

# **The Self-Confidence Level of Dental Students in Alkafeel University College of Dentistry in Dental Clinical Practice Between the Fourth and Final Stage**

## **Abstract**

**Aim of study:** To ascertain and compare final-year dental students' self-confidence in conducting a number of necessary dental procedures.

**Method:** Dentistry college issued questionnaires to 288 final two-years dental students. It included 42 sheets, each of which contained a number of dental procedures. Information was asked about their level of trust in conducting such procedures on a three-point scale: 1 (lack of or no confidence), 2 (neutral), and 3 (extreme confidence) (self-assured). We used paired t-tests to assess the statistically important variations in the means of trust between the two groups while different variables were included.

**Results:** Diagnose interceptive cases with low trust have personalized treatment options that provide both veneer and non-vital and handicapped treatments, as well as treating mentally impaired patients. Slight variations in trust levels found between the two institutions. These three procedures are confidence-inspiring for students with above-average grade point average (GPAs): basic posterior restoration, complex posterior restoration, and the more challenging complex retentive technique.

**Conclusion:** It was clear that students in their final two years of dental school had a strong belief in the procedures they were expected to have mastered by the end of their undergraduate careers. Changing and revising the undergraduate program, transitioning to a competency-based system, and promoting other learning systems that have been shown to have a positive impact on students' learning outcomes should be welcomed.

Key words: Dental students, steel crown, general dental council's, dental practice, caries diagnosis.

## **Introduction**

A significant portion of the dental school curriculum is devoted to assessing students' acquisition of dental professional skills rather than their development of self-confidence and expertise in clinical and technical skills. Education in dentistry should focus on developing competence and self-confidence in students. Students' clinical competencies can be referred to as "what students must be able to do on their own when they enter practice" or "the link between education and practice." [1]. Trust has been linked to an increase in clinical competence [2-4]. Patient self-assessments of their own expertise and abilities have been used to evaluate dental school curricula [5], the success of particular courses within the dental school curricula [6,7], and

instructional methods that enhance students' perceptions of their professional competencies [5]. Numerous tests have been undertaken to assess dental students' trust levels at the undergraduate level [7-11], but no comparable studies have been conducted in Iraq. According to the findings of the tests, graduates feel the strongest competent in obtaining an accurate patient background, identifying and managing dental caries, administering an oral review, providing dental health education, and understanding the need for referral [8]. Restorative, radiology, and preventive dentistry were more popular among respondents, according to Gerbert et al. [9], than pathological occlusion, myofascial pain, biopsies, and temporomandibular disorders. [10]. Lynch and Allen discovered that the bulk of clinicians struggled with patient preparation and construction of reversible partial dentures for partly dentate individuals [11]. Waldman and Perlman discovered that dentists lacked expertise in delivering services to patients with special needs and lacked professional skills managing these patients during their dental education [12,13]. at the same time helping to develop the knowledge and trust of their students in building the next phase in their careers Both dental facilities have a financial and supply constraint. It has also been said that dental and healthcare structures were built on this way the needs of the patient come first to remain effective, the dental curriculum must evolve in order to meet both the current and future demands of the community Dental education began with the opening of the dental college, which is part of the private university system in Najaf. it accepts applicants on the basis of their scores in high school and their grades. in-college dental school for ten years of ten semesters and two years of dental-tooth row follow They have two parts: (1) of training: pre-entry (2) (years 3,4,5). Both programs taught are very close to much of the other ones taught in western countries. Thus, dental colleges in the United States and Europe are of equal quality.

The aim of this study was to determine and compare the degree of self-confidence in conducting a range of basic dental skills. to gain insight from final two-years dental students at Alkafeel institution: Alkafeel University to make recommendations for potential educational instruction, in addition to those already listed, in order to investigate There are correlations between trust level and gender.

## **Subjects and Methods**

A correspondence Additionally, a letter requesting permission to perform the study was submitted to the committee of the Dentistry college. The survey had a cover letter outlining the study's goals, nature, and the fact that involvement was voluntary. The 42-item dental check list The techniques were formulated in accordance with the documented goals of the dental schools and were based on previous research. which were received from the paper "the first five years" by the general dental council (GDC) [7,21]. The questionnaire was written in English and included questions about demographic details such as college attendance and gender. The poll was conducted in centered on 42 critical dental expertise lists. For trust self-assessments, a three-point scale was used, ranging from 1 to 3. (Not or little confident), 2-(irreversible), 3-(confident). The survey was conducted among final two-years dental students enrolled in fourth

year 144 and fifth year 144. A pilot analysis was performed on a group of final two-years dental students to ensure the questions were clear.

### Data Collection

All of the students were given individual questionnaires, which were subsequently collected on the same day, yielding a sample size of 288.

### Statistical Methods

Data was coded and entered into a computer system for later use. The Statistical Package for Social Science (SPSS) version 20 was used to compute means, standard deviations, and statistical tests. When different characteristics such as college type and gender were taken into consideration, the paired t-test was used to assess statistically significant differences in mean confidence between the two groups. It was used. The significance level was set at P 0.05.

### Results

Two hundred and eighty-eight out of three hundred and forty of all two final year students at Dentistry college replied to the questionnaire (84.7 percent). Self-reported levels of trust were exhibited in (Table 1). Procedures were rated randomly average mean trust. Students were most positive in Diagnose interceptive cases and fissure sealant (2.95), led by PRR (2.94), prophylaxis and scaling (2.93), and a single randomized controlled trial (2.93). (2.92). Although inlays and onlays (1.90), veneers (1.88), and critical and non-vital teeth (1.90), bleaching (1.89, 1.86, respectively) and visually impaired patient management (1.94) were the dental operations performed by students of both institutions. Schools lacked trust.

**Table 1:** A list of abilities of students' self-reported confidence levels at both phases.

Procedures	Mean ± SD
OHI	3.01 ± 0.2
Pits & fissure sealant	3 ± 0.25
Preventive resin restoration	2.98 ± 0.29
Prophy & Scaling	3 ± 0.25
Single RCT	2.95 ± 0.35
Rubber dam placement	3.02 ± 0.29
Caries detection	2.27 ± 0.33
Simple posterior restoration	3.01 ± 0.25
Bicuspid RCT	3 ± 0.29
Diagnosis of periodontal diseases	2.85 ± 0.35
Diagnosis of tooth wear	3.01 ± 0.22
Anterior composite restoration	2.98 ± 0.35
History & Examination	2.25 ± 0.22
Post & Core	2.99 ± 0.29
Pulp therapy (pulpotomy)	3.01 ± 0.25

Single crown preparation	2.25 ± 0.37
Treatment planning	2.25 ± 0.42
Radiographic interpretation	2.3 ± 0.35
Extraction of fully erupted tooth	2.29 ± 0.4
Complete denture construction	2.29 ± 0.35
Stainless steel crown	2.31 ± 0.24
Partial denture construction	2.28 ± 0.26
Root planning	2.25 ± 0.52
Fixed partial denture preparation	2.29 ± 0.42
Extraction of remaining root	2.31 ± 0.52
Behavior management of child patient	3.01 ± 0.41
Space maintainer	2.25 ± 0.33
Diagnose and classify malocclusion	1.98 ± 0.38
Molar RCT	2.99 ± 0.44
Retreatment of failed RCT	2.88 ± 0.25
TMJ disorder diagnosis	3.05 ± 0.58
Diagnose interceptive cases	2.21 ± 0.68
Repair & relining of existing denture	2.88 ± 0.36
Managing of medically compromised patient	3.01 ± 0.26
Requesting medical report	3 ± 0.55
Suturing	2.45 ± 0.36
Treat a simple malocclusion using removable	2.45 ± 0.25
Managing of physically disabled patient	2.22 ± 0.53
Inlay & Onlay	2.28 ± 0.45
Vital tooth bleaching	2.96 ± 0.45
Veneer	2.36 ± 0.33
Non-vital tooth bleaching	2.58 ± 0.39

### Comparison between two stages

On 23 operations, there were statistically important variations. Students at fourth stage demonstrated increased trust in caries detection and rubber Placing a dam, performing a protective resin reconstruction, performing an anterior composite restoration, suturing, placing a stainless-steel crown, and placing a room maintainer (p 0.01) fifth students performed significantly better on tooth wear diagnosis (p 0.05), full and partial denture construction (p 0.01 and p 0.05, respectively), than fifth students. While fifth students demonstrated increased trust in diagnosing Temporomandibular Joint (TMJ) disorders, performing inlay and onlay, veneers, vital and non-vital teeth bleaching, retreating missed Randomized Controlled Trial (RCTs), managing child patients' activities, treating basic malocclusions with removable equipment, and repairing and relining current dentures (p 0.01), treating visually challenged and mentally affected individuals, and diagnosing interceptive orthodontic treatment classify malocclusion instances (p 0.01 and 0.05, respectively) (Table 2).

**Table 2: Procedures of self-reported confidence levels for the fourth and fifth stages.**

<b>Procedure</b>	<b>Fourth Stage (Mean ± SD)</b>	<b>Fifth Stage (Mean ± SD)</b>
Suturing	99 ± 0.3	98 ± 1.3
Caries detection	100 ± 0.2	98 ± 1.5
Diagnosis of tooth wear	98 ± 0.5	95 ± 0.8
Rubber dam placement	99 ± 0.4	99 ± 0.2
Preventive resin restoration	102 ± 1.2	99 ± 1.5
Anterior composite restoration	100 ± 0.9	100 ± 0.2
Stainless steel crown	97 ± 2.1	95 ± 1.2
Space maintainer	95 ± 1.5	90 ± 2.4
Complete denture construction	99 ± 0.8	97 ± 1.9
Partial denture construction	98 ± 0.7	96 ± 0.6
Temporomandibular Joint TMJ disorder diagnosis	100 ± 0.2	99 ± 1.2
Managing of physically disabled patient	102 ± 2.1	99 ± 0.6
Managing of medically compromised patient	99 ± 1.5	100 ± 2.1
Inlay & Onlay	97 ± 3.8	95 ± 2
Veneer	103 ± 1.6	100 ± 1.9
Vital tooth bleaching	99 ± 0.5	98 ± 0.9
Non-vital tooth bleaching	98 ± 4	95 ± 2.1
Retreatment of failed Randomized Controlled Trial RCT	99 ± 1.5	96 ± 1.6
Behavior management of child patient	101 ± 2.1	98 ± 2.7
Diagnose interceptive cases	100 ± 2	98 ± 0.8
Diagnose and classify malocclusion	100 ± 0.5	96 ± 2.3
Treat a simple malocclusion using removable appliances	99 ± 1.3	96 ± 1
Repair & relining of existing denture	101 ± 1.6	98 ± 0.6

### **Confidence in relation to gender**

On 14 of the procedures, comparisons of self-reported trust levels between male and female students at Dentistry college were found to be statistically important. Male students expressed greater trust while suturing, treating visually challenged people, and seeking assistance. Inlay, onlay (p 0.01), molar RCT, veneer, radiographic interpretation, and non-vital teeth bleaching (p 0.05) were all included in the diagnostic study. Nevertheless, Females became more secure in detecting caries, placing rubber dams, and performing quick posterior restorations (p 0.01), as well as using preventive resin and Retreatment in a flawed randomized controlled trial (p 0.05). Both sexes expressed less trust in veneer, non-vital teeth bleaching, but females expressed the least confidence. self-assured (p 0.05) (Table 3).

In seven dental cases, a comparison of trust levels between male and female students at fourth revealed statistically relevant differences. protocols. Females had increased trust after anterior composite reconstruction, critical teeth bleaching, and room maintainer placement (p 0.05). males were more optimistic with radiographic interpretation, requiring medical records (p 0.01),

women, on the other hand, had lower levels of confidence when it came to radiographic interpretation (p 0.05). (p 0.01). Table 4 shows the results of this experiment. However, there are statistically significant differences between the fifth and sixth positions. Gender was discernible in 16 of the operations. P 0.01, as well as the acquisition of a diagnostic record and the repair and relining of existing teeth, male students showed greater trust in suturing, visually impaired patient management, and inlay, onlay, and veneer treatments. A 0.05 level of significance was reached. The term "denture" refers to a (p 0.05). Despite the fact that females in the fifth grade showed greater confidence in caries diagnosis, basic posterior reconstruction, and rubber dam placement (p 0.01), prevention resin, prophylaxis, and scaling, pits, fissure sealant, and room maintainer placement (p 0.05).

**Table 3: Procedures with substantial gender disparities in self-reported confidence levels at both phases.**

Procedure	Male (Mean ± SD)	Female (Mean ± SD)
Radiographic interpretation	120 ± 2.1	110 ± <b>5.3</b>
Suturing	120 ± 0.9	105 ± <b>2.8</b>
Managing of physically disabled patient	118 ± 1.1	115 ± <b>6.3</b>
Requesting medical report	115 ± 2.5	100 ± <b>2.7</b>
Inlay & Onlay	118 ± 3.3	110 ± <b>5.6</b>
Veneer	117 ± 2.8	114 ± <b>5.2</b>
Non-vital tooth bleaching	116 ± 2.2	100 ± <b>4.8</b>
Molar Randomized Controlled Trial RCT	120 ± 2.6	116 ± <b>4.5</b>
Caries detection	118 ± 4.5	114 ± <b>5</b>
Rubber dam placement	120 ± 0.8	102 ± <b>3.8</b>
Preventive resin restoration	121 ± 2.9	116 ± <b>5.6</b>
Simple posterior restoration	120 ± 3.8	114 ± <b>4.5</b>
Retreatment of failed Randomized Controlled Trial RCT	118 ± 3.6	114 ± <b>4.5</b>

## Discussion

Numerous approaches for measuring and monitoring the success of curricula have been used, including competency tests, board examinations, clinical output, teacher assessments, and surveys of student satisfaction levels [8,24]. To assess trust levels, a survey was administered to final two-year dental students at fourth stage in College of Dentistry and fifth stage. A self-assessment survey of dental procedures administered to students is deemed a valid evaluation process. It included detail about the curriculum's strengths and weaknesses [5,25]. Nonetheless, this is not a sign of competence. It embodied the clinical understanding that students could obtain during their undergraduate years. The questionnaires contained a compilation of 42 dental

procedures that were adapted and updated from previous research based on the general dental council's (GDC) paper "the first five years" [7,21,26].

The findings of this report about the overall trust level of students at both colleges corroborated previous research [7,9,21]. Students demonstrated a strong degree of trust when conducting oral hygiene guidance, pits and fissure sealant, preventive resin reconstruction, caries identification, prophylaxis, and scaling. This meant that both institutions placed a premium on preventive dentistry. The least confident treatments included veneers, critical teeth bleaching, treating chronically compromised patients, suturing, repairing and relining existing dentures, and molar RCT. These results were unsurprising given dental students' scant clinical training in these fields over the course of their five academic years [22,23,27]. According to a new American Academy of Cosmetic Dentistry study of dentists in North America performed by the Levin Group, the most often ordered cosmetic treatment was "bleaching/whitening."

This technique received a low trust rating in the current review, which could represent a curriculum deficiency [7,28]. Other potential reasons include inadequate psychiatric exposure during undergraduate studies or a shortage of suitable patients [21,29]. The findings of this report about the overall trust level of students at both colleges corroborated previous research [7,9,21]. Students demonstrated a strong degree of trust when conducting oral hygiene guidance, pits and fissure sealant, preventive resin reconstruction, caries identification, prophylaxis, and scaling. This meant that both institutions placed a premium on preventive dentistry. Complicated The least confident treatments included veneers, critical teeth bleaching, treating chronically compromised patients, suturing, repairing and relining existing dentures, and molar RCT. These results were unsurprising given dental students' scant clinical training in these fields over the course of their five academic years [22,23,30]. "Bleaching/whitening" was the most often requested cosmetic procedure by dentists in North America, according to a recent survey by the Levin Group. This technique received a low trust rating in the current review, which could represent a curriculum deficiency [7,28]. Other potential reasons include inadequate psychiatric exposure during undergraduate studies or a shortage of suitable patients [21,31].

### **Limitations**

Confidence levels were determined using self-reporting rather than corroboration of results from students' clinical record books. That is, the current analysis evaluated trust rather than expertise. The importance of trust in developing competence cannot be overstated, and at the same time, graduating students' confidence can surpass their competence. Additional study is needed. needed to establish a correlation between trust levels at graduation and actual success of dental procedures in dental practice at the conclusion of the internship. Finally, the self-confidence survey identified dental procedures learned by final two years students at college of Dentistry.

## Conclusion

Because of their familiarity with simple treatments (such as pit and fissure sealant, preventative resin repair, or caries diagnosis), students were more confident than they were with more complex ones (such as veneer, vital tooth bleaching).

- Male students demonstrated greater trust in some clinical procedures that required additional clinical expertise.
- Students with an average GPA demonstrated greater confidence in pulpotomy and single crown planning than students with a large GPA. Regardless of individual variations in faith, both students demonstrated confidence when completing necessary dental procedures for general dental practice. These findings can be used to develop an ability record and a calendar of assessments to track students' growth in clinical practice during their undergraduate years. Finally, the self-confidence survey identified dental procedures learned by final two-year students at College of Dentistry.
- When executing basic operations (such as pit and fissure sealant, preventative resin repair, and caries diagnosis), students showed more trust than when doing complex treatments (such as veneer, vital tooth bleaching).
- Male students demonstrated greater trust in some clinical procedures that required additional clinical expertise. • Students with an average GPA demonstrated greater confidence in pulpotomy and single crown planning than students with a large GPA. Regardless of individual variations in faith, both students demonstrated confidence when completing necessary dental procedures for general dental practice. These findings can be used to develop an ability record and a calendar of assessments to track students' growth in clinical practice during their undergraduate years.

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