interpersonal skills. The maximum total score in ICI is 32. Therefore a score of 0 – 16 is considered to represent a perceived need for improvement in interpersonal communication; whereas a score of 17 – 32 represents perceived adequate competency in interpersonal communication.

CSAM is a 32-item scale developed to assess medical students' attitude towards patient-centred communication, particularly observation, listening, building rapport and showing empathy. Each item is scored on a four-point Likert scale: 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree. Fourteen of the 32 items are negative statements and hence are scored in the reverse. A higher score in CSAM represents a more positive attitude towards the need for good doctor-patient communication.

CSVA is an adaptation of the Objective Structured Video Examination (OSVE) and the computer-assisted assessment developed by Hulsman *et al.*[8] The CSVA involves students watching a seven-minute video showing a doctor-patient encounter. The doctor in the video deliberately demonstrated five communication skills elements i.e. Greetings, Building Rapport, Listening, Fluency and Nonverbal Skills. Students are required to identify the positive and negative aspects of the doctor's communication skills using a pen-paper test. Given that the objective of CSVA is to assess students' theoretical knowledge in communication skills, 11 short-answer questions (SAQ) in the pen-paper test were formulated according to the two basic levels of the Miller's assessment model[9], i.e. "knows" and "knows how" level. At the "know" level, students will be asked to define, identify, explain or

state the skills demonstrated by the doctor. At the "knows how" level, students will be asked to state an alternative solution to a skill that was performed badly by the doctor. Model answers as well as a marking scheme were developed. Detailed marking guidelines were formulated to achieve greater inter-marker consistency. The maximum score for the video assessment is 36 marks. A higher score in CSVA indicates a better theoretical knowledge in communication skills.

COSTE was developed to assess students' acceptability of the training programme. It consists of two sections. Section A, an adaptation of DREEM (Dundee Ready Education Environment Measure)[10], comprises 30 items measuring 3 subscales: students' perception of the training process, staff and the training atmosphere. The scoring of each item followed the rationale developed by Roff *et al.*[10] : 0=Strongly agree, 1=Agree, 2=Unsure, 3=Disagree, and 4=Strongly Disagree. The maximum score for the COSTE is 120. Section B in COSTE consists of two items where students evaluate their interview experience with the simulated patients. Item 1 requires students to rate from 0=Not at all satisfied to 3=Highly satisfied with regards to their performance in the interview. The second item allows students to identify their difficulties encountered during the interview. Twelve commonly reported difficulties (e.g. "not knowing what to ask" and "not comfortable talking to people I was not familiar with") were listed as options. Students could select more than one option or describe their difficulties in the additional space provided. Students who did not face any difficulty at the interview could select the option which states "I have no difficulties with interviewing".

MATERIALS AND METHODS
One hundred and twenty eight pre-clinical medical students completed ICI and COSTE, and 76 completed the CSAM. ICI and CSAM were distributed to students prior to the CST programme while COSTE was distributed upon completion of the training. The Internal consistency of the three assessment tools was established using Cronbach's Alpha. With regards to CSVA, two clinicians were consulted in the preparation of script for the video reenactment as well as the SAQ test.

RESULTS
The results demonstrated that ICI, CSAM, and COSTE have adequate internal consistency in measuring students' perceived competence in interpersonal communication, attitude towards the need for patient-centred communication, and acceptance of the revised CST programme. No item was reported to be ambiguous in ICI and CSAM. However, two items from COSTE, i.e. "The staff ridicule the students" and "The students irritate the staff" were removed as students noted that the stated items did not describe their experiences with the staff during their trainings. The removal of the two items increased the alpha value from 0.806 to 0.837 The reliability coefficients for each tool is shown in Table I.

Table I: Reliability estimates for ICI, CSAM, and COSTE (Part A)

Assessment Tools	Cronbach's Alpha
ICI	0.731
CSAM	0.859
COSTE (Part A)	0.837

DISCUSSION
This article has outlined the development of four tools, namely ICI, CSAM, CSVA and COSTE designed to evaluate the CST programme in IMU. In general, the assessment tools have demonstrated adequate reliability in measuring students' perceived competence in interpersonal communication, attitude towards patient-centred communication, conceptual knowledge of communication skills within the context of doctor-patient interactions, and the acceptance of the CST programme.

In ICI, students' self-efficacy in interpersonal skills i.e. the perception of one's ability to perform competently was measured. Although evidence for self-efficacy to predict behaviour is mixed, it is believed that an individual's conceptions of ability to perform the skills will serve both as a guide for developing competency and as an internal standard for improvement[11]. In addition, self-efficacy is also contextually dependent. Hence, it is anticipated that ICI will represent a useful measure in predicting students' ability in demonstrating good doctor-patient communication in the future. However, to determine if this is true the predictive validity of ICI needs to be established. An ongoing study is being conducted to investigate the extent that ICI predicts communication skills.

The assessment of medical students' attitudes towards communication skills learning and doctor-patient relationship has been a research area of some focus[12-13]. Many of these attitude scales used in previous studies focused on the more general attitude towards the need of learning communication skills among medical students which do not provide an insight into students' attitude towards specific skill. For example, a student who demonstrate positive attitude towards the need for good communication skills may not regard cultural sensitivity as an important skill to enhance doctor-patient communications. CSAM could therefore be considered a more sensitive tool because it assesses students' attitude towards the need to demonstrate certain skills (e.g. building rapport, showing empathy) when communicating with patients. Students and CST trainers could become more aware of the particular communication deficiencies that need to be developed and/or enhanced in the training.

Nevertheless, the tools have a number of limitations that must be taken into considerations. In CSVA, students are required to write a pen-and-paper test following watching the video. In order to reduce variability among assessors, it would be beneficial if the tests are to be marked by one assessor. However, this task can be very time consuming if the number of students is huge. Therefore, a detailed marking scheme has been developed. The reliability of the marking scheme is being investigated in another study.

While assessing the efficacy of the CST programme, it is equally important to acquire students' acceptance and satisfaction with their CST experiences. Students' feedback often provide a basis for modification and improvement of a programme in order to enhance the learning experience[14]. As such, COSTE was designed to obtain students' feedback in relation to their training experience. This information is believed to be extremely useful for trainers to identify training content and further improve on the training methods. However, the feasibility of a program may also be measured by obtaining students' view on how the CST programme has facilitated the development and/or enhancement of their communication skills, which is not measured in COSTE. This additional component will be included in COSTE for future use.

It is a significant challenge to design a sensitive and accurate evaluation tool to assess the degree of effectiveness of a CST programme. This is largely because the evaluation of communication skills often requires the measurement of abstract constructs such as skills, behaviours, knowledge, attitudes and perceived competencies, to name just a few. Measuring these constructs with sufficient accuracy is a colossal task as the data is often influenced by individual perception and subjected to the pitfalls that come with any self-report measure e.g. social desirability, the tendency to give socially desirable responses[15].

CONCLUSION

In general, the results of this pilot study did not lead to major alterations to the evaluation tools. The finding provides substantial assurance that the tools aimed to evaluate the IMU CST programme are reliable. Further research is necessary to evaluate the validity of the above mentioned tools. A longitudinal study is currently being conducted to evaluate the predictive validity of these tools.

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