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# Acceptability of teledentistry during the COVID-19 pandemic in Saudi Arabia

**Submission date**
11/06/2021

**Recruitment status**
No longer recruiting

**Registration date**
14/06/2021

**Overall study status**
Completed

**Last Edited**
17/08/2022

**Condition category**
Oral Health

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

## Plain English summary of protocol

Background and study aims
COVID-19 is a condition caused by the coronavirus (called SARS-CoV-2) that was first identified in late 2019. Dental care has to be maintained during the COVID-19 outbreak. One of the suggested options to use during the outbreak is telehealth and teledentistry. Teledentistry is defined as “the remote provision of dental care, advice, or treatment through the medium of information technology, rather than through direct personal contact with any patient(s) involved”. This study aims to assess the validity, knowledge, attitude, perceptions and challenges of using teledentistry for diagnosis among dental patients compared to regular dental visits in Saudi Arabia during the COVID-19 pandemic.

Who can participate?
Patients aged 18 years and over recruited from Umm Al-Qura University (UQU) Dental School, Makkah, Saudi Arabia.

What does the study involve?
Participants are randomly allocated into the study group or the control group. The study group receive a tele-dentistry session followed by an assessment questionnaire to evaluate their knowledge, attitude, perception, and challenges of teledentistry, in addition to an experience assessment part to evaluate their impression of experiencing teledentistry. The control group receive nothing other than the assessment questionnaire.

What are the possible benefits and risks of participating?
The main benefit is receiving a diagnosis during the teledentistry session. There are no expected risks.

Where is the study run from?
Umm Al-Qura University Dental Hospital (Saudi Arabia)

When is the study starting and how long is it expected to run for?
June 2020 to August 2022

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Dr Khalid Aboalshamat
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# Contact information

### Type(s)
Scientific

### Contact name
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# Additional identifiers

### Protocol serial number
HAPO-02-K-01 2-2021-O1-521

# Study information

### Scientific Title
Validity, knowledge, attitude, perception and challenges of using teledentistry among dental patients in Saudi Arabia during the COVID-19 pandemic: a randomized clinical trial

### Study objectives
Is it valid to use teledentistry for diagnosis compared to a regular dental visit, and what is the level of knowledge, attitude, perceptions and challenges of using teledentistry among dental patients in Saudi Arabia during the COVID-19 pandemic?

### Ethics approval required
Old ethics approval format

### Ethics approval(s)

Approved in 10/01/2021, Umm Al-Qura University Institutional Review Board (Umm Al-Qura University, Makkah, 24352, Saudi Arabia; +966 (0)125270000; irb.uqudent@uqu.edu.sa), ref: HAPO-02-K-012-2021-01-521

## Primary study design
Interventional

## Study design
Parallel-group single-blind randomized controlled trial

## Study type(s)
Diagnostic

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

## Interventions
Randomization is conducted using software to randomly divide the participants into the study group and the control group.

In the study group, the participants are contacted via a WhatsApp social media platform and are given a video demonstrating how to take a proper intraoral photograph. Then they are asked to take five intraoral pictures and send them via WhatsApp. The WhatsApp social media platform is used because of the end-to-end encryption to preserve patient confidentiality. Then the research team have a teledentistry session with the participant. The session is a phone call for about 10 minutes. The first three minutes include questions about past dental history helping the data collector to collect information about the chief complaint and medical history. The next 3 minutes investigate the Decayed, Missing, Filled (DMF) index for each tooth and oral hygiene status. Further information is discussed with the participant in regards to what was found in the sent pictures to clarify anything that cannot be visualized. This discussion also asks about their last dental visit, other dental symptoms, and past dental procedures to help with assessment. After that, the data collector discusses with the participant his/her chief complaint with an emergency evaluation and initial recommendation in simple language. The rest of the session is for the participant's questions and concerns. After that the participant receives a self-report questionnaire to assess their knowledge, attitude, perception, challenges toward teledentistry and their impression from the teledentistry experience.

The control group receive a self-report questionnaire to assess their knowledge, attitude, perception, challenges toward teledentistry without any intervention.

## Intervention Type
Other

## Primary outcome(s)
1. The validity of using teledentistry for diagnosis measured using dental records and clinical examination at baseline and follow up visit (between 1-3 months)
2. The knowledge, attitude, perceptions and challenges of using teledentistry measured via questionnaire at baseline and follow up visit (between 1-3 months)

## Key secondary outcome(s)
There are no secondary outcome measures

### Completion date
01/08/2022

## Eligibility

### Key inclusion criteria
1. Adult over 18 years of age
2. Arabic speakers living in Saudi Arabia
3. Have smartphone and social media apps (WhatsApp), with a valid contact number to use for communication during the tele-dental consultation
4. Agree to participatee in the intervention and answer all the questionnaires

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group
Adult

### Lower age limit
18 Years

### Sex
All

### Total final enrolment
70

### Key exclusion criteria
1. Patients with hearing problems
2. Did not approve to participate in the trial and did not sign the consent form

### Date of first enrolment
17/02/2021

### Date of final enrolment
08/04/2021

## Locations

### Countries of recruitment
Saudi Arabia

### Study participating centre
**Umm Al-Qura University Dental Hospital**
Taif Road, 21955

Makkah
Saudi Arabia
21955

# Sponsor information

**Organisation**
Umm al-Qura University

**ROR**
https://ror.org/01xjqrm90

# Funder(s)

**Funder type**
Other

**Funder Name**
Investigator initiated and funded

# Results and Publications

**Individual participant data (IPD) sharing plan**
The datasets generated during and/or analysed during the current study are available from the corresponding author Dr Khalid Aboalshamat (ktaboalshamat@uqu.edu.sa) on reasonable request as an SPSS file (unidentified). The data will be available upon request for 2 years. Data can be accessed by the journal to which the researchers will submit their article, any Saudi Governmental authority, and researchers after careful consideration of their scientific intention to use. All data are anonymous with no identification.

**IPD sharing plan summary**
Available on request

**Study outputs**

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Results article | | 01/06/2022 | 17/08/2022 | Yes | No |
| Participant information sheet | | | 08/07/2021 | No | Yes |
| Protocol file | | | 08/07/2021 | No | No |