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# Can seeing your future smile with technology help you make better dental decisions?

**Submission date**
31/07/2025

**Recruitment status**
No longer recruiting

**Registration date**
04/08/2025

**Overall study status**
Completed

**Last Edited**
04/08/2025

**Condition category**
Oral Health

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

## Plain English summary of protocol

Background and study aims
Many patients are hesitant to start orthodontic treatment before cosmetic dental work like veneers or crowns. This study aims to find out whether using technology to show patients what their smile could look like after treatment helps them feel more confident in choosing orthodontics before restorative procedures.

Who can participate?
Adults aged 18 to 60 years old who are unhappy with their smile and need both orthodontic and restorative treatment, and who have good oral and general health.

What does the study involve?
Participants will be randomly placed in one of two groups. One group will receive a standard consultation. The other group will use a computer simulation to preview how their smile will look after treatment. All participants will answer a short questionnaire about their decision, confidence, and satisfaction.

What are the possible benefits and risks of participating?
There are no known physical risks. The main benefit is that participants may better understand their treatment options and feel more confident in their decisions. Their participation will help improve how dentists use technology in consultations.

Where is the study run from?
Miracle Dental Clinic, Bakhtyari, Jamal Irfan Street, As Sulaimaniyah (Iraq)

When is the study starting and how long is it expected to run for?
July 2025 to December 2025

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Dr Darwn Abdulateef, darwn.abdulateef@univsul.edu.iq

# Contact information

### Type(s)
Public, Scientific, Principal investigator


### Contact name
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# Additional identifiers

### Clinical Trials Information System (CTIS)
Nil known

### ClinicalTrials.gov (NCT)
Nil known

### Protocol serial number
Nil known

# Study information

### Scientific Title
Influence of digital reality technology on patient decision-making in orthodontic-restorative smile makeover treatment planning

### Study objectives
To assess the impact of Digital Reality (DR) technology on persuading patients to accept treatment prior to restorative procedures in smile makeover.

### Ethics approval required
Ethics approval required

### Ethics approval(s)
approved 16/07/2025, Ethics Committee of The College of Dentistry, University of Sulaimani (Old Campus, Iskan, As Sulaimaniyeh, Sulaimaniyeh, 46001, Iraq; +964 (0)7731087000; dentistry.ethics@univsul.edu.iq), ref: COD-EC-25-0084

### Study design
Randomized controlled trial

### Primary study design
Interventional

### Study type(s)
Quality of life

### Health condition(s) or problem(s) studied
Malocclusion

### Interventions
The researchers will randomly assign patients to either a group using digital reality technology for treatment planning or a control group without it, and will compare outcomes related to decision-making.

Method of randomisation:
Participants will be randomized using computer-generated simple random numbers in a 1:1 ratio.

Arm 1 (Control Group): Standard consultation with explanation and 2D images only.
Arm 2 (Intervention Group): Digital reality-assisted consultation using digital smile design and virtual simulation to preview the anticipated outcome.

### Intervention Type
Behavioural

### Primary outcome(s)
Patient decision to accept or reject orthodontic treatment, measured using a single-item questionnaire with a binary (Yes/No) response immediately after consultation

### Key secondary outcome(s))
1. Patient satisfaction with the consultation process, measured using a 1–7 Likert scale questionnaire immediately after consultation
2. Patient understanding of treatment, measured using a 3-item Likert-scale questionnaire (1–7 scale) immediately after consultation
3. Confidence in treatment decision, measured using a 3-item Likert-scale questionnaire immediately after consultation
4. Willingness to undergo orthodontic treatment, measured with 3 questions on a 1–7 Likert scale immediately after consultation

### Completion date
01/12/2025

## Eligibility

### Key inclusion criteria

1. Clinical indication for combined orthodontic and restorative treatment
2. Adults 18-60 years old
3. Patients who report dissatisfaction with their smile
4. Patients with no systemic condition that could compromise healing

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group
Adult

### Lower age limit
18 years

### Upper age limit
60 years

### Sex
All

### Key exclusion criteria
1. Previous orthodontic treatment within the last 5 years
2. Contraindications to either treatment modality
3. Severe skeletal discrepancies requiring orthognathic surgery
4. History of facial trauma or surgery altering smile
5. Non-compliance or unwillingness to follow study protocol

### Date of first enrolment
10/08/2025

### Date of final enrolment
01/11/2025

## Locations

### Countries of recruitment
Iraq

### Study participating centre
**Miracle Dental Clinic**
Bakhtyari
Jamal Irfan Street
As Sulaimaniyah
Iraq
46001

# Sponsor information

**Organisation**
University of Sulaimani

**ROR**
https://ror.org/00saanr69

# Funder(s)

**Funder type**
Other

**Funder Name**
Investigator initiated and funded

# Results and Publications

**Individual participant data (IPD) sharing plan**
IPD will not be shared. The data is used only for this study and is stored securely in accordance with ethical guidelines.

**IPD sharing plan summary**
Not expected to be made available

**Study outputs**

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Participant information sheet | Participant information sheet | 11/11/2025 | 11/11/2025 | No | Yes |