Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Determining the effect of an intervention based on the Theory of Planned Behavior on promoting environmentally friendly behavior (Reducing Plastic Bag Consumption) in Health Volunteers in Zanjan

Protocol summary

Study aim

Determining the effect of educational intervention based on TPB on reducing the consumption of plastic bags in volunteers of health in Zanjan.

Design

This is a pre- and post-intervention study that aims to determine the effect of educational intervention using the theory of planned behavior (TPB) on reducing the consumption of plastic bags as an environmentally friendly behavior in volunteers of health in Zanjan.

Settings and conduct

The research method will be as follows: 1- Designing a questionnaire based on the TPB 3- Determining the validity and reliability of that 3- Designing intervention (educational content and multimedia)4- Implementing an intervention program through WhatsApp social network 5- Performing an educational evaluation (pre-test and post-test).

Participants/Inclusion and exclusion criteria

Inclusion criteria: health volunteer; resident of Zanjan city, and having at least one year of experience.
Exclusion criteria: reluctance to continue cooperation for any reason; failure to attend more than one training session, the intention to move during the intervention, and failure to complete scale before and after the intervention.

Intervention groups

The scale will be provided to the health volunteers of the intervention and control groups. Then, the designed training intervention will be implemented indirectly through WhatsApp social network and educational software (multimedia) designed for this purpose in the intervention group. The control group will not receive any intervention. The researcher will then provide the questionnaires to the research units in both groups and the participants will complete that.

Main outcome variables

Environmental knowledge score and constructs of the Planned Behavior Theory (TPB) (attitude, subjective norms, behavioral control, behavioral intention and behavior)- Reduce the daily consumption of plastic bags.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220430054703N1**
Registration date: **2022-05-03, 1401/02/13**
Registration timing: **prospective**

Last update: **2022-05-03, 1401/02/13**
Update count: **0**

Registration date

2022-05-03, 1401/02/13

Registrant information

Name

Khadijeh Hajimiri

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 24 3378 1300

Email address

hajimiri@zums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-05-31, 1401/03/10

Expected recruitment end date

2022-07-01, 1401/04/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Determining the effect of an intervention based on the Theory of Planned Behavior on promoting environmentally friendly behavior (Reducing Plastic Bag Consumption) in Health Volunteers in Zanjan

Public title

The effect of educational intervention based on the TPB on reducing the consumption of plastic bags

Purpose

Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:

Health Volunteer Resident of Zanjan city Have at least one year of experience as a health volunteer

Exclusion criteria:

Reluctance to continue cooperation for any reason Failure to attend more than one training session Intention to move during the intervention Failure to complete questionnaires before and after the intervention.

Age

From **18 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **110**

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

Ethics committee of Zanjan University of Medical Sciences

Street address

Zanjan University of Medical Sciences, Azadi Blvd., Zanjan

City

Zanjan

Province

Zanjan

Postal code

4515786349

Approval date

2020-04-07, 1399/01/19

Ethics committee reference number

IR.ZUMS.REC.1399.029

Health conditions studied

1

Description of health condition studied

The subject of study is not a disease

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Environmental knowledge

Timepoint

Before and 3 months after the educational intervention

Method of measurement

Researcher made questionnaire based on the Theory of Planned Behavior

2

Description

Attitude towards the behavior

Timepoint

Before and 3 months after the educational intervention

Method of measurement

Researcher made questionnaire based on the Theory of Planned Behavior

3

Description

Subjective norm

Timepoint

Before and 3 months after the educational intervention

Method of measurement

Researcher made questionnaire based on the Theory of Planned Behavior

4

Description

Perceived behavioral control

Timepoint

Before and 3 months after the educational intervention

Method of measurement

Researcher made questionnaire based on the Theory of

Planned Behavior

5

Description
Behavioral intention
Timepoint
Before and 3 months after the educational intervention
Method of measurement
Researcher made questionnaire based on the Theory of Planned Behavior

Secondary outcomes

1

Description
Reduce the daily consumption of plastic bags
Timepoint
Before and 3 months after the intervention
Method of measurement
Researcher made questionnaire based on the Theory of Planned Behavior

Intervention groups

1

Description
Intervention group: At first, people who meet the inclusion criteria will be selected to participate in the study. After selecting these people, the purpose of the study will be explained to them and then informed consent will be obtained. After reviewing the relevant texts, articles and journals, the questionnaire will be designed based on TPB and its validity and reliability will be calculated through evaluation of face validity, content validity (CVI, CVR), reliability (internal consistency).Then participants' perceptions about reducing the daily consumption of plastic bags will be measured based on the theory of planned behavior and also their behavior will be measured by completing a questionnaire designed for this purpose. Then the educational intervention program is implemented. This program will be implemented within a month through WhatsApp social network and multimedia. In the next step, in order to determine the effectiveness of the educational intervention program, participants' beliefs and behavior about reducing the daily consumption of plastic bag, three months after intervention, will be measured again through the same questionnaires.
Category
Behavior

2

Description
Control group: At first, participants' perceptions about reducing the daily consumption of plastic bags will be measured based on the theory of planned behavior and also their behavior will be measured by completing a questionnaire designed for this purpose. Then after three months participants' beliefs and behavior, will be measured again through the same questionnaire.
Category
Behavior

Recruitment centers

1

Recruitment center
Name of recruitment center
Comprehensive urban health centers under the auspices of Health & Treatment Center of Zanjan
Full name of responsible person
Dr. Mohammad Reza Siraj Sadeghi
Street address
Health & Tretment Center of Zanjan, Amirkabir Crossroads, Imam street, Zanjan
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Province
Zanjan
Postal code
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Phone
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Email
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Zanjan University of Medical Sciences
Full name of responsible person
Samad Nadri
Street address
Vice Chancellor for Research and Technology, Third Floor, Second Building, Central Headquarters of Zanjan University of Medical Sciences, Azadi Boulevard, Zanjan
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Zanjan
Postal code
4515613191
Phone
+98 24 3315 6141
Email
research@zums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Zanjan University of Medical Sciences
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
Zanjan University of Medical Sciences
Full name of responsible person
Seyedeh Somayeh Mousavi
Position
Student Master
Latest degree
Master
Other areas of specialty/work
Health Promotion
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be 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
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