

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

Comparison of the effect of using ANEDOC APP and daily educative message reminder in knowledge, consumption of anemia prevention diet and Fe Supplement, and hemoglobin level on pregnant women

Protocol summary

Study aim

comparing the effectiveness of using the ANEDOC APP application daily educational messages given through WhatsApp and the control group in increasing anemia prevention knowledge and behavior in pregnant women

Design

Three-arm parallel-group pilot randomized controlled trial. Open-label trial. Randomization was computerized with concealed randomization sequence carried out by field officer.

Settings and conduct

This pilot RCT will be conducted in 2 Health centers in Surakarta regency

Participants/Inclusion and exclusion criteria

Inclusion criteria are 1) pregnant women with 18-30 weeks gestational age at the time of the study, 2) who did ANC at the Puskesmas Sangkrah and Kratonan Health Center (Surakarta Regency), 3) had an android based smartphone, 4) are active WhatsApp users, and 5) are willing to be research respondents. The exclusion criteria are pregnant woman who had serious gestational complications such as antepartum hemorrhage, severe preeclampsia, and cardiovascular disease

Intervention groups

There are 2 interventions groups in this study. 1) ANEDOC APP intervention. Respondents are guided to install ANEDOP APP on their mobile phones and activate the education and reminder feature of the ANEDOC APP. The duration of the intervention was 6 weeks. 2) Daily messages reminder. Respondents will receive daily educational and reminder messages through WhatsApp. The short message delivered in visual graphics consists of two sentences. The first sentence contains educational content about the symptoms, impacts, and prevention of anemia. The last sentence is a persuasion message to do the anemia prevention behaviors. There will be 21 different messages that will be sent twice in 6 weeks

period. The control group will receive standard Antenatal Care from the health centers.

Main outcome variables

knowledge, consumption of anemia prevention diet and Fe Supplement, and hemoglobin level.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220320054334N1**

Registration date: **2022-04-17, 1401/01/28**

Registration timing: **registered_while_recruiting**

Last update: **2022-04-17, 1401/01/28**

Update count: **0**

Registration date

2022-04-17, 1401/01/28

Registrant information

Name

Izzatul Arifah

Name of organization / entity

The University of Muhammadiyah Surakarta

Country

Indonesia

Phone

+62 271 717417

Email address

izzatul.arifah@ums.ac.id

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-08, 1401/01/19

Expected recruitment end date

2022-04-30, 1401/02/10
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparison of the effect of using ANEDOC APP and daily educative message reminder in knowledge, consumption of anemia prevention diet and Fe Supplement, and hemoglobin level on pregnant women

Public title
Effect of mHealth intervention in preventing pregnancy anemia

Purpose
Prevention

Inclusion/Exclusion criteria
Inclusion criteria:
Pregnant women with 18-30 weeks gestational age at the time of the study Pregnant woman who did the Antenatal Care at the Sangkrah and Kratonan Health Center (Puskesmas) in Surakarta Regency, Central Java, Indonesia Had an android based smartphone Active WhatsApp users willing to be research respondents
Exclusion criteria:
had serious gestational complications such as hypertension, preeclampsia, and cardiovascular disease

Age
No age limit

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **75**

Randomization (investigator's opinion)
Randomized

Randomization description
The method of randomization is block randomization. Unit of randomization is individual. Tools used in randomization is web-based software. A combination of 4 in 1 block and 2 in 1 block is used to built the sequence. The allocation concealment was not carried out

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

Ethics committee of Faculty of Medicine, University of Muhammadiyah Surakarta

Street address

No. 1 Pos Tromol street, Gonilan, Surakarta city. Faculty of Medicine, University of Muhammadiyah Surakarta

City

Surakarta

Postal code

57102

Approval date

2022-04-05, 1401/01/16

Ethics committee reference number

4208/B.2/KEPK-FKUMS/IV/2022

Health conditions studied

1

Description of health condition studied

anemia in pregnant women

ICD-10 code

D50.9

ICD-10 code description

Iron deficiency anemia, unspecified

Primary outcomes

1

Description

Knowledge, consumption of anemia prevention diet and Fe supplement

Timepoint

Before intervention and 1 week after intervention

Method of measurement

Measuring knowledge, consumption of anemia prevention diet, and Fe supplement using questionnaires.

Secondary outcomes

1

Description

Hemoglobin level

Timepoint

Before intervention and 1 weeks after intervention

Method of measurement

Measuring the hemoglobin level using Sahli's Haemoglobinometer

Intervention groups

1

Description

Intervention group 1: ANEDOC APP intervention. Respondents are guided to install ANEDOP APP on their mobile phones. They will be given instructions to fill in the data needed to run the application and activated the education and reminder feature of the ANEDOC APP. They will be monitored using this application through the WhatsApp Group. The duration of the intervention was 6 weeks.

Category

Treatment - Other

2

Description

Intervention group 2: Daily messages reminder. Respondents will receive daily educational and reminder messages through WhatsApp. The short message delivered in visual graphics consists of two sentences. The first sentence contains educational content about the symptoms, impacts, and prevention of anemia. The last sentence is a persuasion message to do the anemia prevention behaviors. There will be 21 different messages that will be sent twice in 6 weeks period.

Category

Treatment - Other

3

Description

Control group: The control group will receive standard Antenatal Care from the Primary Health Care.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Kratonan Primary Health care

Full name of responsible person

Gigih Dewi Jayanti

Street address

No. 34 Pringgondani Street, Kratonan, Serengan, Surakarta City

City

Surakarta

Postal code

57153

Phone

+62 271 655539

Email

izzatul.arifah@ums.ac.id

2

Recruitment center

Name of recruitment center

Sangkrah Primary Health Care

Full name of responsible person

Lilia Fitrianingsih

Street address

Sungai Indragiri Streets, Sangkrah, Pasar Kliwon, Surakarta City

City

Surakarta

Postal code

57199

Phone

+62 271 655061

Email

izzatul.arifah@ums.ac.id

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

University of Muhammadiyah Surakarta

Full name of responsible person

Dr. Umi Budi Rahayu, S.Ft

Street address

No.1 Tromol Pos street, Gonilan, Surakarta City

City

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Postal code

57102

Phone

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Email

ums@ums.ac.id

Web page address

<https://www.ums.ac.id/>

Grant name

Tri Dharma College Integration Grant

Grant code / Reference number

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

Yes

Title of funding source

University of Muhammadiyah Surakarta

Proportion provided by this source

100

Public or private sector

Private

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

University of Muhammadiyah Surakarta

Full name of responsible person

Izzatul Arifah

Position
Lecturer
Latest degree
Master
Other areas of specialty/work
Public Health
Street address
No 1. Tromol Pos Street. Gonilan, Surakarta city
City
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Province
Central Java
Postal code
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Email
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Person responsible for scientific inquiries

Contact

Name of organization / entity
University of Muhammadiyah Surakarta
Full name of responsible person
Izzatul Arifah
Position
Lecturer
Latest degree
Master
Other areas of specialty/work
Public Health
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Person responsible for updating data

Contact

Name of organization / entity
University of Muhammadiyah Surakarta
Full name of responsible person
Izzatul Arifah
Position
Lecturer

Latest degree
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Other areas of specialty/work
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further information

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

No - There is not 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

Undecided - It is not yet known if there will be 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

Study protocol of the Pilot RCT of using mHealth for anemia prevention on pregnant women

When the data will become available and for how long

starting in November 2022

To whom data/document is available

people working in academic institutions

Under which criteria data/document could be used

for academic purpose

From where data/document is obtainable

requested at personal email: izzatul.arifah@ums.ac.id

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

Sending a letter of request, and reviewing the request

Comments