

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

Submission date 31/07/2025	Recruitment status Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 04/08/2025	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 04/08/2025	Condition category Oral Health	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> 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

Dr Darwn Abdulateef

ORCID ID

<https://orcid.org/0000-0002-3897-3575>

Contact details

University of Sulaimani

College of Dentistry

As Sulaimaniyah

Iraq

46001

+964 (0)7731087000

darwn.abdulateef@univsul.edu.iq

Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

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

Secondary study design

Randomised controlled trial

Study setting(s)

Dental clinic

Study type(s)

Quality of life

Participant information sheet

Not available in web format, please use the contact details to request a participant information sheet

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 measure

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

Secondary outcome measures

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

Overall study start date

16/07/2025

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

Age group

Adult

Lower age limit

18 Years

Upper age limit

60 Years

Sex

Both

Target number of participants

60

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

Sponsor details

College of Dentistry

As Sulaimaniyah

Iraq

46001

Sponsor type

University/education

Website

<https://univsul.edu.iq>

ROR

<https://ror.org/00saanr69>

Funder(s)

Funder type

Other

Funder Name

Investigator initiated and funded

Results and Publications

Publication and dissemination plan

The researchers plan to submit the findings to a peer-reviewed scientific journal

Intention to publish date

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