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Effects of AI-assisted emotional regulation on psychological wellbeing and facial-state perception

Submission date
14/09/2026

Recruitment status
No longer recruiting

Registration date
16/09/2026

Overall study status
Completed

Last Edited
16/09/2026

Condition category
Mental and Behavioural Disorders

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Public, Principal investigator

Contact name
Miss Yuyu Sun

ORCID ID
https://orcid.org/0009-0005-8099-490X

Contact details
No. 998, Xueyuan street, Baiyang street, Qiantang District
Hangzhou
China
310018
+86 13925668802
202413546007@stu.cuz.edu.cn; happyfish0321@gmail.com

Type(s)
Scientific

Contact name
Dr Xiaoxiao Cao

ORCID ID
https://orcid.org/0000-0002-8461-9497

Contact details
No. 998, Xueyuan street, Baiyang street, Qiantang District
Hangzhou
China
310018
+86 13429672890
caoxiaoxiao@cuz.edu.cn

Additional identifiers

Study information

Scientific Title
Effects of AI-assisted emotional regulation on psychological wellbeing and facial-state perception

Study objectives
The primary objective was to determine whether 42 days of daily AI-assisted conversational emotional regulation produced a greater improvement in positive affect than maintaining usual daily routines. Secondary objectives were to compare changes in negative affect, anxiety symptoms, depressive symptoms, self-esteem and life satisfaction between groups; describe daily mood trajectories; and assess adherence to the intervention and repeated assessments. An exploratory objective was to examine whether psychological changes were accompanied by changes in app-derived facial skin age and comprehensive skin score. Because this is a retrospective registration, PANAS positive affect is reported as the main psychological outcome based on the implemented study and is not represented as a prospectively registered sole primary endpoint.

Ethics approval required
Ethics approval required

Ethics approval(s)
Submitted 25/05/2025, Ethics Committee, School of Design Arts, Communication University of Zhejiang (School of Design Arts, Communication University of Zhejiang, No. 998 Yuqiao West Road, Tongxiang, 310018, China; +86 573 89390295; sjysxy@cuz.edu.cn), ref: CUZ-RE-2025-05

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Open (masking not used)

Control
Active

Assignment

Parallel

Purpose
Treatment

Study type(s)

Health condition(s) or problem(s) studied
Psychological wellbeing and emotional regulation, with exploratory facial-state outcomes.

Interventions
A total of 63 participants were allocated using a computer-generated random sequence to one of two parallel groups. The intervention group (n=39) used MoodTalker, an AI-assisted conversational emotional-regulation application, for 42 consecutive days and was instructed to complete at least one interaction per day. The application provided text-based empathic dialogue, cognitive reframing, mindfulness-oriented guidance, positive psychology prompts and supportive conversation, with optional text-to-speech output. The control group (n=24) maintained its usual daily routine for 42 days and received no AI-assisted emotional-regulation intervention or additional health-education materials. Both groups completed daily mood ratings and repeated psychological assessments. Participants were instructed not to initiate formal psychological counselling or structured mindfulness training during the study. A subsample completed exploratory facial-state assessments using an independent commercial mobile skin-analysis application. The study was open label, and no formal allocation-concealment procedure was implemented.

Intervention Type
Behavioural

Primary outcome(s)
1. Positive affect measured using Positive Affect subscale score of the Positive and Negative Affect Schedule (PANAS-PA at baseline and weekly during the 42-day intervention at Weeks 1, 2, 3, 4, 5 and 6, with the principal between-group change comparisons conducted at weeks 3 and 6

2. Negative affect measured using 10-item Negative Affect subscale of the Positive and Negative Affect Schedule (PANAS-NA) at baseline and weeks 1, 2, 3, 4, 5 and 6, with the principal comparisons conducted at weeks 3 and 6

3. Anxiety symptoms measured using the seven-item Generalized Anxiety Disorder scale (GAD-7) at baseline and weeks 1, 2, 3, 4, 5 and 6, with the principal comparisons conducted at weeks 3 and 6

4. Depressive symptoms measured using the nine-item Patient Health Questionnaire (PHQ-9) at baseline and weeks 1, 2, 3, 4, 5 and 6, with the principal comparisons conducted at weeks 3 and 6

5. Self-esteem measured using the Rosenberg Self-Esteem Scale score; higher scores indicate greater self-esteem at baseline and weeks 1, 2, 3, 4, 5 and 6, with the principal comparisons conducted at weeks 3 and 6

6. Life satisfaction measured using the Satisfaction With Life Scale score at baseline and weeks 1, 2, 3, 4, 5 and 6, with the principal comparisons conducted at weeks 3 and 6

7. Daily mood measured using a single-item scale from 0 (very poor) to 10 (excellent) at daily during days 1–42

8. Study adherence measured using number of days on which daily mood ratings were completed, supplemented by available MoodTalker platform-use records for the intervention group at throughout the 42-day study period and summarized at Week 6

9. Exploratory app-derived facial skin age measured using algorithm-derived estimate of facial skin age generated by an independent commercial mobile skin-analysis application at baseline and post-intervention at the end of the 42-day study period

10. Exploratory app-derived comprehensive skin score measured using composite facial skin score from 0 to 100 generated by an independent commercial mobile skin-analysis application at baseline and post-intervention at the end of the 42-day study period

Key secondary outcome(s)

Completion date
07/01/2026

Eligibility

Key inclusion criteria
1. Aged 18–30 years
2. No formal psychological counselling or structured mindfulness training within the previous six months
3. No active severe dermatological condition, such as severe acne, eczema, or psoriasis
4. Able and willing to use the required mobile applications and complete the repeated study assessments
5. Willing to provide informed consent before participation

Healthy volunteers allowed
Yes

Age group
Adult

Lower age limit
18 Years

Upper age limit
30 Years

Sex
All

Total final enrolment
63

Key exclusion criteria

1. PHQ-9 score ≥20 or GAD-7 score ≥15 at screening
2. History of major depressive disorder, bipolar disorder, schizophrenia, or another severe psychiatric disorder
3. Use of systemic corticosteroids, retinoids, or antidepressant medication within the preceding four weeks
4. Facial wounds, active facial infection, or recent cosmetic dermatological procedures
5. Regular mindfulness or meditation practice at least twice weekly for at least three consecutive months
6. Aged under 18 years

Date of first enrolment
17/07/2025

Date of final enrolment
21/11/2025

Locations

Countries of recruitment
China

Study participating centre
Communication University of Zhejiang
No. 998, Xueyuan street, Baiyang street, Qiantang District
Hangzhou
China

Sponsor information

Organisation
Communication University of Zhejiang

ROR
https://ror.org/04t7gxr16

Funder(s)

Funder type

Funder Name
National Social Science Fund of China

Alternative Name(s)
Chinese National Funding of Social Sciences, , National Social Science Foundation of China, National Social Science Foundation, NSSFC

Funding Body Type
Government organisation

Funding Body Subtype
Local government

Location
China

Funder Name
Communication University of Zhejiang

Funder Name
Zhejiang Office of Philosophy and Social Science

Alternative Name(s)
Zhejiang Provincial Office of Philosophy and Social Sciences, Office of Philosophy and Social Science of Zhejiang Province, Philosophy and Social Science Planning Project of Zhejiang Province,

Funding Body Type
Government organisation

Funding Body Subtype
Local government

Location
China

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file	version 1.1	27/08/2026	16/09/2026	No	No