



# Handbook: Uplift the Web Challenge



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# What is the Uplift the Web Challenge?

[The Uplift the Web Challenge](#) is a joint effort between academics and practitioners to identify effective interventions to help address depression at a global scale. We invite you to join this effort by contributing an intervention. Contributors will have opportunities to receive public recognition, co-authorship in published research, and, most importantly, evidence of their submitted intervention's effectiveness compared to several other top options. Interventions will first be vetted by our advisory board, and we will test up to 10 of them in a large online experiment. Submissions to the Uplift the Web Challenge will be accepted until May 1, 2024.

# Why Should I Participate in the Uplift the Web Challenge?

By contributing an intervention, you can help the field of digital mental health to advance toward the goal of helping more people gain access to high-quality mental health supports. If your submission is chosen for testing, you will gain high-quality data from a large sample showing how effective your intervention is, compared to other leading options.

To acknowledge your efforts, everyone whose intervention is selected for testing ...

- will be offered authorship on the primary publication resulting from the challenge,
- will be honored at a conference organized by Northwestern's Lab for Scalable Mental Health, in which the results of the Uplift the Web Challenge will be presented,
- will be acknowledged alongside their intervention on our project website.

In addition, we will give out a series of awards:

- *Reducing depression*: This award will be given to all teams whose interventions significantly reduce depressive symptoms at the four-week follow-up.
- *Fighting hopelessness*: This award will be given to all teams whose interventions significantly reduce hopelessness immediately after completing it.
- *Boosting agency*: This award will be given to all teams whose interventions significantly increase agency immediately after completing it.
- *User choice*: This award will be given to the three teams whose interventions users rate as most acceptable.

The three teams whose interventions most reduce feelings of depression four weeks later...

- will be given awards as the “**overall winning interventions,**”
- will be listed as "winners" in the publication and website,
- will be invited to give talks at a virtual conference organized by the Lab for Scalable Mental Health, in which the results of the Uplift the Web Challenge will be presented to the public.

We will also give special awards to those teams led by (1) graduate students and (2) practitioners<sup>3</sup> whose interventions (a) most reduce depression, (b) most reduce hopelessness, (c) most increase agency, and (d) are rated by users as most acceptable (resulting in eight additional awards). Finally, awards will be given for the interventions rated as most novel by the advisory board in three categories: submitted by a graduate student-led team, submitted by a practitioner-led team, and overall.

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<sup>3</sup> Here we define a "practitioner" as any submitter who does not do research for an academic institution.

# How Do I Win the Uplift the Web Challenge?

You can win the Uplift the Web Challenge in three steps:

Step 1: You submit your idea (see the section “[Where do I Submit my Intervention?](#)”).

Step 2: Your idea is selected for testing by a Selection Committee (see the section “[How Will my Intervention be Reviewed?](#)”).

Step 3: Your intervention wins the Uplift the Web Challenge by significantly reducing depression (see all awards in the section “[Why Should I Participate in the Uplift the Web Challenge?](#)”). You can also win an award if your intervention reduces hopelessness or agency, or users say they found it particularly acceptable.

## Where Do I Submit My Intervention?

You may submit your intervention through our [website](#). Submissions are being accepted until May 1, 2024.

# What are the Requirements for My Intervention?

Interventions must meet the following requirements:

- Ethical* : The intervention must be approved by Northwestern's Institutional Review Board.
- Online* : The intervention must be deployable online.
- Short* : The intervention must involve only one session and be no longer than 10 minutes.
- Scalable* : The intervention must be able to handle up to 200 online participants at once.
- English* : The intervention must be understandable to an English-speaking audience.
- Costless* : The intervention must not pay participants in addition to what they are already being paid to participate in the study.
- Aligned* : You cannot add additional measures for evaluating your intervention.
- Permitted* : You can submit an intervention with content that someone else created only if you also show written permission from the creator that you are permitted to submit it.

These requirements are described in more detail below.

## **Requirement 1: Ethical**

Your intervention must provide accurate and true information without exposing participants to unnecessary risks or harm:

- you may not deceive participants,



- you may not ask participants to state false beliefs,
- you may not present information to participants that is hateful, disturbing, or offensive,
- you may not ask participants to engage in hateful, disturbing, or dangerous actions.

Further, your intervention must obtain ethics approval by Northwestern's Institutional Review Board (IRB). If your intervention is selected, our team will obtain IRB approval for your intervention. If the IRB requires changes to your intervention, we will work with you to make those changes while maintaining as much consistency as possible to your original idea. You are encouraged to contact us via [uplift.the.web@gmail.com](mailto:uplift.the.web@gmail.com) if you have concerns about ethics approval. We will not select interventions that attempt to game the system in some way, e.g., by instructing participants on how to reply to the depression measure.

#### **Requirement 2: Online**

Your proposed intervention must occur online, but our platform allows for a diverse range of possibilities. It cannot require that participants use any technology besides the device they used to access the programs.

#### **Requirement 3: Short**

Participants should be able to complete your proposed intervention in a single session lasting 10 minutes or less. We may request that you shorten your intervention if pretesting indicates it will take longer than 10 minutes to complete it.

#### **Requirement 4: Functioning at Scale**

Many participants (over 200) must be able to engage in your proposed intervention at the same time. This means any intervention involving human interaction would almost certainly not be feasible.

**Requirement 5: Comprehensible**

The intervention must be understood by an English-speaking audience because we will collect data within the USA.

**Requirement 6: Costless**

The intervention must not involve paying people in addition to what they are already being paid for participating in the study.

**Requirement 7: Aligned**

You must not administer additional measures after your intervention because this would interfere with estimating the effect of your intervention on our measures of interest,

**Requirement 8: Permitted**

If you would like to submit an intervention that someone else created, you must show proof that the creator or owner of the intervention allowed you to use it. For example, if you would like to submit a YouTube video, you could attach an email from the person who created the video that shows they allowed you to submit it.

# How Will My Intervention be Reviewed?

## **Formal Check Review**

Our team will review submitted interventions to check whether they satisfy the requirements for interventions. We will notify you if your intervention does not satisfy the requirements and work with you, within reason, to revise the intervention so that it is eligible. You are welcome to contact us with questions at [uplift.the.web@gmail.com](mailto:uplift.the.web@gmail.com).

## **Selection Process**

The selection committee consists of an advisory and editorial board that operate separately.

You can learn more about the members of these committees at <https://sites.northwestern.edu/10minutechallenge/people>. The committees will also rely on input from a sample of people who have lived experience with depression.

### ***The Advisory Board***

The advisory board will provide expert reviews for the interventions. The board will include ten graduate students and research staff from laboratories around the United States with diverse experience in the development and evaluation of digital mental health tools. At least two board members will review each intervention. The advisory board will review based on the interventions' expected success in reducing depressive symptoms, the interventions' potential to help people equitably and on a global scale, and interventions' novelty.

### *Feedback From People With Lived Experience*

We will survey 100 adults with lived experience of depression to ask for their feedback on the interventions. Each survey participants will be shown a series of brief descriptions of the interventions and asked to indicate (1) how much they believe the intervention could help them to deal with feelings of depression, (2) how much the intervention might appeal to other American adults from diverse backgrounds, (3) other open-ended feedback about it.

### *The Editorial Board*

The editorial board will make the final decision about which interventions qualify for the Uplift the Web Challenge. The editorial board consists of the five principal investigators of the challenge: Jessica Schleider, Stephen Schueller, Lorenzo Lorenzo-Luaces, Matthew Nock, and John Protzko.

The editorial board will use the reviews from the advisory board and input from the survey of people with lived experience to determine which interventions to include in the experiment. The editorial board will search for the most promising interventions, aiming to maximize 1) the probability that the interventions will reduce depression if implemented in real-world settings and 2) the diversity of interventions within the pool of submitted interventions, in terms of intervention approach and target populations. If two or more identical or extremely similar interventions have been submitted, the editorial board will prefer the intervention submitted by authors who have already published on this intervention. If our team decides that improvements can be made to an intervention, we will reach out to its submitters to come to a shared decision about the changes. Every intervention that was approved by the initial formal check team will be informed about the decision and given a rationale for it.

# How Will You Evaluate The Selected Interventions?

The 10 selected interventions will be evaluated in a large-scale online experiment. Study participants will be recruited from an online recruitment platform (see section “[Who Are the Participants?](#)”). Consent is required before participation in the study, and only those who meet eligibility criteria will be allowed to participate. We will collect information about participant well-being, including measures of depression, hopelessness, and agency, as well as participant demographics, including gender, age, ethnicity, and highest level of education. Then, we will randomize each participant to experience a different intervention, a passive control, or an active comparison intervention that has been shown to be effective in previous research. Because participants are randomly assigned to experience various interventions, any subsequent differences in depression relative to the control group can be interpreted as causal effects of the intervention (see section “[How Will You Determine the Effect of My Intervention?](#)”). Finally, participants complete the measures of depression (see section “[How Will Depressive Symptoms Be Measured?](#)”), hopelessness (see section “[How Will Hopelessness be Measured?](#)”), intervention satisfaction (see section “[How Will Satisfaction with Interventions be Measured?](#)”), and agency (see section “[How Will Agency be Measured?](#)”).

# How Will Depressive Symptoms be Measured?

Depressive Symptoms will be measured via the Patient Health Questionnaire (PHQ-9). The items are as follows:

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed, or the opposite—being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead, or of hurting yourself

Individuals rate each item based on their experiences over the past two weeks. The items are answered on a 4-point scale from 0 to 3 (not at all, several days, more than half the days, nearly every day). The total score ranges from 0 to 27, with higher scores indicating more severe depressive symptoms.

## How Will Hopelessness Be Measured?

Hopelessness will be measured via the four-item Beck Hopelessness Scale (BHS-4). The items are as follows:

1. I feel that the future is hopeless and that things cannot improve
2. My future seems dark to me
3. Things just won't work out the way I want them to
4. There's no use in really trying to get something I want because I probably won't get it

Respondents rate how typical the above statements are of them on a 4-point scale from 0 (not at all typical) to 3 (very typical). The total score ranges from 0 to 12, with higher scores indicating more severe hopelessness.

# How Will Satisfaction With Interventions Be Measured?

Satisfaction with interventions will be measured using the Credibility / Expectancy Questionnaire. The questionnaire contains two sets: in the first set, respondents are asked to answer in terms of what they think; in the second set, they are asked to answer in terms of what they truly feel. The items from the questionnaire are below.

1. At this point, how logical does the program offered to you seem?
2. At this point, how successfully do you think this program will be in improving your mental health?
3. How confident would you be in recommending this program to a friend who experiences similar problems?
4. Over the next few weeks, how much improvement in your mental health do you think will occur?
5. At this point, how much do you really feel that the program will help you to improve your mental health?
6. Over the next few weeks, what *percentage* improvement in your mental health do you really feel will occur?

Respondents respond to each of the above items on a 9-point scale from from 0 (not at all) to 9 (very much), except the percentage question, which they respond to on a 100-point scale. After adjusting the percentage scale by dividing it by 10, the total score ranges from 0 to 55, with higher scores indicating more severe hopelessness.



## How Will Agency Be Measured?

Agency is a sense of control over actions and their consequences. Agency will be measured using the Agency Subscale of the State Hope Scale, a reliable and valid three-item self-report measure of one's perceived ability to generate plans and work toward goals. The items from the questionnaire are below.

1. At the present time, I am energetically pursuing my goals
2. Right now, I see myself as being pretty successful
3. At this time, I am meeting the goals that I have set for myself

Respondents respond to each of the above items on a 8-point scale from from 1 (definitely false) to 8 (definitely true). Scores on this subscale can range from 3 to 24, with higher scores indicating higher levels of agency thinking.

## How Will You Determine the Effect of my Intervention?

The effect of your intervention will be estimated by comparing the mean change from baseline to four-week follow-up in (a) depressive symptoms, (b) hopelessness, (c) agency, and/or (d) user satisfaction, among those assigned to your intervention to the mean change in those outcomes for participants in the control condition. The control condition is a passive control, meaning participants will not receive an intervention. We will estimate the difference in the average level of each variable in the intervention condition compared to the control condition by running a linear regression model. To increase the precision of our estimate, we will statistically control for several characteristics of study participants: gender, age, race, and education. There are two important criteria for your intervention effect:

1. What is the size of the effect? We will report the coefficient,  $b$ , as the estimate of your intervention's average effect. This coefficient indicates the adjusted mean difference between participants in your intervention condition and the control condition. A negative intervention effect signals a reduction. The stronger the magnitude of this effect, the more effective the intervention.
2. Is the effect statistically significant? We will report p-values for one-sided tests. If this p-value is below .05, your effect is statistically significantly different from 0. This would suggest that it is very unlikely that the observed effect occurred just due to chance.

## How Much Can I Trust Your Results for My Intervention?

There are two common ways that our findings could be wrong, and we are taking measures to minimize the likelihood of both of them. First, your intervention could be effective in reducing depression but our test indicates it is not (a “false negative”). Our study has a probability of more than 90% to identify the effect of an intervention as statistically significant if the true effect size of this intervention is at least 0.15 standard deviations (which is considered a small effect size). Thus, if we do not find that your intervention had a statistically significant effect, it may still have an effect, but it is probably very small. Second, your intervention could have no effect but our experiment indicates that it does have an effect (a “false positive”). Our study has a probability of less than 5% to identify an intervention as statistically significant if the true effect size of this intervention is actually 0.

## Who Are the Participants?

Participants will be Americans aged 18 and older. We will recruit participants from an online participant recruitment platform. All participants will have recently scored within “moderate depressive symptoms” or more severe on the Patient Health Questionnaire (PHQ-9), a commonly used depression measure. Further, due to filtering based on attention checks, participants can be expected to be relatively attentive to intervention materials. Based on previous studies we conducted on the platform, the ethnic makeup of the sample can be expected to be roughly 70% Caucasian, 10% African American, 7% Latino/Hispanic, and 5% East Asian.

## How Will the Materials and Data for my Intervention be Published?

The Uplift the Web Challenge is committed to open science principles such as openness and transparency. We want to maximize the scientific and public insights from the Uplift the Web Challenge, and we want our procedures to be as transparent as possible for submitters and outside observers. The interventions selected for evaluation, the anonymized data file, and our analysis scripts will be made public on our website as soon as our first scientific paper on the Uplift the Web Challenge is published. As such, when you submit your intervention, you will need to agree to sharing it publicly on our online repository, in accordance with Creative Commons 1.0 <https://creativecommons.org/publicdomain/zero/1.0/deed.en>. We will make all interventions freely available, ensure that intervention authors are credited, and not attempt to profit off their dissemination in any way.

# How Can I Learn More about the Science Underlying the Uplift the Web Challenge?

If you want to learn more about brief online interventions for depression, you can check out these articles and presentations.

1. Schleider, J. L., Dobias, M. L., Sung, J. Y., & Mullarkey, M. C. (2020). Future directions in single-session youth mental health interventions. *Journal of Clinical Child & Adolescent Psychology*, 49(2), 264-278. [link: <https://pubmed.ncbi.nlm.nih.gov/31799863/>]
2. Lorenzo-Luaces, L., & Howard, J. (2023). Efficacy of an Unguided, Digital Single-Session Intervention for Internalizing Symptoms in Web-Based Workers: Randomized Controlled Trial. *Journal of Medical Internet Research*, 25, e45411. [link: <https://www.jmir.org/2023/1/e45411/>]
3. Bunge, E. L., Williamson, R. E., Cano, M., Leykin, Y., & Muñoz, R. F. (2016). Mood management effects of brief unsupported internet interventions. *Internet Interventions*, 5, 36–43. <https://doi.org/10.1016/j.invent.2016.06.001> [link: <https://www.sciencedirect.com/science/article/pii/S2214782916300094?via%3Dihub>]
4. Video Lecture: Little Treatments, Big Effects: Building Brief Interventions to Reduce Psychopathology at Scale [link: [https://www.youtube.com/watch?v=Q6oLh6Y\\_mZY](https://www.youtube.com/watch?v=Q6oLh6Y_mZY)]
5. Voelkel, J. G., Stagnaro, M., Chu, J., Pink, S., Mernyk, J., Redekopp, C., ... & Willer, R. (preprint). Megastudy identifying effective interventions to strengthen Americans' democratic attitudes. [link: <https://doi.org/10.31219/osf.io/y79u5>]