Clinical Trial Protocol
Iranian Registry of Clinical Trials

13 Nov 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

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
IRB number: SEUREC-CHS21124

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 (≤60%), fair (60≤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

Eldamam

Postal code

31454

Phone

+966 13 892 7444

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

City

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s.ramadan@seu.edu.sa

Person responsible for updating data

Contact

Name of organization / entity

Saudi Electronic University

Full name of responsible person

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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