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Impact of A Communication Skills Module for First Year Medical Residents

Kothai Gnanamoorthy, Prasanna Karthik Suthakaran**, Jagadeesan Mohanan**, Mahendrakumar Kalappan***

Abstract

***Background:** Communication skills were for a long time a part of the "hidden curriculum" in medical education. In India, communication skills were not taught as a separate skill to medical students. This study was designed to measure the improvement in communication skills of first year medical residents after implementation of a communication skills training module.*

***Methods:** Twenty-nine first year medical residents were enrolled in this training module. They underwent a 6-week long training module in communication skills which covered various scenarios faced in day-to-day practice. They were evaluated both before and after the module using the Kalamazoo Essential Elements Communication Checklist (Adapted) (KEECC - A). They also underwent another evaluation after 6 months of completing the module. Feedback was also obtained from participants and trainers.*

***Results:** The mean scores of the pre-test, post-test and follow-up were 14.30 ± 3.31, 25.60 ± 3.94 and 23.69 ± 5.35 respectively. The improvement in scores between pre-test and post-test was + 11.30 (95% CI 10.30 - 12.30, p <0.0001) and the decrease of the follow-up score from the post-test was - 1.91 (95% CI - 2.86 to - 0.97, p = 0.003). Both these changes were statistically significant. There was a positive feedback from participants and trainers.*

***Conclusions:** There is a definite need for improvement of communication skills among first year medical residents in India. The use of standardised check lists helps in easy assessment and reproducibility across different settings. This training has to be constantly reinforced to prevent regresssion of skills.*

***Key words:** Communication checklist, doctor – patient relationship, KECC-A, Kalamazoo.*

Introduction

In 2018, the National Medical Commission of India notified the Competency Based Medical Education for Undergraduates[1]. According to this document, one of the roles that an Indian Medical Graduate (IMG) has to play is that of a "communicator". According to Accreditation Council for Graduate Medical Education (ACGME), training in medical education involves training in communication skills like listening effectively to patients, eliciting relevant information about them with effective questioning skills, providing disease related information back to them using effective explanatory and interpersonal skills like building and maintaining a therapeutic relationship, and demonstrating caring and respectful behaviours towards patient and their caregivers[2].

Communication skills were for a long time a part of the "hidden curriculum" in medical education. There were many initiatives by different agencies responsible for medical education across the world to improve the communication skills of medical residents. In May 1999, twenty one members from various major medical education and professional organisations attended a conference held in Kalamazoo, Michigan, USA sponsored jointly by the Bayer Institute for Healthcare Communication and the Fetzer Institute. This meeting involved discussions on various methods used in training medical residents in communication skills. At the end of this conference, the consensus arrived at, called the Kalamazoo Consensus Statement (KCS) I was released[3]. This statement highlighted 7 key elements of communication in clinical encounters which were building the doctor – patient relationship, opening the discussion, gathering information, understanding the patient's perspective, sharing information, reaching an agreement and providing closure. In April 2002, the American Academy on Physician and Patient (AAPP) held a conference on patient - physician communication at the Fetzer Institute in Kalamazoo, Michigan. The discussions in the conference lead to the release of the Kalamazoo Consensus Statement (KCS) II which concluded that the assessment of communication and interpersonal skills can be conducted using checklists

**Associate Professor, Department of General Medicine, ESIC Medical College and Hospital, KK Nagar, Chennai - 600 078, Tamil Nadu, **Professor, Department of General Medicine, Sri Venkateswaraa Medical College Hospital and Research Institute, Sri Venkateswaraa University, Chennai - 600 067, Tamilnadu.*

***Corresponding Author:** Dr Prasanna Karthik Suthakaran, Professor, Department of General Medicine, Sri Venkateswaraa Medical College Hospital and Research Institute, Sri Venkateswaraa University, Chennai - 600 067, Tamil Nadu. Tel: 9884604695, E-mail: kartpresss@gmail.com*

of observed behaviors during interactions with real or simulated patients, by surveys of patients' experiences in clinical interactions and by examinations using oral, essay, or multiple-choice response questions[2]. The discussions in KCS II lead to the development of a checklist called Kalamazoo Essential Elements Communication Checklist (Adapted) (KEECC - A)[4]. This checklist has been used as an assessment tool and found to be effective in evaluating communication skills of medical residents[5,6]. The use of the Kalamazoo Essential Elements of Communication Checklist – Adapted (KEECC - A) or other dedicated communication skills checklists has made a definitive impact on improving in communication skills of residents being trained in the West[6].

In India, communication skills were not taught as a separate skill to medical students till the Medical Council of India/ National Medical Commission guidelines were formed on the implementation of Attitude, Ethics, Communication (AETCOM) module for undergraduate medical students[7]. However most of the current set of first year resident doctors have not fully benefited from this change. In this scenario, this study was designed to measure the improvement in communication skills of first year medical residents after implementation of a communication skills training module.

Methodology

After obtaining clearance from the Institutional Ethics Committee, faculty members, (Assistant and Associate Professor cadre) from the Department of Medicine of our institution underwent a two week training program for proper use of the Kalamazoo Essential Elements of Communication Checklist – Adapted (KEECC - A) under the guidance of the primary investigator and members of the Medical Education Unit (MEU) using role play and pre-determined standardised patient scenarios. The KEECC - A checklist used 7 different elements for evaluation of the student. Each of these elements were rated on a Likert scale of 1 - 5 (1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent). The scores obtained in each of the individual elements were totalled to arrive at the score for that particular interaction. The maximum possible marks that could be attained was 35. Once the faculty members were deemed to have been trained, the authors and the other trained members of the Department of General Medicine, along with guidance from the senior faculties, developed 40 standardised patient scenarios covering aspects of communication skills like obtaining consent, explaining a diagnosis/condition to the patient, breaking bad news to a patient, explaining about terminal stage of a relative and interpersonal skills like handling an angry patient/relative, handling an error by a colleague.

Twenty nine first year medical residents who provided informed consent to participate in the study were enrolled. They underwent a baseline evaluation of their communication skills with the help of KEECC - A checklist using a standardised patient scenario and were rated by two independent trained evaluators. The arithmetic mean of the scores of the two evaluators was taken as the pretest score. After the pretest was over, the residents underwent training in the communication skills module over a period of 6 weeks.

In this module, trainers first demonstrated techniques of communication skills in a few standardised encounters using role play with one trainer playing the role of a standardised patient and another trainer playing the role of a resident doctor. The trainers highlighted specific areas of the communication scenarios and clarified doubts of students. The students were then divided into small groups of 6 members each, for practice. Each group was assigned a trained faculty member as an observer/evaluator. For every training session, three of the previously prepared scenarios were chosen. One student was then asked to perform the role of resident doctor as mentioned in the scenario with a standardised patient. The other members observed the entire interaction. The observer/evaluator observed the entire interaction and rated the student using the KECC - A checklist. At the end of the communication scenario, the participant was asked to give their insights on the overall communication process and also their impression on the successful completion of the tasks they set out to achieve. The other students also gave their inputs on what went well and what could have been done better. At the end, the observer/evaluator gave his feedback on the performance of the student and clarified areas where mistakes were made. The process was repeated with a different scenario and a different student. Each of the groups underwent a similar training.

The same process was repeated for a total of 6 sessions over a period of 6 weeks. The small groups were assigned a different trainer/evaluator for each session. At the end of 6 weeks, a post-test evaluation was done. Each student underwent evaluation twice, using two different standardised patient scenarios, and rated by two independent evaluators. The arithmetic mean of all four scores obtained was taken as the post-test. Individual feedback was provided to the candidates about their strengths and weaknesses. After a period of 6 months, the students were again evaluated by a process similar to the post test. The arithmetic mean of these scores were taken up as the follow-up score. Feedback from participants and faculty members was obtained at the end of the training programme using a pre-validated questionnaire.

Data was recorded in Microsoft Excel 2019. Charts were prepared using the same. Statistical analysis was done with Quickcalcs by Graphpad. p value of <0.05 was taken as statistically significant. Paired t-test analysis was used for testing changes in scores.

Results

In this study, there were 16 male residents and 13 female residents. All of them had completed their undergraduate training including internship prior to April 2019. Their ages ranged from 24 - 29 years (Median - 27 years).

The mean score of the pretest was 14.30 ± 3.31 and the mean score of the post test was 25.60 ± 3.94. The improvement in scores was + 11.30 (95% CI 10.30 - 12.30) and this change was statistically significant (p <0.0001). The mean score at follow-up was 23.69 ± 5.35. The decrease of the score from the post-test was - 1.91 (95% CI - 2.86 to - 0.97) and this change was also statistically significant (p = 0.003) (Table I). Fig. 1 shows the distribution of scores in the three settings for each individual student.

Fig. 2 shows the median scores in the individual elements of the KECC - A checklist in three different settings. The median scores in all the elements showed an increase after the training programme. The change was the highest in the "providing closure" element followed by "building relationship" and "opening the discussion elements". In all these elements, the median score reached the maximum possible score of 5. The "reaching an agreement" element also showed good improvement after the training program. All elements of the KEECC - A showed a similar or lower median score an follow-up when compared to the post-test except the element of "gathering information" which showed a higher score.

91.42% of the respondents (n = 32) agreed or strongly agreed that the current undergraduate curriculum laid less emphasis on communication skills. 94.28% of the respondents (n = 33) agreed or strongly agreed that there was a definite unmet need for training in communication skills for residents. 100% of the respondents (n = 35) agreed or strongly agreed that the communication module improved skills of the residents and that the same course be conducted for subsequent post-graduate resident batches.

Discussion

There exists a strong need for improvement of communication skills among first year residents in India[8]. The development of various models for enhancing communication skills have shown promise in improving skills of the residents[8,9]. The findings of these studies are similar to the finding of our study; that training improves communication skills of residents. Porcerelli *et al* also found that the use of KECC – A as a training tool improved communication skills among post-graduate residents and also improved their own self-rating of communication skills[7]. The advantages of the KEECC -A checklist is that it provides a structured method for assessment of communication skills and the assessment can be standardised across assessors and assessments. The challenges in using KEECC-A checklist is that it provides a broad framework for assessment of the communication skills subject to interpretation by the assessor and there is a need for pre-assessment standardisation of the marking scheme to be used when there is more than a single assessor.

The results of this study are similar to the findings of Chavda *et al* and Nayak *et al* who found that the use of a communication module improved skills when using KEECC – A for evaluating these skills among undergraduate students in different settings[10,11]. Chavda *et al* showed that among their students, the mean score in communication skills improved from 49.86 to 75.45 and the increase was statistically significant. Similarly, Nayak *et al* showed an increase in the median score from 9 to 40 which was statistically significant.

In this study, before the training module, the median scores in the first five elements of KEECC – A, namely, building the doctor – patient relationship, opening the discussion, gathering information, understanding the patient's perspective, and sharing information were higher than the median scores in the last two elements, namely reaching an agreement and providing closure. This showed a lack of training and importance given to reaching an agreement to the treatment plan with the patient and providing closure to the discussion. The training also helped to improve the "providing closure" element followed by "building relationship" and "opening the discussion" elements the most as these elements showed the most increase in median scores after training. The changes in scores in other elements showed that the residents required further training to achieve the highest possible score in each element. The "sharing of information" element and "understanding patient perspective" element were the ones with the lower median score, possibly indicating their current stage of medical training.

This study also showed that some of the skills learned by training decreased and some others increased over a period of time in the absence of a continuous training module. This finding is similar to the findings of Taveira- Gomes *et al* who found that among clerkship students, who were trained in communication skills during their second year of training, some skills like empathy and ability to collect information improved whereas their interview structure

and non-verbal behaviour declined[12]. This again reiterates the need for continuous efforts to maintain these skills at a higher level.

During this study, the need for training assessors in the correct technique of implementing the KEECC-A checklist for assessment of communication was challenging. This was necessitated by the need for inter-assessor reproducibility of scoring. First year medical residents had a definite lack of communication skills prior to this training module and the areas that had to be trained required extensive training on an individual basis making it a time-consuming process.The lack of video recording during assessment hindered the training process as feedback was based on recall by the assessor and resident. The implementation of video recording could have possibly enhanced the remedial measores needed in non-verbal communication skills.

Conclusions

Communication skill is one of the most important skills that a doctor should possess. First year residents should learn this soft skill at the earliest so as to enhance their patient – doctor relationship and should continuously hone this skill over the years to achieve a high standard. The current resident students have a definite need for training on communication skills as it has not been taught to them formally in their undergraduate years. The use of a validated tool like KEECC – A helps in measuring these skill sets over multiple occasions in a standardised manner. These skills also need constant reinforcement to ensure they do not decay.

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