

*Original Research Article*

# Confidence Levels of Dental Interns in Treating Prosthodontic Patients and their Point of View Regarding the Quality of Prosthodontic Education; A Survey Done in Riyadh Colleges of Dentistry and Pharmacy

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There are several prosthodontic treatment procedures being done in undergraduate dental training. One of those procedures is the fabrication of complete dentures, which according to various studies have been proven to be the most difficult procedure to learn and perform. Majority of dental students did not exhibit high confidence in making complete dentures. This is a cross-sectional study, which utilized a closed-ended questionnaire. The questionnaire included questions including participants' gender, GPA, confidence levels in treating different types of prosthodontic patients and satisfaction levels from their undergraduate training in various modalities. Higher mean values show greater confidence and satisfaction levels among the interns. It can be noted that the majority comparisons based upon gender and GPAs were found to be insignificant. However, there was significant higher confidence level noticed in females when treating patients with fixed partial dentures. There is no significant relationship between gender and confidence levels. Low GPA students showed better satisfaction towards their undergraduate clinical training.

**Keywords:** Dental Interns, Confidence, Prosthodontics procedures.

## INTRODUCTION

Dental students are exposed to various clinical procedures during their undergraduate training. It is believed that some of the students do not feel confident in performing certain procedures, which include prosthodontic as well. Clinical experience and quality of education is an essential factor in determining the confidence level of dental students (Puryer et al, 2017). Studies conducted in different parts of the world have shown varying results. A Cardiff, UK based research revealed that dental students lacked significant amount of confidence when performing complicated dental procedures. However, this confidence level increased when students gained more experience and training. Gender comparisons are also important to determine (Gilmour et al, 2016).

Regarding the undergraduate education and training, clinical demonstration of procedures is a very important part in confidence building of dental students. Moreover, higher

confidence level is also associated with the time taken to complete these complicated procedures. Furthermore, laboratory demonstration and hands on training prior to clinical exposure were also helpful in improving the confidence levels of students (Packer, Scott & Davis, 1999).

There are several prosthodontic treatment procedures being done in undergraduate dental training. One of those procedures is the fabrication of complete dentures, which according to various studies have been proven to be the most difficult procedure to learn and perform. Majority of dental students did not exhibit high confidence in making complete dentures (Wieder et al, 2013). However, some students exhibit low confidence when treating elderly patients in their clinical training. It can be argued that confidence levels may be improved when students are exposed to multiple age groups of patients including elderly as well (Ettinger et al, 1982).

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Several studies have been conducted in order to assess the satisfaction level of students towards prosthodontic training. A study done in Harvard School of Dental Medicine showed a significantly higher amount of stress perceived in students when they were given training in the prosthodontic laboratories.

They experienced greater extent of stress during these sessions and revealed that their knowledge and skills were affected by the longer exposure to laboratory training (Sukotjo et al, 2008). Several new technologies have been inserted into dental schools in order to improve the pre-clinical training of students. One of these interventions is simulation clinic, which has become a part of many dental schools throughout the world. However, studies have shown mixed reviews of this technology and its' supremacy over traditional laboratory training (Clancy et al, 2002).

## AIMS OF THE STUDY

- Determine the confidence level of interns in performing prosthodontic procedures.
- Compare between males and females.
- Compare among the students with different GPAs.

## MATERIALS AND METHODS

This is a cross-sectional study, which utilized a closed-ended questionnaire. The questionnaire included questions including participants' gender, GPA, confidence levels in treating different types of prosthodontic patients and satisfaction levels from their undergraduate training in various modalities.

A 3-point likert scale was used with the value given to least confident as 1 and highly confident as 3. Similar coding was done for satisfaction levels. Survey was constructed using Google forms and sent to all male and female interns by college emails. Their participation was considered as their consent to take part in this study.

Ethical approval was taken from IRB department of Riyadh Colleges of Dentistry and Pharmacy. The target population was 300 interns. Data were subjected to statistical analysis using SPSS version 16. Tests including analysis of variance (ANOVA), mean value calculation, standard deviation and frequencies were recorded and presented under the heading of results. The study was completed within one month of commencing.

## RESULTS

Questionnaires were sent to 300 dental interns, however, 260 male and female dental interns responded to our emails and took part in this study. Out of this number, 80 participants were males and 180 were females. We also divided the sample into three subgroups based on their GPA during undergraduate studies. Comparisons were made upon gender and GPA, which are presented in Tables 1 and 2.

Higher mean values show greater confidence and satisfaction levels among the interns. It can be noted that the majority comparisons based on gender and GPAs were found to be insignificant. However, there was significant higher confidence level noticed in females when treating patients with fixed partial dentures. On the other hand, male interns were more confident in treating patients with complete dentures as compared with females.

**Table 1: Mean values and standard deviations for both genders**

Gender	Male	Female	Total	P- value
Confidence in treating prosthodontic patients in first clinical year	Mean: 1.45 SD: 0.5	Mean: 1.40 SD: 0.49	Mean: 1.41 SD: 0.49	0.452
Confidence in treating prosthodontic patients in final clinical year	Mean: 2.15 SD: 0.65	Mean: 2.24 SD: .60	Mean: 2.21 SD: 0.62	0.259
Confidence level in doing cases for removable partial dentures	Mean: 1.70 SD: 0.71	Mean: 1.68 SD: 0.69	Mean: 2.21 SD: 0.62	0.906
Confidence level in doing cases for fixed partial dentures	Mean: 1.85 SD: 0.65	Mean: 2.26 SD: 0.57	Mean: 2.13 SD: 0.63	0.00
Confidence level in doing cases for complete dentures	Mean: 1.95 SD: 0.67	Mean: 1.57 SD: 0.71	Mean: 1.69 SD: 0.72	0.00
Require more training in improving?	Mean: 2.65 SD: 0.47	Mean: 2.73 SD: 0.44	Mean: 2.71 SD: 0.45	0.174
Satisfaction with Laboratory training	Mean: 1.85 SD: 0.57	Mean: 1.88 SD: 0.56	Mean: 1.87 SD: 0.56	0.612
Satisfaction with clinical training	Mean: 2.10 SD: 0.70	Mean: 2.13 SD: 0.58	Mean: 2.12 SD: 0.62	0.691
Satisfaction with clinical supervisors	Mean: 2.30 SD: 0.56	Mean: 2.22 SD: 0.66	Mean: 2.24 SD: 0.63	0.363

**Table 2: Mean values and standard deviation for interns with different GPAs**

GPA	Below 3	3 to 4	Above 4	P- value
Confidence in treating prosthodontic patients in first clinical year	Mean: 1.50 SD: 0.53	Mean: 1.57 SD: 0.49	Mean: 1.33 SD: 0.47	0.001
Confidence in treating prosthodontic patients in final clinical year	Mean: 2.00 SD: 0.00	Mean: 2.23 SD: .68	Mean: 2.21 SD: 0.60	0.586
Confidence level in doing cases for removable partial dentures	Mean: 2.00 SD: 1.06	Mean: 1.66 SD: 0.71	Mean: 1.69 SD: 0.67	0.439
Confidence level in doing cases for fixed partial dentures	Mean: 2.50 SD: 0.53	Mean: 2.04 SD: 0.65	Mean: 2.16 SD: 0.61	0.095
Confidence level in doing cases for complete dentures	Mean: 2.00 SD: 1.06	Mean: 1.80 SD: 0.73	Mean: 1.61 SD: 0.69	0.067
Require more training in improving?	Mean: 3.00 SD: 0.00	Mean: 2.66 SD: 0.47	Mean: 2.71 SD: 0.45	0.135
Satisfaction with Laboratory training	Mean: 2.50 SD: 0.53	Mean: 1.90 SD: 0.61	Mean: 1.83 SD: 0.53	0.004
Satisfaction with clinical training	Mean: 2.50 SD: 0.53	Mean: 2.00 SD: 0.62	Mean: 2.16 SD: 0.61	0.029
Satisfaction with clinical supervisors	Mean: 2.30 SD: 0.56	Mean: 2.22 SD: 0.66	Mean: 2.24 SD: 0.63	0.364

## DISCUSSION

This study was aimed to assess the confidence levels of dental students when treating patients with different prosthodontics procedures. Another aspect of this study was to determine the satisfaction levels of students from their undergraduate training. We targeted the male and female dental interns as they have gone through all the phases of their undergraduate training and have completed all their clinical requirements including various prosthodontic procedures.

We divided the interns into two subgroups. One was based on gender, while other being related to their GPA scores in undergraduate studies. Our aim was to compare among the above mentioned groups and look for any significant differences. First, half of the survey included questions related to the confidence levels of students in performing various prosthodontics procedures. Although the majority of responses were similar and no significant differences were found either in gender as well as in GPA groups. However, we found out that female interns were more confident in treating fixed partial denture cases and male interns feeling confident in doing complete denture cases. These comparisons were statistically significant.

On the other hand, students with varying GPAs were also compared and it was noticed that students with low GPA showed greater satisfaction from their training given in the laboratories as well as clinics. Whereas, all other comparisons were not significant except for the confidence level in the first clinical year, which was better in middle range GPA students.

There is a scope to improve this study if we add more questions to the survey and expand our sample size by reaching out to other dental schools. One of the limitations of the study was the low number of male participants, which constituted only 80 out of total which was 260 participants.

## CONCLUSIONS

- There is no significant relationship between gender and confidence levels.
- Low GPA students showed better satisfaction towards their undergraduate clinical training.
- Confidence levels of students in general improved with more exposure to prosthodontic patients.

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