Role of Communication, Professionalism, and Clinical Care Skills of Postgraduate Students on Patients Recall Visits in Dental School—An Observational Study

Mohan Kumar Pasupuleti¹, Gautami Subhadra Penmetsa¹, Meghana Gangolu¹, Santosh Venkata Ramesh Konathala¹, and Sruthima Naga Venkata Satya¹

Abstract
Preservation of periodontal health after periodontal therapy is paramount for the complete elimination of periodontal diseases. In most of the Dental Schools, recall appointments are considerably low, and in particular, to the Department of Periodontics, the compliance to recall visits by the patients diagnosed with periodontal disease is still inadequate. Faculty from the Department of Periodontics framed new criteria to follow in the comprehensive clinics by the postgraduate students. The criteria include communication, intraoral examination skills, and professionalism toward dental patients. Faculty in each comprehensive dental clinic observed the clinical encounters of postgraduate students with patients and provided the feedback. The study conducted from May 2018 to April 2019, and the patients attended were 1164 of 1544. Unattended patients were 380 of 1544. Effective evaluation of the feedback provided by faculty and communication with both the postgraduate students and unattended patients resulted in further improvement in recall, that is, 151 of 380 patients. Reframed criteria, direct observation of the postgraduate students by faculty during patients interaction, assessment of feedback forms, and immediately modifying the student's way of communication allowed maximum recall visits to the Department of Periodontics.

Keywords
clinical care skills, communication, professionalism

Introduction
Periodontal maintenance is defined as the procedures performed at selected intervals to assist the periodontal patients in maintaining oral health by the American Academy of Periodontology, Glossary of Periodontal Terms. Regular periodontal care as a part of maintenance therapy is necessary even after the completion of periodontal treatment (1).

Establishing periodontal maintenance at regular intervals, which include weekly, monthly, biannual, annual visits, can maintain periodontal health and also prevent the recurrence of periodontal diseases (1, 2).

Lack of complete knowledge in clinical care, communication skills, and professionalism toward the patients among the postgraduate students are the leading causes of the inability in the management of periodontitis patients. The reason for the lack of knowledge among the students was that they were not taught and regularly assessed by the faculty during their clinical encounters with patients, particularly during the initial examination (3).

Direct observation of the students by the faculty during clinical examination of the patients and immediate modification may improve the knowledge among postgraduates in Dental Schools. This further helps the postgraduates in bringing the patients to recall visits based on their needs (4).

Recalls establish a relationship between the dentists and the patients by building up the trust and also facilitates to acknowledge the value of regular dental checkups and

¹ Department of Periodontics, Vishnu Dental College, Bhimavaram, Andhra Pradesh, India

Corresponding Author:
Mohan Kumar Pasupuleti, Department of Periodontics, Vishnu Dental College, Bhimavaram, Andhra Pradesh 534202, India.
Email: mosups@gmail.com
encourage them to return for subsequent dental visits. Many patients after their phase I therapy do not turn up for their recalls as they were not acknowledged the importance of further visits for any kind of treatment (4,5).

Failure in recall appointments was entirely in the hands of professionals. Proper education and motivation of the patients will bring back the patients to further recall visits (6,7). To fill the void in recall appointments failure, the faculty of the Department of Periodontics reframed the questionnaire to follow during complete oral examination based on the communication, clinical care, and professionalism toward the patients.

As there is sparse literature focusing on the Dental patients recall visits, this study aims at improving the percentage of noncompliant patients for recall visits and moreover in assessing and correcting the performance of the postgraduate student’s communication, professionalism, and clinical care skills in improving the adequate percentage of patients recall visits in a Dental School.

**Methodology**

All the postgraduate students posted in the 5 comprehensive clinics of our Dental school on rotation basis were asked to screen for gingival and periodontal diseases under the supervision of faculty in each comprehensive clinic.

Every patient undergoing nonsurgical periodontal and surgical periodontal treatment in the Department of Periodontics would be selected for the study. The entire exercise was divided into 3 phases, among which providing information in the first phase includes explaining the newly framed criteria to the PG students. During the second phase, discussion with the faculty gives immediate feedback by verbal and written comments where the students need to rectify when they go wrong in following any of the criteria. In the third phase, there will be a critical evaluation of the complete feedback form by the Head of the department in case of missed recall appointments of patients regularly or when the patients were not following the scheduled visits. In this phase, the senior faculty communicates with the patients and explains the patients regarding their periodontal problems and motivates them for their treatment (Figure 1).

The parameters followed in the information phase are communication, professionalism, and clinical care skills, which were already explained to the PG students prior. The faculties observe and assess the students based on the way they communicate with the patient during clinical
examination, the professionalism they show toward the patient, and the clinical care they take during treatment. The patients were intimated about their recall visits after their appropriate nonsurgical or surgical therapies.

Likewise, the recall visits of all patients from May 2018 to April 2019 were assessed. Feedback was given immediately by the staff members in the comprehensive clinics where the postgraduate students examine the patients for any gingival and periodontal problems.

If the patients do not return to the department on their scheduled recall date, the patients would be contacted and motivated by the staff for the recall again after knowing their appropriate reason, which failed them to attend on the scheduled date.

The present study clearly shows the comparison of the recall visits percentage with the previous year recall visits, which were done without any revised criteria and professional supervision.

To summarize, the checklist is given to the students when they encounter the patients in the comprehensive clinics, and the immediate written and verbal comments were given to the students by the staff members posted in the 5 clinics. The comments were evaluated and discussed by the head of the department, and the patients who did not turn up for the appointments in their scheduled dates were again communicated by the senior faculty members by explaining about their periodontal treatment needs and motivate the patients to come for the next visit to the department for complete periodontal treatment.

Following is the checklist for observed students’ encounters with patients during a clinical examination (Form:1) (4).

Results

Recall patients who attended the Department of Periodontics in the year 2018 without any faculty supervision were 656 of 1142. After framing new criteria and the clinical examination of patients under faculty observation, the total number of patients returned for recall visits was 1164 of 1544. Unattended patients were only 380 of 1544 patients due to various reasons. The recall results of patients were divided into 2 phases, like following new criteria under faculty supervision as phase 1 and recall results after evaluation of feedback of PG students and communication with unattended patients after the first recall as phase 2. There was an increase in recall visits up to 151 of 380 neglected patients.

The recall visits in the year 2018, when there was no faculty supervision and no framed criteria, were 42.5% attended patients and 57.4% unattended patients. After framing new criteria and when there was faculties supervision (Phase: 1), the number of attended patients was 75.3% and unattended patients were 24.6%.

In phase 2, recall visits after communication with the unattended patients by the senior faculties increased up to 85.17%, and the unattended patients due to various reasons were 14.8% only (Figure 2).

There was a significant increase in the percentage of appointments from year A to year B. There was also an absolute increase in recall appointments in year B when compared with year A. There was also an increase in outpatient attendance from phase 1 to phase 2 in the year B.

We also noted that there was a clear-cut increase in the number of patients attended in phase1 and phase 2 after applying new criteria and communication of the staff with the patients with a thorough assessment of feedback of the students, respectively.

When it comes to the number of patients attended to the department outpatients section it was 1164 in phase1 and phase 2 after applying new criteria and communication of the staff with the patients under faculty guidance, the attendance of patients increased to 1315 when senior faculty communicated with unattended or noncompliant patients in phase 2. The number of unattended patients drastically came down from 380 to 229 (Figure 3).

Discussion

National Institute for Health and Excellence provided guidelines to assist Dentists in assigning the recall visits based on the needs of patients. During the initial examination, after completing the clinical and radiographic examination, appropriate preventive measures should be provided to the
patients explaining the causative and risk factors for gingival and periodontal diseases (8).

Recall intervals should be assigned based on the clinical expertise and need of the individual patients. Most commonly, the recall intervals are assigned at 3, 6, 9, or 12 months. The dentists should discuss the importance of recall intervals (8,9).

According to the Wang and Aspelund in the year 2009, patient’s dropouts and broken appointments were due to the anxiety and appointment patterns of complex dental treatment procedures. Novak et al. in 2002 and Wang et al. in 2009 said that the dental treatments which are nontraumatic should be introduced first, followed by traumatic procedures. Failure in introducing simple treatments would result in broken appointments (10,11).

Our profession’s emphasis is to increase the recall rate percentage of patients who require periodontal treatment and thus helps the periodontally compromised patients to utilize the dental services provided by our dental school. To overcome void in recall visits, the staff from the Department of Periodontics framed the criteria to follow during clinical examination, and the students were supervised during their encounters with the patients (4,11).

Although the Merin classification on the frequency of recall visits is widely used during periodontal maintenance, the criteria followed in this study helped in increasing the recall visits of noncompliant patients due to various reasons such as negligent attitude, fear of dental treatment, indifferent behavior on the dentists part, and economic problems (2,3,12). The criteria followed in this study helped in overcoming the reasons for noncompliance patients, particularly by education and motivation of the patients by the senior faculties during phase 2 of this study. These criteria helped to increase the overall percentage of patients turnout to the Department of Periodontics and are in accordance with the study by Hauer et al (4,13,14).

The results of this study are in accordance with the study done by Pierce et al. in 2013, in which they assessed the medical students by framing criteria based on students clinical skills, communication, and professionalism in which they concluded that the students found this exercise useful and easy to schedule the patient’s appointments regarding their recall visits (4).

Holmboe, in 2004, observed the skills of trainees during medical interviewing, physical examination, and counseling. They stated that the most important method of evaluation was the direct observation of trainees performing those clinical skills. The authors also outlined the nature of the problems in clinical skills and their evaluation by faculty. They ended with recommendations to improve the current state of faculty skills in evaluation. These recommendations were followed to improve the recall visit percentages in our study (15).

Students found the criteria simple and easy to follow, and they got acquainted with the exercise for one year. Due to the direct observation and assessment of clinical care skills, we found that there was a drastic increase in the recall visits of the Periodontics department when we compared with the previous year when we had not followed the new criteria. These results are in accordance with Kogan et al. in 2009 and Pelgrim et al. in 2011 (16,17).

Conclusion

The number of patients attended to the department outpatients section was 1164 in phase 1, when students followed the criteria under faculty guidance, and the attendance of patients was increased to 1315 when senior faculty communicated with unattended or noncompliant patients in phase 2. The number of unattended patients drastically came down from 380 to 229.

Thus, the criteria were found to be very useful and simple to follow by the students to increase the overall recall visits of patients to the Department of Periodontics in Dental hospitals.

Appendix A

Form: I: Checklist for observed students encounters with patients during a clinical examination

| Information | Date: | Comprehensive Clinic No: | Student Name: | Faculty Observer: |
|-------------|-------|--------------------------|---------------|------------------|
| 1. Communication skills of PG students with the patients: | | | | |
| a. Does the student focus on the patient’s chief complaint? | | | | |
| b. Explains the appropriate cause of the present patient’s condition? | | | | |
| c. Listens to the patient’s problems without any interruption? | | | | |
| d. Explains the risks if neglected? | | | | |
| e. Allows the patients to ask their queries? | | | | |
| f. Addressing the root cause or trying to deviate the patients from the purpose? | | | | |
| g. Focuses on the patient’s medically related problems? | | | | |
| h. Explains patients about the importance of Recall visits? | | | | |
| 2. Professionalism: | | | | |
| a. The attire of the Dentist? | | | | |
| b. Attitude while talking with patients? | | | | |
| c. Voice during demonstration. | | | | |
| d. Respects the privacy of patients? | | | | |
| e. The demeanor of the professional. | | | | |
| f. It helps to demonstrates courtesy. | | | | |
| g. Is he/she amicable to the patient’s professional needs? | | | | |
| 3. Clinical care: | | | | |
| a. Washes hands before examining the patients (yes/no) | | | | |
| b. Washes hands while exiting the room? (yes/no) | | | | |
| c. Taking proper case records of the patients? (yes/ no) | | | | |

*Section 1 and 2 are to be scaled as follows:
1. Very poor
2. Poor
3. Fair
4. Good
5. Excellent

Discussion

1. Verbal communication with the students by faculty observer regarding any of the above criteria.
2. In the form of written comments on any specific topics among the newly framed criteria.

Evaluation

Critical evaluation of the student’s feedbacks by the Head of the department.

Students signature________
Faculty signature________
Head of the department signature________
Declaration of Conflicting Interests
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding
The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD
Mohan Kumar Pasupuleti https://orcid.org/0000-0001-7797-1890

References
1. American Academy of Periodontology. Glossary of Periodontal Terms. 4th ed. American Academy of Periodontology; 2001:39-42.
2. Lindhe J, Nyman S. Long-term maintenance of patients treated for advanced periodontal disease. J Clin Periodontol. 1984;11:504-14.
3. Axelsson P, Lindhe J. The significance of maintenance care in the treatment of periodontal disease. J Clin Periodontol. 1981;8:281-94.
4. Pierce R Jr, Noronha L, Perryman CN, Fancovic E. A brief structured observation of medical student hospital visits. Educ Health. 2013;26:188-91.
5. Farooqi OA, Wehler CJ, Gibson G, Jurassic MM, Jones JA. Appropriate recall interval for periodontal maintenance: a systematic review. J Evid Based Dent Pract. 2015;15:171-81.
6. Farrell SE. Evaluation of student performance: clinical and professional performance. Acad Emerg Med. 2005;12:302e6-e10.
7. Fromme HB, Karani R, Downing SM. Direct observation in medical education: a review of the literature and evidence for validity. Mt Sinai J Med. 2009;76:365-71.
8. National Collaborating Centre for Acute Care (UK). Dental Recall: Recall Interval Between Routine Dental Examinations. National Collaborating Centre for Acute Care (UK); 2004. (NICE Clinical Guidelines, No. 19.) 5. Recommendations.
9. Skaret E, Raadal M, Kvale G, Berg E. Factors related to missed and cancelled dental appointments among adolescents in Norway. Eur J Oral Sci. 2000;108:175-83.
10. Wang NJ, Aspelund GO. Children who break dental appointments. Eur Arch Paediatr Dent. 2009;10:11-4.
11. Nowak AJ, Casamassimo PS. The dental home: a primary care oral health concept. J Am Dent Assoc. 2002;133:93-8.
12. Wilson TG. Compliance. A review of literature with possible applications to periodontics. J Periodontol. 1987;58:706-14.
13. Hauer KE, Holmboe ES, Kogan JR. Twelve tips for implementing tools for direct observation of medical trainees’ clinical skills during patient encounters. Med Teach. 2011;33:27-33.
14. Hauer KE. Enhancing feedback to students using the mini-CER (Clinical Evaluation Exercise). Acad Med. 2000;75:524.
15. Holmboe ES. Faculty and the observation of trainees’ clinical skills: problems and opportunities. Acad Med. 2004;79:16-22.
16. Kogan JR, Holmboe ES, Hauer KE. Tools for direct observation and assessment of clinical skills of medical trainees: a systematic review. JAMA. 2009;302:1316-26.
17. Pelgrim EA, Kramer AW, Mokkink HG, van den Elsen L, Grol RP, van der Vleuten CP. In-training assessment using direct observation of single-patient encounters: a literature review. Adv Health Sci Educ Theory Pract. 2011;16:131-42.

Author Biographies
Mohan Kumar Pasupuleti is a reader in the Department of Periodontics with 9 years of clinical and academic experience. Currently working at Vishnu Dental college, Bhimavaram, Andhra pradesh, India.
Gautami Subhadra Penmetsa is a professor & HOD of the Department of Periodontics with 19 years of clinical and academic experience. Currently working at Vishnu Dental college, Bhimavaram, Andhra pradesh, India.
Meghana Gangolu is a post graduate student at the Department of Periodontics. Currently working at Vishnu Dental college, Bhimavaram, Andhra pradesh, India.
Santosh Venkata Ramesh Konathala is an associate professor in the Department of Periodontics with 9 years and 6 months of clinical and academic experience. Currently working at Vishnu Dental college, Bhimavaram, Andhra pradesh, India.
Sruthima Naga Venkata Satya is a professor in the Department of Periodontics with 11 years of clinical and academic experience. Currently working at Vishnu Dental college, Bhimavaram, Andhra pradesh, India.