

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

28 Jun 2026

### COVID-19 Pandemic: Effect of Digital-Based Educational Intervention Using Protection Motivation Theory on Saudi Electronic University students' knowledge and self-protective behaviors

#### Protocol summary

##### Study aim

Assess the effect of digital-based educational intervention about COVID-19 using protection motivation theory on Saudi Electronic University students' knowledge and self-protective behaviors.

##### Design

The experimental study, participants will be followed for two months. random assignment of the participants will be done for case and control. the study will be conducted from September 2021 to January 2022.

##### Settings and conduct

Saudi electronic University

##### Participants/Inclusion and exclusion criteria

A multistage cluster random sample will be utilized to select the study participants. First, two branches from the Saudi electronic university were randomly chosen. Second, in each branch, the two available non-health colleges were included in the study to avoid contamination of the sample (college of administrative and financial sciences, and college of sciences and theoretical studies). Third, inside each college, a convenience sampling technique will be used to select the required participants. The sample size will be calculated using the Thompson equation based on the total number of students in SEU during the academic year 2021/2022. Inclusion and exclusion criteria: students who were enrolled in SEU and willing to participate in the study were included whereas those who previously participated in any educational program about COVID-19 were excluded from the study.

##### Intervention groups

Digital-based educational intervention based on protection motivation theory

##### Main outcome variables

knowledge and self-protective behaviors regarding COVID-19

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20210131050192N3**

Registration date: **2021-08-14, 1400/05/23**

Registration timing: **prospective**

Last update: **2021-08-14, 1400/05/23**

Update count: **0**

##### Registration date

2021-08-14, 1400/05/23

##### Registrant information

##### Name

Wafaa Elgzar

##### Name of organization / entity

Damanhour University

##### Country

Egypt

##### Phone

+20 13 2265261

##### Email address

wafaa.elgzar@nur.dmu.edu.eg

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-09-01, 1400/06/10

##### Expected recruitment end date

2022-01-30, 1400/11/10

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

IRB number: SEUREC-CHS21124

### Scientific title

COVID-19 Pandemic: Effect of Digital-Based Educational Intervention Using Protection Motivation Theory on Saudi Electronic University students' knowledge and self-protective behaviors

### Public title

Digital-Based Education on students' knowledge and self-protective behaviors

### Purpose

Education/Guidance

### Inclusion/Exclusion criteria

#### Inclusion criteria:

Students who were enrolled in SEU Willing to participate in the study

#### Exclusion criteria:

Those who previously participated in any educational program about COVID-19 were excluded from the study.

### Age

From **18 years** old to **45 years** old

### Gender

Both

### Phase

N/A

### Groups that have been masked

*No information*

### Sample size

Target sample size: **300**

### Randomization (investigator's opinion)

Not randomized

### Randomization description

### Blinding (investigator's opinion)

Not blinded

### Blinding description

### Placebo

Not used

### Assignment

Parallel

### Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Saudi Electronic University ethical committee

##### Street address

8 ElRian street , Eldamam KSA

##### City

Eldamam

##### Postal code

31454

#### Approval date

2021-05-05, 1400/02/15

#### Ethics committee reference number

## Health conditions studied

### 1

#### Description of health condition studied

Corona Virus infection

#### ICD-10 code

B34.2

#### ICD-10 code description

Coronavirus infection, unspecified

## Primary outcomes

### 1

#### Description

Students' knowledge regarding COVID-19

#### Timepoint

two months post intervention

#### Method of measurement

Part II: Students' knowledge regarding COVID-19: it composed of 24 multiple choices questions. The participants were scored "one" for "yes" answer, and "zero" for "no" or "do not know" answer. The total knowledge score ranged between 0-24 and will be categorized as poor ( $\leq 60\%$ ), fair ( $60 \leq 75\%$ ) or good ( $> 75\%$ ).

### 2

#### Description

students' self-protective behaviors regarding COVID-19

#### Timepoint

two months post intervention

#### Method of measurement

Protection motivation theory scale: it assessed the protection motivation factors regarding COVID-19 pandemic. It composed of 28 items distributed over nine constructs: perceived vulnerability (3 items), perceived severity (3 items), intrinsic reward (3 items), extrinsic reward (3 items), fear (3 items), response efficacy (3 items), self-efficacy (3 items), response cost (3 items) and intention for self-protection (4 items). In each item the participants should choose one of five alternatives: strongly agree= 5, agree =4, indifference =3, disagree =2 and strongly disagree=5. For response cost items, scoring will be reversed. The higher score indicates higher self-protection.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

For the intervention group: the educational intervention will be designed and carried out based on PMT through

four sequential phases: - Needs assessment Phase: it assessed the students' knowledge, self-protection behaviors, and protection motivation factors during COVID-19 pandemic through using the developed tool as a pre-test. Planning phase: based on the results of needs assessment phase, and in the light of the relevant literature, the investigators designed a digital educational intervention based on PMT then it will be independently evaluated by external peer reviewers. The educational intervention aimed to enhance their COVID-19 related knowledge and foster their positive attitude and beliefs about its preventive behaviors. Students' emails and phone numbers were collected to develop WhatsApp group for the intervention group to facilitate communication. Implementation phase: after program designing and approval, PowerPoint presentation will be sent for the students through their emails. A key health message about COVID-19 will be sent for them through WhatsApp on daily basis to maintain contact and boost their self-efficacy and intention for self-protection. A real-time availability of the investigators through Zoom cloud meeting room will be done on weekly basis to answer students' questions and correct any misinformation for those in need. Evaluation phase: follow up will be conducted after 2 months using the same pre-test tools.

#### Category

Prevention

## 2

#### Description

For the control group: an online pre-test will be done and repeated two months later, using the same pretest tools (Part II, III, IV). On an ethical basis, the PowerPoint presentation will be given for the control group after the study completion.

#### Category

Prevention

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Saudi Electronic University

##### Full name of responsible person

6 ElRian street , Eldamam, Kingdom of Saadia Arabia

##### Street address

8 ElRian street , Eldamam KSA

##### City

Eldamam

##### Postal code

31454

##### Phone

+966 13 892 7444

##### Email

dmm/seu@seu.edu.sa

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Saudi Electronic University

##### Full name of responsible person

Samiha Hamdi Said

##### Street address

8 ElRian street , Eldamam KSA

##### City

Eldamam

##### Postal code

31454

##### Phone

+966 13 892 7444

##### Email

s.ramadan@seu.edu.sa

#### Grant name

institutional funding research support

#### Grant code / Reference number

7861

#### Is the source of funding the same sponsor organization/entity?

Yes

#### Title of funding source

Saudi Electronic University

#### Proportion provided by this source

100

#### Public or private sector

Public

#### Domestic or foreign origin

Domestic

#### Category of foreign source of funding

empty

#### Country of origin

#### Type of organization providing the funding

Academic

## Person responsible for general inquiries

#### Contact

##### Name of organization / entity

Saudi Electronic University

##### Full name of responsible person

Samiha Hamdi Said

##### Position

Eldamam

##### Latest degree

Ph.D.

##### Other areas of specialty/work

public health Nursing

##### Street address

8 ElRian street , Eldamam KSA

##### City

Eldamam

##### Province

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##### Postal code

31454

##### Phone

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**Email**

s.ramadan@seu.edu.sa

## Person responsible for scientific inquiries

**Contact**

**Name of organization / entity**

Saudi Electronic University

**Full name of responsible person**

Samiha Hamdi Said

**Position**

Associate professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

public health nursing

**Street address**

8 ElRian street , Eldamam KSA

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## Person responsible for updating data

**Contact**

**Name of organization / entity**

Saudi Electronic University

**Full name of responsible person**

Samiha Hamdi Said

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Associate professor

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Undecided - It is not yet known if there will be a plan to make this available

**Statistical Analysis Plan**

Undecided - It is not yet known if there will be a plan to make this available

**Informed Consent Form**

Undecided - It is not yet known if there will be a plan to make this available

**Clinical Study Report**

Yes - There is a plan to make this available

**Analytic Code**

Undecided - It is not yet known if there will be a plan to make this available

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**

published research report that contains all the findings

**When the data will become available and for how long**

within one year and will be available log life

**To whom data/document is available**

for public

**Under which criteria data/document could be used**

for scientific use and public education

**From where data/document is obtainable**

it will be published in scientific journal

**What processes are involved for a request to access data/document**

none

**Comments**

none