

# Effectiveness of a guided mental health chatbot for youth living in Jordan in communities exposed to adversity

<b>Submission date</b> 17/10/2022	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered
<b>Registration date</b> 02/11/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 07/02/2025	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Mental disorders are a leading cause of disability worldwide, with an estimated 264 million people affected by depression alone. Up to half of mental disorders start during adolescence, often with long-lasting and serious consequences for health and productivity. There is a need for evidence-based psychological interventions targeting young adults that can be used in settings which are resource pressured.

The study objective is to conduct a feasibility randomized controlled trial to determine whether all aspects of the study methodology can be feasibly implemented. The study will test a guided self-help e-mental health intervention called “Scalable Technology for Adolescents and youth to Reduce Stress (STARS)”. This study will inform a larger randomized controlled trial on the effectiveness of STARS in reducing symptoms of depression and anxiety. STARS is a self-help programme delivered through a chatbot over the Internet using smartphones, tablets or computers, and with additional support from a trained non-specialist care provider.

### Who can participate?

Young adults living in Jordan (i.e., Jordanian nationals, Syrian displaced people, and other populations residing in Jordan) aged 18-21 years who are experiencing moderate levels of psychological distress, and with access to a device for intervention delivery. Participants will be recruited through social media, community centres, and primary health care centres. Persons outside of Jordan, under 18 years of age or over 21 years of age, and persons at imminent risk of suicide will be excluded from the study and provided with information on appropriate services.

### What does the study involve?

To test whether we can feasibly deliver the STARS intervention aimed at reducing symptoms of depression and anxiety, two groups will be compared. Participants in the intervention group will receive basic information on psychological distress and a list of resources for support, as well as the STARS programme with additional weekly e-helper support delivered over the phone, while those in the control group will only receive the basic information.

In order to assess symptoms of depression and anxiety, wellbeing and functioning, participants in this study will complete several questionnaires at two time points: At the beginning of the study and after 8 weeks.

What are the possible benefits and risks of participating?

STARS is based on evidence-based techniques and may reduce psychological distress, but it is not certain. There is broad evidence for the use of digital interventions, and it is unlikely there will be adverse effects due to the intervention.

Where is the study run from?

The study is conducted by the University of New South Wales (Sydney, Australia), World Health Organization (Geneva, Switzerland), and Institute of Family Health (Amman, Jordan).

When is the study starting and how long is it expected to run for?

September 2021 to March 2023

Who is funding the study?

Enhancing Learning and Research for Humanitarian Assistance – Research for Health in Humanitarian Crises (Elrha - r2hc) (UK)  
Save the Children Wales (UK)

Who is the main contact?

Professor Richard Bryant, r.bryant@unsw.edu.au

## Contact information

### Type(s)

Principal investigator

### Contact name

Prof Richard Bryant

### ORCID ID

<https://orcid.org/0000-0002-9607-819X>

### Contact details

University of New South Wales

School of Psychology

Sydney

Australia

2052

+61-2-93853640

r.bryant@unsw.edu.au

### Type(s)

Public

### Contact name

Dr Kenneth Carswell

### ORCID ID

<https://orcid.org/0000-0001-5344-5802>

### **Contact details**

World Health Organization (WHO)  
Department of Mental Health and Substance Abuse  
Geneva  
Switzerland  
1211  
+41-22-791-5024  
carswellk@who.int

## **Additional identifiers**

### **Clinical Trials Information System (CTIS)**

Nil known

### **Protocol serial number**

ERC ID: 0003729

## **Study information**

### **Scientific Title**

Effectiveness of the STARS guided mental health chatbot for youth living in Jordan in communities exposed to adversity - Feasibility study

### **Acronym**

STARS

### **Study objectives**

The STARS intervention can be feasibly delivered to young adults in Jordan.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Approved 01/07/2022, Ethics Review Committee at World Health Organization (Avenue Appia 20, 1211 Geneva, Switzerland; no telephone number provided; ercsec@who.int), ERC ID: 0003729

### **Study design**

Single-blind 2-arm feasibility randomized controlled trial

### **Primary study design**

Interventional

### **Study type(s)**

Treatment

### **Health condition(s) or problem(s) studied**

Common mental disorders; Depression; Anxiety

## **Interventions**

### **STARS**

STARS is a brief, 10-session intervention developed to address emotional distress experienced by adolescents and youth. The 10 sessions are each around 20-25 minutes of content delivered in a conversational style by a chatbot. In addition, participants will also receive weekly calls by an e-helper (trained and supervised non-specialist) who will support and motivate participants in completing the intervention.

STARS follows a cognitive behavioural therapy (CBT) framework to deliver all psychological content to address the broad mental health needs reported by adolescents and youth. CBT is an approach recommended by WHO for treatment of mental disorders in adolescents. A transdiagnostic approach is used that covers ten sessions: (1) introduction (intervention overview, privacy, and confidentiality); (2) emotions (psychoeducation about emotions); (3) relax (emotion regulation techniques, such as slow breathing); (4-5) what we do (behavioural activation); (6-7) managing problems (problem management techniques); (8-9) self-talk (thought challenging); and (10) what next (consolidating learnings and planning for the future). In addition, the intervention also encourages the user to practice and apply the skills in their own life, which is supported by activities such as recorded stress management audios.

### **Enhanced usual care**

The enhanced usual care (EUC) intervention includes basic information about depression and anxiety, as well as signposting to evidence-based care available in Jordan. The information will be based on a session from STARS. Thereafter, participants will receive a list indicating organizations offering mental health and psychosocial support in Jordan.

The basic information and signposting to evidence-based care will be provided to participants in both group (STARS intervention group and control group).

Randomization will be carried out in Qualtrics on a 1:1 ratio.

The intervention will take 5 weeks. The follow-up assessment will take place 8 weeks after baseline.

## **Intervention Type**

Behavioural

### **Primary outcome(s)**

Feasibility of the STARS intervention, including:

1. Recruitment rate recorded as the number of eligible participants who consent to participate in the study
2. Drop-out rates recorded as the number of randomized participants who do not complete the intervention or the post-assessment
3. Number of adverse events and serious adverse events
4. Evaluation of (secondary) outcome measures and estimation of differences across the two groups

The above will be supported by qualitative process evaluation interviews to further understand aspects related to implementation.

### **Key secondary outcome(s)**

Measured at screening/baseline and week 8 unless noted:

1. Psychological distress (Hopkins Symptom Checklist; HSCL-25)
2. Psychological distress (Kessler Psychological Distress scale; K10)

3. Functioning (WHO Disability Assessment Schedule; WHODAS 2.0)
4. Subjective wellbeing (WHO Well-Being Index; WHO-5)
5. Self-identified problems (Psychological Outcomes Profiles; PSYCHLOPS)
6. Agency (agency subscale of the State Hope Scale; SHS-A)
7. User-satisfaction questionnaire (Client Satisfaction Questionnaire; CSQ-I) [only at post-assessment (8 weeks after baseline)]

**Completion date**

27/03/2023

## Eligibility

**Key inclusion criteria**

1. Any person living in Jordan who can read English or Arabic
2. Is between the ages of 18 and 21 years
3. Is experiencing moderate levels of psychological distress as determined by a score of 20 or above on the Kessler distress scale, 10-item version (K10)
4. Has access to a device for intervention delivery or is willing to use one at a participating centre

**Participant type(s)**

Other

**Healthy volunteers allowed**

No

**Age group**

Other

**Sex**

All

**Total final enrolment**

60

**Key exclusion criteria**

1. Persons under 18 years of age or over 21 years of age
2. People at imminent risk of suicide (as defined by the mhGAP intervention guide)

**Date of first enrolment**

02/11/2022

**Date of final enrolment**

26/01/2023

## Locations

**Countries of recruitment**

Jordan

**Study participating centre**  
Institute for Family Health, Noor Al Hussein Foundation  
PO Box 955  
Amman  
Jordan  
11910

## Sponsor information

**Organisation**  
World Health Organization

**ROR**  
<https://ror.org/01f80g185>

**Organisation**  
UNSW Sydney

**ROR**  
<https://ror.org/03r8z3t63>

## Funder(s)

**Funder type**  
Charity

**Funder Name**  
Enhancing Learning and Research for Humanitarian Assistance

**Alternative Name(s)**  
Enhancing Learning & Research for Humanitarian Assistance, ELRHA

**Funding Body Type**  
Private sector organisation

**Funding Body Subtype**  
Research institutes and centers

**Location**  
United Kingdom

# Results and Publications

## Individual participant data (IPD) sharing plan

The (de-identified) datasets generated during the current study will be available upon request from Professor Richard Bryant (r.bryant@unsw.edu.au).

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		05/02/2025	07/02/2025	Yes	No