Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Studying the effectiveness of problem-solving skills training on aggression, action flexibility, and rumination in fifth-grade female students with clinical symptoms of aggression

Protocol summary

Study aim
Studying the effectiveness of problem-solving skills training on aggression, action flexibility, and rumination in fifth-grade female students with clinical symptoms of aggression

Design
A controlled, parallel-group, unblinded, cluster-randomized clinical trial will be conducted on 40 patients.

Settings and conduct
To select the sample, a cluster random sampling method will be used. First, from the four education districts of Essaouira, Iraq, two districts are selected by simple random drawing (lottery), and then from each district, four fifth-grade girls' schools are selected by simple random drawing, and from each school, two classes are selected by simple random drawing. Finally, those who are given the final diagnosis of aggression are selected as the sample.

Participants/Inclusion and exclusion criteria
Inclusion criteria: 1- No serious physical illness 2- Score one standard deviation above the mean in aggression Exclusion criteria: Participation in other psychotherapy sessions

Intervention groups
Intervention: Problem-solving skills: In the present study, the problem-solving skills training course will consist of 6 2-hour sessions, based on the Spivak and Shore method (cited in Cassidy and Long, 1996). Control: The control group will not receive any intervention during the research, but to prevent factors threatening the internal validity of the research, such as compensatory competition of the control group or demoralization, they will be assured that they will receive the problem-solving skills training intervention in the next session (after data collection).

Main outcome variables
aggression, behavioral flexibility, and rumination

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20250811066812N1**
Registration date: **2025-09-07, 1404/06/16**
Registration timing: **registered_while_recruiting**

Last update: **2025-09-07, 1404/06/16**
Update count: **0**

Registration date
2025-09-07, 1404/06/16

Registrant information

Name
Hanan Hussen Hamad Hamad

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 61 3333 3333

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2025-08-15, 1404/05/24

Expected recruitment end date
2025-09-11, 1404/06/20

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Studying the effectiveness of problem-solving skills training on aggression, action flexibility, and rumination in fifth-grade female students with clinical symptoms of aggression

Public title
Studying the effectiveness of problem-solving skills training on aggression, action flexibility, and rumination in fifth-grade female students with clinical symptoms of aggression

Purpose
Education/Guidance

Inclusion/Exclusion criteria
Inclusion criteria:
Score one standard deviation above the mean in aggression
Exclusion criteria:
Drug use Having a new physical illness Unwillingness to participate in research

Age
From **10 years** old to **11 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description
The statistical population of this study includes all fifth-grade female students with clinical symptoms of aggression. In this study, a multi-stage random cluster sampling method was used to initially select participants. Finally, students in these classes will be screened using the “Ahvaz Aggression Inventory.” Students whose questionnaire scores are higher than the clinical average are considered candidates for aggression. These individuals will then be interviewed by a clinical psychologist, and finally, students who are diagnosed with clinical symptoms of aggression will be selected as the final list of eligible participants for the study. After collecting the initial group of eligible students, the process of random assignment to the study groups (intervention group and control group) will begin. Block randomization and stratified randomization methods will be used to assign participants to the intervention and control groups. The tool used to generate block and stratified random sequences will be the statistical software R (R version 4.3.1).

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 Islamic Azad University of Ahvaz Branch

Street address
Opposite Keshavarz Street, Farhang Shahr, Golestan Highway

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Khouzestan

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Approval date
2025-07-23, 1404/05/01

Ethics committee reference number
IR.IAU.AHVAZ.REC.1404.215

Health conditions studied

1

Description of health condition studied
Clinical signs of aggression

ICD-10 code
F43

ICD-10 code description
Reaction to severe stress, and adjustment disorders

Primary outcomes

1

Description
Aggression: It includes behavior that is done with the intention and direction of harming oneself or others and can have various manifestations, ranging from verbal abuse that causes psychological harm to physical violence and involves a complete disregard for one's own health or that of others. In this study, aggression is the score that respondents obtain in response to the Ahvaz Aggression Inventory (Zahedifar et al., 1379).

Timepoint
The present study, due to the multi-stage random selection of participants, is a field experimental study and the research design is a pre-test-post-test design with a control group and a follow-up phase. In this design, the subjects are measured before the implementation of the independent variable (pre-test), then the experimental intervention or independent variables are applied. After that, the subjects are

measured again. Finally, after one month of the post-test, both groups are measured again to examine the continuity of the effect of the interventions on the experimental groups.Problem-solving skills training sessions were developed based on the Spivak and Shore method (cited by Cassidy and Long, 1996) and are implemented in 6 2-hour sessions.

Method of measurement

The research tool will include: Ahvaz Aggression Inventory by Zahedifar et al. (1990). Also, the research data analysis was done using SPSS version 27 computer software. The significance level in this study is considered to be 0.05.

2

Description

Functional flexibility: Resilience or functional flexibility has been defined as a process, ability, or outcome of successful adaptation to threatening conditions. In the present study, functional flexibility refers to the score that patients obtain from the 25-item Connor and Davidson (2003) Resilience Questionnaire, standardized by Mohammadi (2005).

Timepoint

The present study, due to the multi-stage random selection of participants, is a field experimental study and the research design is a pre-test-post-test design with a control group and a follow-up phase. In this design, the subjects are measured before the implementation of the independent variable (pre-test), then the experimental intervention or independent variables are applied. After that, the subjects are measured again. Finally, after one month of the post-test, both groups are measured again to examine the continuity of the effect of the interventions on the experimental groups.Problem-solving skills training sessions were developed based on the Spivak and Shore method (cited by Cassidy and Long, 1996) and are implemented in 6 2-hour sessions.

Method of measurement

The research tool will include: Functional Flexibility Questionnaire: Connor and Davidson (2003). Also, the research data analysis was done using SPSS version 27 computer software. And the significance level in this research is considered to be 0.05.

3

Description

Rumination: It is defined as a constant preoccupation with an idea or topic and thinking about it. Rumination is a class of conscious thoughts that revolve around a specific and habitual axis and are repetitive, without immediate environmental demands being dependent on them, and focus on the causes and consequences of symptoms, preventing maladaptive problem solving and leading to an increase in negative thoughts. In this study, rumination is the score that subjects obtain from the Nolen-Hoeksma and Maro questionnaire (1991), translated by Bagherinejad et al. (2010).

Timepoint

The present study, due to the multi-stage random selection of participants, is a field experimental study and the research design is a pre-test-post-test design with a control group and a follow-up phase. In this design, the subjects are measured before the implementation of the independent variable (pre-test), then the experimental intervention or independent variables are applied. After that, the subjects are measured again. Finally, after one month of the post-test, both groups are measured again to examine the continuity of the effect of the interventions on the experimental groups.Problem-solving skills training sessions were developed based on the Spivak and Shore method (cited by Cassidy and Long, 1996) and are implemented in 6 2-hour sessions.

Method of measurement

The research tool will include: Rumination Questionnaire: Nolen-Hoeksma and Maru (1991). Also, the research data analysis was done using SPSS version 27 computer software. And the significance level in this research is considered to be 0.05.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group:After forming the groups, the subjects were led to special rooms and were given questionnaires to measure the variables as a pre-test and were assured that the answers they gave would remain confidential, and they were asked to answer the questions confidently and honestly. 2. People in the experimental group received training sessions based on the Spivak and Shore method (quoted in Cassidy and Long, 1996) in 6 2-hour sessions. 3. After completing the treatment period, each experimental group was re-measured with questionnaires to measure the variables as a post-test and finally, after one month of the post-test, they were re-measured (follow-up phase).

Category

Treatment - Other

2

Description

This research is a pre-test-post-test design with a control group and a follow-up phase. In this design, the subjects are measured before the implementation of the independent variable (pre-test), then the experimental intervention or independent variables are applied. After that, the subjects are measured again. Finally, after one month of the post-test, both groups are measured again to examine the continuity of the effect of the interventions on the experimental groups. After the formation of the groups, the subjects were led to special rooms and given questionnaires to measure the variables as a pre-test and were assured that the answers they gave would remain confidential, and they were asked to answer the questions confidently and honestly. Also, no

intervention was carried out for the control group. However, to prevent threats to the internal validity of the test, the intervention was carried out for them after the end of the research. After completing the treatment period, each control group was re-assessed with questionnaires that were used to measure the variables as a post-test, and finally, one month after the post-test was administered (follow-up phase).

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Girls' elementary schools

Full name of responsible person
Hanan Hussen Hamad Hamad

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Unit 4, Ofogh Residential Complex, 3rd Sed and Sima St., Afarinesh St., Sadaf Blvd., Baharestan

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Email
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Islamic Azad University

Full name of responsible person
Pezhman Taghipour Birgani

Street address
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Grant name

Grant code / Reference number

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

Title of funding source
Islamic Azad University

Proportion provided by this source
10

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
Islamic Azad University

Full name of responsible person
Hanan Hussen Hamad Hamad

Position
Master's student

Latest degree
Bachelor

Other areas of specialty/work
Psychology

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Unit 4, Ofogh Residential Complex, 3rd Sed and Sima St., Afarinesh St., Sadaf Blvd., Baharestan

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Person responsible for scientific inquiries

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Name of organization / entity
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Full name of responsible person
Hanan Hussen Hamad Hamad

Position
Master's student

Latest degree
Bachelor

Other areas of specialty/work
Psychology

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Person responsible for updating data

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Name of organization / entity

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Full name of responsible person

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Latest degree

Bachelor

Other areas of specialty/work

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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

Not applicable

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

Not applicable

Data Dictionary

Not applicable