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Awe walking and college student mental health

Submission date
18/09/2024

Recruitment status
No longer recruiting

Registration date
09/10/2024

Overall study status
Completed

Last Edited
04/10/2024

Condition category
Mental and Behavioural Disorders

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

Plain English summary of protocol

Background and study aims
Most college students report mental health problems, stressing campus-based mental health resources. As such, there is a need for preventative interventions to proactively enhance mental health and decrease demand for acute care. We propose a walking intervention intended to reduce negative affect, increase positive affect, and enhance mental health outcomes by eliciting awe – a positive emotion triggered by perceptually vast and novel stimuli. Short activities in greenspace can be designed to elicit awe and improve short and long-term mental health outcomes. The intervention involves regular walks through nearby greenspace while attending to a set of cues designed to elicit awe.

Who can participate?
Full-time students at the University of Illinois Urbana Champaign aged 18 years and older

What does the study involve?
Participating in this study will involve the completion of an 8-week walking program. Participants will be asked to complete at least one 30-minute, low-intensity, outdoor walk per week while attending to a specific prompt. They will be asked to complete a pre-program and post-program set of questionnaires, as well as a short weekly questionnaire.

What are the possible benefits and risks of participating?
Risks related to this research involve the types of risks that are encountered through normal daily activities. Benefits include helping to develop strategies for improving college student mental health outcomes and a better understanding of different emotional experiences that occur during walking. The alternative to participating in this study is to decide not to participate.

Where is the study run from?
University of Illinois Urbana-Champaign (USA)

When is the study starting and how long is it expected to run for?
August 2023 to February 2025

Who is funding the study?
University of Illinois Urbana-Champaign (USA)

Who is the main contact?
Dr Nick Pitas, npitas@illinois.edu

Contact information

Type(s)
Public, Scientific, Principal Investigator

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Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
IRB23-0018

Study information

Scientific Title
Examination of the efficacy of a community-based leisure walking intervention to promote positive mental health in university students through the elicitation of awe

Study objectives
A walking intervention designed to elicit awe through exposure to perceptually vast and novel stimuli will significantly reduce negative affect, increase positive affect, and enhance overall mental health outcomes in participants compared to a standard walking routine without such stimuli.

Ethics approval required
Ethics approval required

Ethics approval(s)

Approved 08/01/2024, Institutional Review Board (Office for the Protection of Research Subjects (OPRS) M/C 685 1901 S. First St, Suite A, Champaign, 61820, United States of America; +1 (0)217 333 2670; irb@illinois.edu), ref: IRB23-0018

Study design
Randomized controlled trial with allocation concealment

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Built environment/local authority, Community, University/medical school/dental school

Study type(s)
Quality of life, Efficacy

Participant information sheet
Not applicable

Health condition(s) or problem(s) studied
Mental health

Interventions
Participants were randomly assigned using the random number generator command in Microsoft Excel to one of three experimental conditions for the duration of the 8-week intervention: the treatment (awe walking), activity control, or waitlist control group. Based on group assignment, participants attended a virtual orientation lasting approximately 15-20 minutes and explaining participant obligations during the intervention. At the conclusion of the orientation informed consent was obtained, and participants were directed to a pre-intervention survey delivered via the online survey platform Qualtrics.

The prompt received during the orientation was tailored based on group assignment. The experimental – “awe walking” – group was instructed to take a light-intensity 30-minute walk each week, at a time and place in the area on or around campus of their choosing. Awe walk participants were further instructed to walk alone (if comfortable doing so, otherwise to avoid interacting with their walking partner), to place their phone in “airplane” mode, and avoid using any electronics with the exception of a camera (their mobile phone or otherwise). Modeled on the awe-walking protocol described by Sturm et al. (2022), participants were asked (1) to approach what they saw with “fresh eyes [and to] take in the vastness of things” in the world around them, focusing on their own small place in a large and complex system, (2) to try and walk in new locations on a regular basis, or identify new features in favorite places, and (3) to conscientiously engage with the environment around them through photography. Although they were encouraged to take as many photos as they wanted, participants were asked specifically to photograph the single most awe-inspiring feature of their walk and the single least awe-inspiring feature of their walk.

In addition to our test condition, we also utilized an activity control group and a waitlist control group. Activity control participants were instructed to take a light-intensity 30-minute walk each

week, at a time and place in the area on or around campus of their choosing. Participants were further instructed to walk alone (if comfortable doing so, otherwise to avoid interacting with their walking partner), to place their phone in “airplane” mode, and avoid using any electronics. Members of the waitlist control group did not receive specific instructions to walk during the 8-week intervention.

Intervention Type
Behavioural

Primary outcome measure
1. Acute stress measured using the Perceived Stress Scale 10-item scale
2. Generalized anxiety measured using Generalized Anxiety Disorder 7-item scale
3. Positive and negative affect measured using the Positive and Negative Affect Scale (PANAS)
Pre-surveys were conducted before the 8-week walking program and post-surveys administered after the program, measured at baseline and at the end of 8 weeks.

Secondary outcome measures
1. Awe measured using the State awe – Awe Cluster: awe, amazement, wonder (Sturm et al., 2022)
2. Dispositional awe measured using the Trait Positive Emotion Scale Awe Subscale (Shiota et al., 2007)
3. Prosocial emotion measured using Prosocial positive: compassion, admiration, amusement, appreciation, gratitude (Sturm et al., 2022)
4. Joy measured using Joy: joy, happiness, warmth, contentment, relaxation, calm, pride (Sturm et al., 2022)
5. Distress measured using the Distress Cluster: sadness, anger, anxiety, fear, annoyance (Sturm et al., 2022)
6. State anxiety measured using the State-Trait Anxiety Scale (State Subscale) (Spielberger et al., 1983; Zsido et al., 2020)
7. State rumination measured using the Brief State Rumination Index (Marchetti et al., 2018)
Collected through weekly surveys during the 8-week program, with one survey administered each week. Participants in the waitlist control groups completed the survey at a consistent day /time, while those in the awe walking and activity control groups completed it after their 30-minute walk.

Overall study start date
15/08/2023

Completion date
15/02/2025

Eligibility

Key inclusion criteria
1. 18 years old or older
2. A full-time student at the University of Illinois Urbana Champaign
3. Capable of moving by themself – on foot, in a chair, etc – for at least 30 minutes once a week

Participant type(s)
Learner/student

Age group
Adult

Lower age limit
18 Years

Upper age limit
100 Years

Sex
Both

Target number of participants
175

Total final enrolment
160

Key exclusion criteria
Less than 18 years old

Date of first enrolment
24/01/2024

Date of final enrolment
23/02/2024

Locations

Countries of recruitment
United States of America

Study participating centre
University of Illinois Urbana-Champaign
Champaign, Illinois
Champaign
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61801

Sponsor information

Organisation
University of Illinois Urbana-Champaign

Sponsor details

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Sponsor type
University/education

Website
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ROR
https://ror.org/047426m28

Funder(s)

Funder type
University/education

Funder Name
University of Illinois at Urbana-Champaign

Alternative Name(s)
Illinois, University of Illinois Urbana-Champaign, University of Illinois, University of Illinois, Urbana-Champaign, University of Illinois at Urbana Champaign, University of Illinois - Urbana-Champaign, University of Illinois at Urbana, U of I, UIUC

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
United States of America

Results and Publications

Publication and dissemination plan
Intended uses of data generated during this process include peer-reviewed presentation(s) and manuscript(s).

Intention to publish date

01/09/2025

Individual participant data (IPD) sharing plan

Data will be held in a password-protected cloud-based database controlled by the primary investigator. Data will not be made available in accordance with the protocol approved by the University of Illinois Office for the Protection of Research Subjects – Institutional Review Board.

IPD sharing plan summary

Stored in non-publicly available repository, Not expected to be made available