

Communication Skills Teaching Learning In Prosthodontics

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ABSTRACT

Background and Objective: To carry out an in-depth training on communication skills for Prosthodontic postgraduates for dealing with complete denture patients and analysis using Kalamazoo scale. The effectiveness of the training was evaluated based on Kirkpatrick's model.

Material and Methods: Videorecording of doctor patient interactions was done during complete denture treatment procedures for 27 completely edentulous patients in the Department of Prosthodontics, Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth, Pondicherry. The videorecordings were analysed using Kalamazoo scale for assessment of communication skills and strength and weakness of postgraduates were identified. Based on the findings a need based customized training program involving general and individualized sessions were planned. Post training the same process of videorecording and analysis was done for another set of 18 patients to see the difference in attitude of postgraduates. The outcomes of the program were evaluated using Kirk Patrick model.

Results: "Remarkable" improvements were identified in various aspects of communication skills and development of the skills of reflective practice which was evident from their change in attitude at all four levels in the post training videoanalysis based on Kalamazoo scale and self reflection of postgraduates.

Conclusion: Such customised training and evaluation for dealing with complete denture patients based on Kirkpatrick's framework helps in achieving a targeted outcome and brings change in attitude at all the four levels thereby contributing towards effective patient centered practice.

Keywords:

Communication skills, Complete denture treatment, Dental, Doctor patient communication, Kirkpatrick's model, Postgraduates, Prosthodontics, Training and evaluation.

INTRODUCTION

Complete denture procedures involve multiple appointments and its success relies on multiple factors which could be anatomical, psychological, social etc.¹ Prosthodontist dealing with complete denture patients usually have limited or no formal training in dealing with complete denture patients and therefore they handle them as any other patients. The result is dissatisfaction of the patient, multiple number of post treatment visits, discontinuation of wearing denture and multiple dentures etc.^{1, 2, 3}

Communication skills have been found to have profound effect on adaptability of complete dentures.⁴ Therefore, training doctors in the communication skills pertaining to

handling complete dentures will result in better outcomes of the treatment procedures and patient care.⁴ Therefore, the present study was undertaken using the four levels of Kirkpatrick's model of evaluation which is the most popular approach to the evaluation of training in organizations.^{5,6,7}

MATERIAL AND METHODS

After getting approval from Institutional Ethical committee, the study was conducted in Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth, Pondicherry. Pre training interactions of three third year postgraduates while treating 27 edentulous patients for complete denture treatment were videorecorded from May 2016 to June 2017.

The interactions were analyzed on basis of Kalamazoo scale which is a validated scale commonly used for assessment of communication skills.^{8,9} Thereafter, an customised coaching in communication skills was designed. The sessions were conducted by the authors- Health professional educationist and communication skills expert, Clinical Psychologist and Prosthodontist (subject expert). The course content was based on the book authored by one of the resource persons.^{10, 11} The training involved nine general sessions on core skills and various aspects of communication skills pertaining to complete denture treatment *per se* and one session on individualized video feedback for each postgraduate based on the strength and weakness identified from videorecordings. Post training the same process of videorecording and analysis (using Kalamazoo scale) was done for another set of 18 patients treated by the same postgraduates. Meanwhile follow up sessions were conducted every two months for self reflection, supervision as well as to avoid diminishing of skills.

The effectiveness of the training was evaluated using Kirkpatrick model.^{6,7} The Kirkpatrick's framework for training evaluation model delineates four levels of training outcomes: Reaction, Learning, Behavior, and Results:

- (1) Reaction: How trainee thought and felt about the training and learning experience during the training course; to what degree participants react favorably to the learning event.
- (2) Learning: The increase in knowledge or capability before and during the course, in order to provide corrective actions at the end of the course; to what degree participants acquired the intended knowledge skills and attitudes based on their participation in the learning event.
- (3) Behavior: The extent of applied learning back on the job (implementation of knowledge); to what degree participants apply what they learned during training when they are back on job.
- (4) Result: The effect on the environment resulting from the trainee's performance; to what degree targeted outcomes occur as a result of learning event(s) and subsequent reinforcement.

RESULTS

The data were analyzed using Kirkpatrick's model:

Level 1: Reaction

We took user feedback (immediate feedback) from the postgraduates before and after the training. During the general sessions they learnt and appreciated the skills applicable for treating complete denture patients which was evident from their comments as *"I learnt about the different communication skills and non verbal communication with the patients"*; *"It helped me to understand the various mental attitudes of different patients"*; *"I would treat and handle patients easily by utilizing communication skills taught to me"*; *"The skills which I have learnt will help me to improve rapport with patients easily."*

Regarding the individual sessions wherein short tags of video recorded dyad (a group of two people, i.e. refers to doctor and patient here) interactions of their strength and weakness was shown to them, Participants felt that it helped them in self assessment of their interaction with patients- *"I could see my body language and approach towards the patients"*; *"It helped me in realizing my strength and weakness"*; *"Individual coaching helped me in realizing what and how I was to the patients. I am able to understand the areas of my weakness and improve upon it."*; *"Individual session was very effective, video sessions helped me to realize my strength and weakness towards the patients."*

During feedback for self reflection, the three postgraduates felt that it was useful- *"This program will definitely make me a better practitioner in the future"*; *"The sessions taught me to handle extreme behaviors seen in the patients."* *"From this coaching I learnt about communication skills and management of different types of patients. I will continue building good rapport with the patients and will start from first visit itself"* There was complete agreement about the value of communication skills in doctor patient interaction among all the postgraduates. In the exit focus group discussion, they asked for regular feedback on their performance, owing to which follow up sessions were planned periodically.

Level 2: Learning

For evaluating this level, it was necessary to identify the intended learning outcomes and then to analyze whether they have been achieved. This was evident from the pre-post objective evidence obtained from the video recording post training and analysis of it using Kalamazoo scale. It was found that the postgraduates were constantly implementing their learning, utilizing more patient centered approach. It was found that

apart from the skills listed in Kalamazoo scale, they were following some of the skills which were “Beyond Kalamazoo”.^{8,9}

Level 3: Behavior

The postgraduates had started applying the skills in any given situation. The follow up session was conducted every two months for discussions about the patients treated during that period, any difficulties faced in handling dyads, peer sharing of their experiences, self reflection of their performance etc. They felt that they have changed in their working style. They felt that they had started valuing and eliciting agenda, showing care and concern explicitly, started giving importance to information giving, explaining about next appointment, explaining about the procedures before starting, addressing non verbal expression etc.

The comments revealed some of their opinions- *“Rapport building during beginning is very helpful, if we have good rapport sometimes they come up with discussion on other problems they are facing. One of the patients came with the complaint of missing teeth and ended up discussing about his leg problem for which I suggested the treatment plan and gave referral to other departments.”*; *“I feel that acknowledging them takes just a few minutes”*; *“During the treatment procedure the patients used to come front and back in the dental chair to see what’s happening. After attending training, I have started explaining procedures and found them to be more relaxed and comfortable.”* They also started limit setting in some given scenarios- *“One of the patient started dictating where to do reduction in the denture. He had to be told clearly that beyond a limit it will get loosened”*

Level 4: Results

Evaluation at level four is ‘difficult and time consuming’ yet this is in effect completes the purpose of any training. All the postgraduates valued the importance of the training and had started applying it unconsciously.¹² They were able to converse confidently and convince patients for accepting treatment e.g.-fixed partial denture versus implants etc. They also felt confident enough to handle paranoid patients and patients with disbelief.

There was influence on patient outcome. It was observed that the patients were more satisfied with treatment, had good rapport with the doctor, felt free to approach the doctor in case of any problem, were more thankful to them, could adapt to the prosthesis better and started getting gifts and referrals in form of

other patients or relatives for treatment. Transference of skills was also observed to general practice i.e. they have started applying the skills to other patients apart from complete dentures.

DISCUSSION

The present study was undertaken using the four levels of Kirkpatrick’s model of evaluation for in-depth training and evaluation of communication skills of Prosthodontic postgraduates for dealing with complete denture patients.

The literature review does not report any such intra-operative assessment of prosthodontic postgraduates treating edentulous patients for complete dentures using videoanalysis; designing a customized communication skills training for handling complete denture patients *per se* (general and individualized); and subsequent assessment using Kirkpatrick model for outcomes at all four levels.

Various factors affect the satisfaction with complete denture treatment (anatomy-related, technique-related, dentist-related, or patient-related factors), therefore there is no consensus till date for any single factor which could affect the satisfaction with complete dentures.¹ Complete denture treatment is unique, as it involves multiple number of visits thereby more number of interactions with the doctor, involvement of patients in decision making for esthetic outcomes and cooperation of patients as it involves long appointments, is influenced by previous experiences (good/bad) with dentist or denture etc. Most importantly both patients and dentists have different expectations and satisfaction ratings regarding the same denture.¹ Therefore, establishing and improving dentist–patient communication and involving them in decision making cannot be overstated and is the most useful strategy to improve patients’ satisfaction with their dentures.¹ It has been found that communication skills diminish with time and acquisition of skills is most effective when learners have had the opportunity to practice and receive feedback on their performance.¹³

Our study differed from other published studies in the planning of a customized training module based on videoanalysis of direct interactions with real patients during multiple consultations (needs assessment).^{14,15} There are many frameworks that can be used to evaluate curricula namely Stufflebeam’s CIPP, RUFDATA framework’s and Kirkpatrick’s Four-Level model etc.¹⁶⁻¹⁸ Kirkpatrick’s model has many applications like

assessment of learning outcomes in higher education, performance of medical educators, participation in research methodology workshops, online general education information literacy materials, blended-learning professional development program for teachers etc.¹⁹ We used this model owing to its effectiveness in evaluation of any training program. However, its application is limited in dental (mainly for faculty development program)²⁰ and literature does not report of any similar studies.

Kirkpatrick states that “if training is going to be effective, it is important that trainees react favorably” and “without learning, no change in behavior will occur”.⁷ However, literature has mostly failed to confirm such causal linkages.

Based on the results of this study the application of this model for the intensive coaching in communication skills for Prosthodontic postgraduates yielded satisfactory outcome. On the basis of the data it would seem rational to continue the training every year in Prosthodontics in very much the same pattern as well as extend it to other branches of dentistry apart from Prosthodontics to achieve more patient centered care.

The limitations of our study are that the group of postgraduates was small; we chose a small group so that individualized feedback based on analysis of their performances could be undertaken in this study. Future study on a larger group of students could yield different results. Analysis of the multiple videorecordings for individualized feedback is time consuming and labor intensive and may be tedious for rating for a larger group of students. But the benefits of individualized feedback in identifying each trainee’s strength and weakness in communication skills outweighs the effort and time involved.

CONCLUSION

This study provided empirical evidence that the in-depth training on communication skills of prosthodontic postgraduates for dealing with complete denture patients, met trainees and trainers expectations in several aspects as evidenced by fulfillment of four levels of outcome of the Kirkpatrick’s model. It helped in achieving systematic and targeted outcome for the trainees. The training can be customized for dealing with dental patients for a particular specialty or procedure for newly trained graduates, postgraduates as well as faculty.

CONFLICTS OF INTEREST

None.

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