Project THRIVE Intervention Trial Protocol

ClinicalTrials.gov ID: NCT03703258
Protocol Date: 10-21-22

Administrative Information

1. Title

Tools for Health and Resilience Implemented after Violence Exposure (Project THRIVE)

2. Trial registration

2a. Trial identifier and registry name

ClinicalTrials.gov ID: NCT03703258

3. Protocol version

Date:

10-21-22

Version:

3

4. Funding

(Sources and types of financial, material, and other support)

NIAAA R00AA026317

5. Roles and responsibilities

5a. Names, affiliations, and roles

Name	Affiliation	Role
Emily Dworkin	University of Washington	PI
Christine Lee	University of Washington	Primary mentor
Debra Kaysen	Stanford University	Secondary mentor
Macey Schallert	University of Washington	Research Coordinator
Jenna Mohr	Seattle University	Research Assistant

5b. Name and contact information for the trial sponsor

N/A

5c. Role of study sponsor and funders

Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they will have ultimate authority over any of these activities

NIAAA has no role or ultimate authority in the study design, collection, analysis or interpretation of the data, writing the report, or the decision to submit the report for publication.

Introduction

6. Background and rationale

6a. Description of research question and justification for undertaking the trial

Including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention

Sexual assault (SA) is one of the most common forms of trauma (Kilpatrick et al., 2013) and it is associated with substantially increased risk for mental disorders including posttraumatic stress disorder (PTSD) and high-risk drinking (Campbell, Dworkin, & Cabral, 2009; Dworkin et al., 2017). The interplay between these conditions may prolong symptoms of posttraumatic stress (Kaysen et al., 2011; Stewart et al., 2000; Zlotnick et al., 2004). These conditions pose a major public health burden, including significant economic costs to individuals and the healthcare system (Bouchery et al., 2006; Suris et al., 2004). In light of these consequences, attention has been increasingly paid to intervention strategies early post-trauma to prevent longer-term psychopathology (Dworkin & Schumacher, 2016). Other research has focused on use of technology to increase reach of evidence-based treatments for PTSD and high-risk drinking. Although two technology-based early interventions have shown promise in addressing substance use and PTSD after trauma, neither has targeted adult survivors who do not present for medical treatment.

Targeting social interactions (i.e., frequency and perceptions of interaction, engagement in social drinking) is one potential means by which to prevent the development of high-risk drinking and PTSD in trauma-exposed women. High social support is a strong protective factor against PTSD (Brewin, Andrews, & Valentine, 2000; Ozer et al., 2003; Wagner, Monson, & Hart, 2016) and high-risk drinking (Stockdale et al., 2007; Moak & Agrawal, 2009), and social support can buffer the effects of certain life stressors on drinking (Johnson & Jennison, 1994; Peirce et al., 1996). Social contexts discourage or encourage drinking (George & Tucker, 1996; McCrady, 2004) via promoting healthier coping strategies in response to stress (Cooper et al., 1992; Humphreys et al., 1999), and encouraging those with drinking problems to seek help (George & Tucker, 1996). In trauma-exposed women with PTSD, lack of perceived social support is associated with more same-day drinking (Stappenbeck et al., 2015) and peer encouragement of drinking is associated with higher drinking consequences (Bachrach & Read, 2017). Thus, increasing alcohol-free contact with social supporters could be beneficial post-trauma. However, negative social reactions to SA disclosure (e.g., victim blame) are associated with increased risk for high-risk drinking in cross-sectional (Ullman et al., 2008) and longitudinal studies (Peter-Hagene & Ullman, 2014), indicating the need for interventions that buffer these iatrogenic effects. Despite the import of peers and of social support in both drinking behavior and in the development of PTSD, no intervention has targeted social contexts and support as a means of preventing high-risk drinking after SA.

Therefore, the goal of this project is to develop and examine the feasibility of a web-based cognitive-behavioral intervention to prevent the development of PTSD and HRD in recently-victimized adults.

6b. Explanation for choice of comparators

The goal of this project is to obtain preliminary data regarding the effects of the intervention. Thus, we selected an assessment-only control condition, while controlling for daily app use and weekly contact with a coach.

7. Objectives

Aim 3 (Assess participant reaction to the intervention)

- (H1) most participants will respond positively on items assessing satisfaction with the intervention
- (H2) participants will report above-average usability on a standardized measure
- (H3) completion rates for daily activities will be similar to previous web-based interventions.

Aim 4 (Assess the impact of the intervention on learning and symptoms)

- (H4) participants will show significant learning as evidenced by increases in correct responses to knowledge questions from baseline to post
- (H5) participants in the intervention condition will evidence less high-risk drinking and PTSD at 3-month follow-up than participants in the assessment-only condition.

8. Description of trial design

Type of trial

(eg, parallel group, crossover, factorial, single group)

Parallel group, two arm

Allocation ratio

1:1

Framework

(eg, superiority, equivalence, noninferiority, exploratory)

Superiority

Methods: Participants, Interventions, and Outcomes

9. Study setting

Description of study settings

Although the intervention will be conducted online, participants will be recruited from the Seattle–Tacoma–Bellevue, WA Metropolitan Statistical Area (defined by the US Census Bureau). According to the 2018 American Community Survey, this represents 3,939,363 people. The median age of the population in this area is 37, and the population is 50% female. The population is 62% White, 14% Asian, 10% Hispanic, 6% Black, 6% two or more races/ethnicities, and 2% other. The median per-capita income is $46,204, and the median household income is $87,910. The majority of individuals in this area (92.9%) are high-school graduates, and 43.6% have a bachelor's degree or higher.

Reference to where list of study sites can be obtained

N/A

10. Eligibility Criteria

Inclusion criteria

- Informed consent
- Self-identification as female
- Sexual assault, defined as endorsement of unwanted, attempted or completed sexual contact in the past 10 weeks on the Sexual Experiences Survey- Revised
- Age ≥ 18
- English fluency
- Telephone and internet access for 3 months
- Consumption of ≥1 alcoholic drink in the past month
- ≥1 episode of high-risk drinking in past 6 months, defined as either more than 3 drinks on a given day or more than 7 drinks in a given week
- At least 3 symptom clusters endorsed on the PTSD Checklist

Inclusion criterion	How assessed at phone screening	How confirmed at baseline
Informed consent	Verbal consent	Electronic consent
Self-identification as female	Single item	N/A
Age ≥18	Single item	N/A
Past-10-week sexual assault history	• "Have you experienced unwanted sexual	N/A

	contact?" ● "On what date or around what date did you last experience this?" ● "Did the recent assault involve…" ○ Completed penetration? ○ Attempted penetration? ○ Unwanted sexual touching? ○ If the participant answers no to all, ask "How would you describe the unwanted sexual experience?"	
Telephone and internet access for 3 months	Single item	N/A
English fluency	Single item	N/A
Consumption of ≥1 alcoholic drink in the past month	In the past month, how many days did you drink alcohol?	Quantity Frequency Questionnaire
≥1 episode of high-risk drinking in past 6 months, defined as either more than 3 drinks on a given day or more than 7 drinks in a given week	"In the past 6 months, what is the greatest number of drinks you had on a single day? By "drink" we mean a 12 ounce can or glass of beer or cooler, a 5 ounce glass of wine, or a drink containing 1 shot of liquor." "In the past 6 months, what is the greatest number of drinks you had in a single week?"	N/A

At least 3 symptom clusters endorsed on the PTSD Checklist	Primary Care PTSD Screen assessed in relation to the recent unwanted sexual experience (score of 2 or more)	On the PTSD Checklist (assessed in relation to the recent unwanted sexual experience), at least 3 of the following criteria met (based on responses of "moderately" or greater): 1 B item (questions 1-5), 1 C item (questions 6-7), 2 D items (questions 8-14), 2 E items (questions 15-20)

Exclusion criteria

- Active suicidality as assessed by the Ask Suicide Screening Questionnaire
- Psychosis as assessed by The Psychosis Screener

11. Interventions

11a. Interventions for each group with sufficient detail to allow replication, including how and when they will be administered

Intervention

The intervention is a phone app ("THRIVE") intended to be used daily for 3 weeks, beginning within 10 weeks of a sexual assault.

Participants will first complete an onboarding process that orients them to the app, the daily surveys, and the tasks and activities that they will be asked to complete daily. They will then complete two onboarding activities: one for the behavioral activation component (in which they generate an initial list of self-care activities), and one for the cognitive restructuring component (in which they learn about stuck points).

The dashboard of the app will contain:

- A banner indicating the consecutive days that participants have completed activities
- A link to an **activity involving behavioral activation** emphasizing engagement with alcohol-free social activities, which they will complete daily
- A link to **activity involving cognitive restructuring** skills with an emphasis on mitigating the harm of cognitive distortions arising from negative social reactions and other social factors, which they will complete daily
- A link to **relationship-targeted activities** that complement the

behavioral activation and cognitive restructuring skills, which will be completed as needed
- A link to a survey, which they will complete daily
- A link to a "mood tracker" that charts responses to daily surveys
- A link to resources

Coach
- The coach will check in weekly by phone or Zoom and will do the following:
    - Check on mood
    - Troubleshoot activity completion (e.g., help participants learn how to address a difficult stuck point)
    - Assist with issues related to use of the app itself (e.g., technical issues, glitches)
    - Provide resources as needed
    - Monitor and encourage intervention engagement

Comparison

Participants will first complete an onboarding process that orients them to the app and the daily surveys.

The dashboard of the app will contain:
- A banner indicating the consecutive days that participants have completed their survey
- A link to their survey, which they will complete daily
- A link to a "mood tracker" that charts responses to daily surveys
- A link to resources

Coach
- The coach will check in weekly by phone and/or Zoom and will do the following:
    - Check on mood
    - Assist with issues related to use of the app itself (e.g., technical issues, glitches)
    - Provide resources as needed

11b. Criteria for discontinuing or modifying allocated interventions for a given trial participant

Participants who withdraw consent for participation should no longer be contacted by study staff or sent automated reminders to complete study tasks.

11c. Strategies to improve adherence to intervention protocols, and any procedures for monitoring adherence

The phone screener will:
- Discuss the process of randomization to a condition with the participant.

- Emphasize that the app will be offered at the end of the baseline survey, so they must finish the survey to access the app.

Given evidence that human contact increases adherence to app interventions, we will provide participants in both conditions with ongoing phone coaching. All screened participants, regardless of randomization or condition, will get one phone or Zoom call from a coach to ensure that app installation and onboarding were successful (if randomized), answer questions (for all participants), encourage adherence to surveys (if randomized), and provide resources (if not randomized). This call will be scheduled during the phone screening and will occur within 3 business days of screening. The coach will be informed of the individual's condition before the call.

Participants in both conditions will be offered three additional weekly phone/text/Zoom check-ins with their coach to troubleshoot progress and skill application (intervention condition only), check in on overall well-being (both conditions), encourage daily survey completion (both conditions), monitor risk (both conditions), and troubleshoot technical difficulties (both conditions). Coaches will be able to access participant data (e.g., activity data, time spent in the app, self-report data) prior to the weekly appointment.

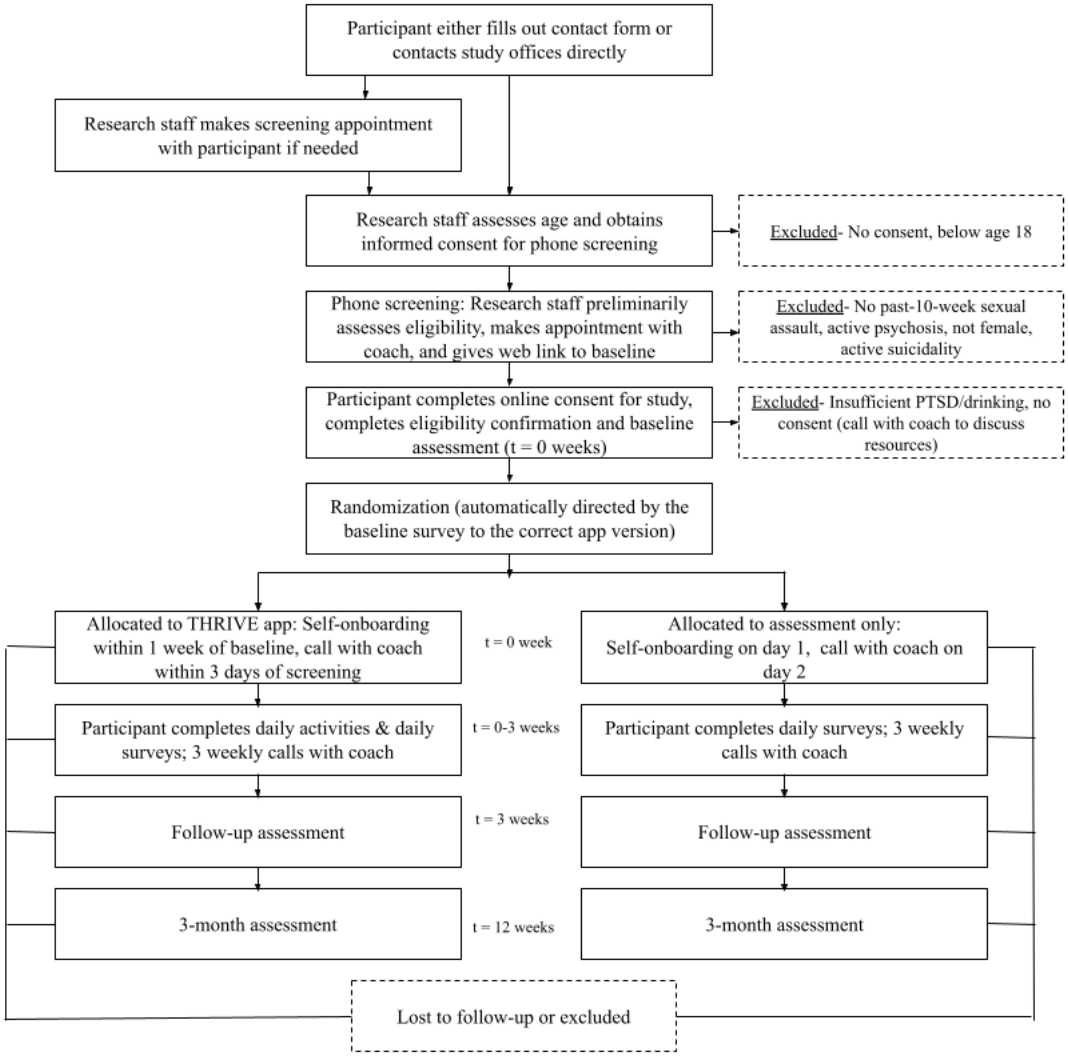
11d. Relevant concomitant care and interventions that are permitted or prohibited during the trial

Participants will not be restricted from accessing any care or interventions during the course of the trial. It is likely that individuals recruited from the Harborview Center for Sexual Assault and Traumatic Stress (a primary recruitment site) will receive treatment for sexual-assault-related distress while enrolled in the study.

12. Outcomes

See ClinicalTrials.gov.

13. Participant timeline



14. Sample size

Estimated number of participants needed to achieve study objectives

n = 20 in intervention condition; n = 20 in control condition

How sample size was determined

Including clinical and statistical assumptions supporting any sample size calculations

The study was designed to collect information about feasibility; thus, the sample size was set for practical reasons rather than detecting effect sizes or significance testing. A control group was included to obtain pilot estimates of effect sizes, and we will have

statistical power of 0.80 to detect an effect size of count ratio of 1.40, based on a mean base rate RAPI drinking problems count of 6 in untreated women from a preliminary study (R21AA016211 PI: Kaysen).

15. Recruitment

Strategies for achieving adequate participant enrollment to reach target sample size

Participants will enter the trial through one of 4 routes. In general, regardless of recruitment route, the intervention will be described as a way to monitor their symptoms and build coping skills. Potential participants will be informed that all eligible participants will receive symptom monitoring, some participants will receive coping skills immediately, and some will be offered the coping skills in 3 months.

1. HATC "call-back list"- Clients who independently (i.e., not via referral through the emergency department) contact HATC within 10 weeks of an assault requesting a therapy appointment will be provided a brief study description and the study phone number over the phone by the HATC social worker.
2. Sexual assault survivors presenting for care at the emergency department- Approximately 2-25 individuals per week present to Seattle-area emergency departments for care related to a recent sexual assault. HATC social workers attempt to follow up with all survivors over the phone and schedule in-person follow-up sessions with a social worker (Maria) and a SANE (Annette) for 1-2 weeks post-assault. Survivors will be told about the study during the scheduling phone call and again at the in-person session, and will be given the study phone number.
3. Emails to University of Washington registered students- We will request the registrar's list for all 3 campuses each quarter. Participants who have asked not to be contacted or who have already participated will be removed from the list.
4. Community flyers and advertisements- We will post on the Seattle Craigslist page, on Facebook targeting Seattle-area women, and at the King County Sexual Assault Resource Center in Renton.

Methods: Assignment of Interventions (for Controlled Trials)

16. Allocation

16a. Sequence generation

Method of generating the allocation sequence (eg, computer-generated random numbers) and list of any factors for stratification. To reduce predictability of a random sequence, details of any planned restriction (eg, blocking) should be provided in a separate document that is unavailable to those who enroll participants or assign intervention.

Participants will be randomly assigned to intervention or control via a computer-generated randomization schedule. Randomization will not be stratified.

16b. Allocation concealment mechanism

Randomization will occur without human involvement; therefore, no allocation concealment method will be needed.

16c. Implementation

Who will generate the allocation sequence, who will enroll participants, and who will assign participants to interventions

Participants will be preliminarily screened for the study over the phone by a study staff person. The staff person will then give them a web link to complete the baseline survey. Participants will then complete the baseline survey online by themselves, which will confirm eligibility. Participants will not be able to retake the baseline survey. At the end of the survey, they will be informed of their eligibility status, and if eligible, intervention condition (randomization will occur within the survey), and be directed to log into the app.

17. Blinding (masking)

17a. Who will be blinded after assignment to interventions (eg, trial participants, care providers, outcome assessors, data analysts), and how

Due to the nature of the intervention, neither participants nor study staff can be blinded to allocation. Baseline and follow-up assessments will occur via self-report; thus, no blinding of staff assessors is needed.

17b. If blinded, circumstances under which unblinding is permissible, and procedure for revealing a participant's allocated intervention during the trial

N/A

Methods: Data Collection, Management, and Analysis

18. Data collection methods

18a. Plans for assessment and collection of outcome, baseline, and other trial data

Participants will complete online self-report surveys at baseline, daily during the intervention, post-intervention, and 3-month follow-up. Participants will be paid $20, $40, and $60 for participation in baseline, post-intervention, and 3 months post-baseline surveys, respectively. Participants will be paid $3 per day of survey completion (daily participation will be incentivized to make daily data analysis possible) and $10 bonus for completion of 7 consecutive days. Baseline, post-intervention, and 3-month assessments will take approximately 30 minutes to complete, and daily assessments will take approximately 5 minutes. Baseline and post-intervention surveys and will assess immediate intervention effects, and 3-month follow-up will assess long-term maintenance of effects. Post-intervention and 3-month follow-up assessments will assess changes in learning (i.e., increases in correct responses to items reflecting knowledge about intervention concepts) and symptoms.

18b. Plans to promote participant retention and complete follow-up

List of any outcome data to be collected for participants who discontinue or deviate from intervention protocols

The following steps will be taken to promote retention:

- We will collect extensive contact data from participants and attempt to reach them for all follow-up assessments unless directed otherwise.
- The daily surveys will be accessed from within the app, which is intended to increase the likelihood that participants complete both surveys and activities
- Participants can opt in to receive a text from the app prompting them to complete a survey.
- Participants will be paired with a coach, who will remind them to complete baseline and post-intervention surveys
- Participants will receive reminders from study staff to complete the baseline, post-intervention, and 3 month surveys.
- Participants will be paid $3 per day of survey completion (daily participation will be incentivized to make daily data analysis possible) and $10 bonus for completion of 7 consecutive days. Participants will be paid $20, $40, and $60 for participation in each assessment (at baseline, termination, and 6 3 months post-termination), respectively. Total possible remuneration will be $213 for both conditions. Participants will be paid for each survey and assessment they complete, even if they do not complete all assessments.
- The screener will emphasize the importance of completing both daily surveys and daily intervention tasks if assigned to the intervention.
- The screener will instruct participants to complete the baseline survey once they terminate the phone call.

19. Data management

Plans for data entry, coding, security, and storage

Including any related processes to promote data quality (eg, double data entry; range checks for data values). Reference to where details of data management procedures can be found, if not in the protocol.

Entry and coding

Data will be completely digital; no data entry will be needed. In some cases, scale scores will be automatically calculated by custom programming. When this does not occur, the first author will create SPSS syntax and a data dictionary referencing scoring procedures.

Security and storage

All data will be identified only by a Personalized Identification Number (PIN). Data will be collected using a secure server. Electronic protection is provided by a commercial-grade firewall, with continuous monitoring of the server for any attempts at electronic invasion. The password to the account will only be known to the Principal Investigator, Mentors, and other relevant research staff. All data stored in the online repository will be encrypted. A master list of names and PINs will be stored in a password-protected database under the supervision of the Principal Investigator, and will be available only to research staff on this project. Research assistants will receive training that includes emphasis upon the importance of confidentiality of information, and all personnel on the project (including graduate and undergraduate research assistants and study staff) will complete the required NIH training in protection of human research participants. All staff will sign confidentiality statements. Data will be retained on computers with restricted and password protected access, without links to the master code list. All data based on this research will be reported in aggregate form. No individual respondents will be identified.

The link between identifiers and the research data will be destroyed after the records retention period required by state and/or federal law.

20. Statistical methods

20a. Statistical methods for analyzing primary and secondary outcomes

Reference to where other details of the statistical analysis plan can be found, if not in the protocol

Relevant to Aim 3 (Assess participant reaction to the intervention), the hypothesis that most participants will respond positively on items assessing satisfaction with the intervention (H1) will be assessed via descriptive statistics, visualizations, and multilevel models; 95% CIs will determine whether satisfaction ratings are significantly better than "neutral." The hypothesis that participants will report above-average usability on a standardized measure (H2) will be assessed via mean scores on the System Usability Scale; 95% CIs will determine whether usability ratings are significantly different from a score of 68/100 (indicating above-average usability). The hypothesis that completion rates for daily activities will be similar to previous

web-based interventions (H3) will be tested via descriptive statistics, visualizations, and multilevel models; 95% CIs will determine whether the number of days completed is significantly different from 10 and the percent of days completed is significantly different from 71.43%.

Relevant to Aim 4 (Assess the impact of the intervention on learning and symptoms), as this study was not powered to detect all effects of interest, we rely primarily on the direction and magnitude of effect sizes to interpret results and conduct significance tests in an exploratory manner. The hypothesis that participants will show significant learning as evidenced by increases in correct responses to knowledge questions from baseline to post (H4) will be tested via paired-samples t-tests. The hypothesis that participants in the intervention condition will evidence less high-risk drinking and PTSD at 3-month follow-up than participants in the assessment-only condition (H5) will be tested via mixed-effects models. Because they are non-negative discrete integers that typically show a positive skew, Poisson or negative binomial distributions will be examined. Dummy variables for the intervention condition with the control as the reference will be included. We will examine time by condition interactions to assess effects at each follow-up.

20b. Methods for any additional analyses
(eg, subgroup and adjusted analyses)

We may include additional covariates to increase precision or if there is evidence that randomization did not adequately balance covariate distributions by condition.

20c. Analysis population and missing data
Definition of analysis population related to nonadherence (eg, as randomized analysis), and any statistical methods to handle missing data (eg, multiple imputation)

We will use an intent to treat analysis, in which participants will be retained in the group to which they were originally randomized. Outcome data from all participants will be included in analyses. We will also explore the use of randomization-based efficacy estimators (White, 2005). We will use maximum likelihood estimation for missing data.

Methods: Monitoring

21. Data monitoring

21a. Data monitoring committee

Composition of data monitoring committee (DMC)

N/A

Summary of its role and reporting structure

N/A

Statement of whether it is independent from the sponsor and competing interests

Reference to where further details about its charter can be found, if not in the protocol

N/A

Alternatively, an explanation of why a DMC is not needed

Given that this is a pilot trial of an intervention with minimal risks, we will not retain a data monitoring committee.

21b. Description of any interim analyses and stopping guidelines

Including who will have access to these interim results and make the final decision to terminate the trial

No interim analyses will be conducted. We will employ the following stopping rule for the clinical trial: if there is clear evidence of harm. Although we do not expect any physical harms or serious psychological harms beyond minimal distress, we have several procedures for monitoring harm from the intervention, including asking participants to contact us if they experience any adverse events, offering additional resources to those with very high levels of mental health symptoms and problem drinking that we identify through data monitoring, and providing resources after baseline and at every follow-up time point. We do not expect there to be overwhelming evidence of the harm of the intervention, but we will monitor this and stop the trial if this is indicated. We also do not expect that there will be no likelihood of demonstrated treatment benefit (futility) for the intervention as compared to control.

22. Harms

Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct

Potential risks

Risks to the participants in the intervention are not substantial: they will receive a combination of commonly-used evidence-based skills that are similar to those known to be effective with PTSD and high-risk drinking and are thus unlikely to increase distress. The sensitivity of some of the measures poses some psychological risk, as they may be somewhat uncomfortable to complete.

Reports of suicidal ideation ethically require follow-up by the investigators, and could potentially result in the need to violate confidentiality in order to protect the participants, consistent with ethical guidelines and State and Federal regulations. Thus, this represents a potential limit to confidentiality. It is possible that participants randomized to the assessment only group may experience increased negative affect and alcohol use in their daily lives. At the conclusion of their participation (3 month follow-up) participants who were assigned to the assessment only group will be offered the web-based intervention. In addition, we will offer all participants referrals for additional services. No participants will be excluded from seeking additional services while part of this study.

Protection against risks

We recognize that this is a vulnerable population and have taken a number of steps to protect the patients' rights and welfare. Participants may refuse to answer questions or may withdraw from the study at any time. Participants are also encouraged to content the investigators at any time to discuss any concerns they might have. Dr. Dworkin is qualified to provide referrals and address concerns related to psychological distress arising through participation in this study.

Trained personnel will be present or on call when specific study procedures take place, though we will make it clear to participants on consent documents and in emails that we may not be able to return calls or emails received during the evening/night time until the next day. Drs. Dworkin, Lee, and Kaysen have training in working with individuals with PTSD, alcohol misuse, and with individuals with chronic and severe suicidality and thus is competent to assess and intervene with these individuals. Drs. Lee, Kaysen, and Areán are well-versed in the requirements and procedures for monitoring and reporting adverse events and complaints to the IRB for review within 48 hours, and Drs. Kaysen, Dworkin, and Areán are licensed Clinical Psychologists in the State of Washington competent to handle any adverse psychological events which may arise. They are also well-versed in clinical management and oversight for remotely-conducted clinical trials. Dr. Kaysen has over 12 years of clinical and research experience working with victims of trauma exposure and sexual assault and is well-qualified to assess and treat individuals in crisis.

All participants, regardless of study or intervention condition, will be offered resources for mental health and rape crisis services. These resources will again be offered to participants after each survey. All participants, regardless of whether they are intervention or control, will be offered these resources. Participants in any of the samples or conditions will not be prevented from seeking additional services for alcohol use or other mental health concerns.

Suicidality. A plan is in place for identifying, contacting, and referring individuals with significant suicidal ideation. Suicide risk is assessed at screening. The study team will take steps to ensure the safety of the participant and others, and participants with high levels of risk will be ineligible to participate in the study. Participants will be told during the consenting process that disclosure of suicidal ideation may necessitate a break of confidentiality. All staff members conducting phone screenings will be trained to assess suicidal risk and intervene with suicidal participants. Disclosure of suicidal ideation will trigger a protocol involving an additional set of questions to assess degree of suicidal risk and appropriate follow-up action tailored to the level of risk. For all non-imminent risk, study staff will engage in safety planning over the phone, but if it assessed that participant remains an imminent risk for

suicide, we will work with the participant to secure additional mental health support. If a participant refuses to remain safe, we will explain to the participant that we must contact the necessary resources to ensure their safety. We will then contact the appropriate officials who are able to intervene in a suicidal crisis. Dr. Dworkin will be contacted in all such situations. Although suicide is not formally assessed at further assessments, if individuals disclose significant distress or suicidal ideation to their coach, the same procedures will be used. This is consistent with recommended best practices for remote management of suicide risk.

Potentially-lethal alcohol consumption. A plan is also in place for identifying and referring individuals who report consumption of potentially lethal doses of alcohol (BACs above .30). Specifically, all daily data will be screened immediately upon entry for indication of significant risk based on criteria established in our prior trials of this nature. Dr. Dworkin will be notified within 48 hours upon identification of a participant who meets criteria for elevated BAC. Dr. Dworkin will attempt to reach all participants who report BACs greater than .30 within 48 hours to inform them of their risk and offer referral resources. All such contact will be noted in a tracking database.

Information regarding the potential for a follow-up contact by the investigators to clarify responses or provide information is included in the consent documents. Participants are also informed in the consent form that they are free to seek other services for their alcohol use and can contact us for referrals. This structure is currently in place and approved at both the local and federal level on all existing drinking and drug prevention studies conducted in the Center for the Study of Health and Risk Behaviors.

23. Auditing

Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor

No auditing will be conducted.

Ethics and Dissemination

24. Research ethics approval

Plans for seeking research ethics committee/institutional review board (REC/IRB) approval

We have obtained ethical approval from the University of Washington IRB.

25. Protocol amendments

Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC/IRBs, trial participants, trial registries, journals, regulators)

Any modifications to the protocol which could impact the conduct of the study, potential benefits to the participants or participant safety, including changes to study objectives, study design, target population, sample sizes, study procedures, or significant administrative aspects, will require a formal amendment to the protocol. This amendment will be approved by the study PI and the IRB prior to implementation.

Administrative changes (i.e., minor corrections and/or clarifications that have no effect on the way the study is conducted) will be documented by the PI, and approved by the IRB if necessary.

26. Consent or assent

26a. Who will obtain informed consent or assent from potential trial participants or authorized surrogates, and how (see Item 32)

During the phone screening, the research staff person will explain the screening process and the broader study and obtain verbal informed consent for screening. Participants will complete a separate electronic consent form on their own for the baseline assessment that again presents information about the broader study and involves consent to be randomized and participate in the intervention. Electronic consent will again occur at the follow-up assessments.

26b. Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies, if applicable

N/A

27. Confidentiality

How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial

All participants will be informed of exceptions to confidentiality (i.e., current, imminent suicidality/homicidality; current child abuse, elder abuse) both verbally and in the written consent form at their initial baseline evaluation. Participants will be informed that in cases of reported current threat to safety to either self or others, or abuse of a vulnerable population, mandatory reporting laws apply and confidentiality may be broken in order to ensure safety.

We need to retain phone numbers and other contact information in order to contact participants for study reminders and follow-up assessments. We will retain this contact information in a locked filing cabinet and password protected computer system (described above). These data will not be shared with individuals who are not directly involved in the study.

All data will be identified only by a PIN. All participant data will be coded in a way that does not contain any participant identifiers. Measures will be administered in order to collect data on participants' demographic information, trauma history, life events, substance use, psychiatric status, and emotional experiences. All of the data will be recorded and maintained on file for purposes of analysis and will be used only for research purposes. Files will be kept in locked file cabinets and only on password protected computers, both of which will be in locked rooms. The linkage code will be kept in a locked file and a computer file with restricted access and will not be available to the public or individuals not directly involved in the research. We will maintain the link for 1 year after the end of the study to ensure that all data are accounted for and no further subject contact is required. .

Data will be collected using a secure server. IP address is not stored, and data are identified only by the PIN, not the participant's name. Data transfer will be encrypted. This is the same level of encryption used for online banking transactions. The password to the account will only be known to the Principal Investigator, Co-Investigators, and research coordinator. A master list of names and code numbers will be stored in locked file cabinets and on a password-protected computer under the supervision of the Principal Investigator, and will be available only to research staff on this project. Research assistants will receive training that includes emphasis upon the importance of confidentiality of information, and all personnel on the project (including graduate and undergraduate research assistants and study staff) will complete the required NIH training in protection of human research participants. All staff will sign confidentiality statements. Data will be retained on computers with restricted and password protected access, without links to the master code list. All data based on this research will be reported in aggregate form. No individual respondents will be identified. Finally, we will receive a Federal Certificate of Confidentiality from the Department of Health and Human Services to address the proposed research. This certificate offers the highest protection available by law for research data. Dr. Kaysen has previously used these certificates in her work with female problem drinkers with PTSD. Participants will be informed of these risks and protections in the informed consent form. Data will be reported in aggregate and deidentified form to our funding agency in compliance with their standards.

28. Declaration of interests

Financial and other competing interests for principal investigators for the overall trial and each study site

None

29. Access to data

Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators

Access to the data will include:

- Members of the research team, with the research team making confidentiality agreements
- The UW Institutional Review Boards;
- The National Institute on Alcohol Abuse and Alcoholism (NIAAA), the sponsor of the Research Study (including a Contract Research Organization or study monitors);
- The Department of Health and Human Services, Office of Human Research Protections, and other governmental agencies and regulatory agencies;
- Other researchers when a review board approves the sharing of the health information.
- Others, if the law requires.

Data in non-identifiable form will be available, upon request to reanalyze the data, to qualified researchers. However, again, no identifying information will be provided. Data kept in identifiable form (recordings) will be destroyed after the records retention period required by state and/or federal law.

30. Ancillary and post-trial care

Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation

N/A

31. Dissemination policy

31a. Plans for investigators and sponsor to communicate trial results

To participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions

Results will be presented in peer-reviewed journal articles (with appropriate deposit in publicly-accessible databases as required as a condition of NIH funding), conference presentations, and community presentations.

31b. Authorship eligibility guidelines and any intended use of professional writers

The research team will adhere to the American Psychological Association's (2001) publication credit guidelines for authors (p. 350-351; Principle 6.23, a-c).

Authorship order is based on scientific contributions to the research and the manuscript. Proposed authorship order is subject to renegotiation if an author fails to fulfill his/her agreed upon role in a timely manner. If the manuscript has not progressed within 6 months of the date of this agreement, the data return to the authorship pool and another author may be designated to take the lead on the paper.

31c. Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code

N/A

32. Appendices

- Study consent form (next page)

UNIVERSITY OF WASHINGTON

Information Statement: Project THRIVE

We want you to make an informed decision about whether or not to participate in this study. Next, we will give you information about this study to help you make that decision. We encourage you to contact us to ask any questions about this research before you decide. This process is called "informed consent."

Contact information for the research team *(please consider taking a screenshot for your reference)*:

Dr. Emily Dworkin, Principal Investigator, Dept. of Psychiatry and Behavioral Sciences, University of Washington, 206-221-2380, edworkin@uw.edu

Dr. Christine Lee, Co-Investigator, Dept. of Psychiatry and Behavioral Sciences, University of Washington, 206-543-6574, leecm@uw.edu

Macey Schallert, Study Coordinator, Dept. of Psychiatry and Behavioral Sciences, University of Washington, 206-437-2069, uwthrive@uw.edu

[ ] Continue to the Information Statement

STUDY BACKGROUND

What is the goal of this study?

The goal of this study is to **test whether an app that encourages healthy coping can help recovery** after an unwanted sexual experience.

What does participation involve?

If you consent to participate, you will be invited to do the following:

1. **Take a 30-minute survey today** that will determine whether you are eligible for the other parts of the study. This survey will include questions about substance use, experiences with trauma, social support, and demographic information (your ethnicity, sexual orientation, and relationship status).

If you are found to be eligible based on the survey today, you would also be invited to do the following:

2. **Download the THRIVE app today** and keep it installed on your phone for 3 weeks
3. Use the THRIVE app to **take short surveys every day for 3 weeks, starting today**. The daily survey should take 5 minutes and asks about your mood, substance use, and social interactions.
4. Have **short check-ins with a coach weekly** to help you use the app and answer any questions you have.
5. Some people will be randomly selected (like a flip of a coin) to also **do daily coping exercises** in the app.
6. Take **two more 30-minute surveys**: one in 3 weeks, and one in 3 months. These surveys will cover the same topics as the 30-minute survey you take today.

How much will I be compensated for participating?

You could earn up to $213. You will be compensated **$20** for taking the 30-minute survey today. If you are eligible for the rest of the study, you will be paid:

- **$3** for every day you complete the short daily surveys plus a **$10 bonus** for completing 7 daily surveys in a row.
- **$40** for the 30-minute survey in 3 weeks
- **$60** for the 30-minute survey in 3 months

All compensation will be in the form of Amazon Gift Cards. Please note that it can take up to 10 days to process these gift cards.

[ ] Continue

RISKS & BENEFITS

What are the risks of participating in this study?

The main risks associated with participation in this study have to do with **the sensitive and private nature of some of the questions**. The surveys in this study and the app activities contain questions about your substance use, experience with stressful events, and psychological symptoms. These questions may make you feel uncomfortable or feel intrusive. In addition, you might feel distressed if someone were to improperly gain access to your responses. Here are some examples of the most sensitive items:

1. Someone had oral sex with me or made me have oral sex with them without my consent by using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
2. How often have you been bothered by feeling bad about yourself, or that you are a failure, or have let yourself or your family down?
3. How much do you agree with the statement, "I am a weak person"?

You may also be asked questions about potentially illegal behaviors, such as illicit drug use and drinking under the legal age. While a breach of data security is unlikely, this may pose a risk if this is private information that you do not want others to know.

Please remember that you do not have to answer any questions that you do not wish to and you may stop participation in the study at any time.

I**f you are randomly selected for the part of the study involving learning and practicing coping skills in the app**, there may be additional risks:

- The coping skills exercises may remind you of problems you're having and could make you feel upset. Although these exercises are based on research about what is helpful, some people may not find them helpful.
- When you use the app to practice coping exercises, you will be asked to answer private questions in the app. The app will store your answers. Only you, the research team, and your coach will be able to see your answers. We set it up this way so that your coach can help you make the most out of these exercises, and so we can understand how people are using the app. If someone else were to gain access to your phone, they could see your answers to these private questions. **It is very important that you enable security protections on your phone**, like a password or fingerprint scanner access, to prevent access to your answers.

If you need assistance or have questions at any time, you can contact the study team.

What are the benefits to taking part in this study?

You may not experience any direct benefits from participating in this study, but you might learn more about yourself, your experience with stressful events, and your drinking as you go through this study, which could be helpful. You may also learn new coping skills for dealing with stressful events, negative emotions, and drinking.

Your participation in this study may benefit other people who have experienced unwanted sexual contact by helping to understand whether using this app speeds up recovery.

Your participation in this study may benefit society by increasing our understanding of recovery after unwanted sexual experiences.

[ ] Continue

PROTECTIONS AGAINST RISKS

How will I be protected against the risks to my privacy?

Participation in this research is voluntary, and you are free to skip over any questions you do not want to answer or to stop participating at any time.

All of the information you provide will be confidential. Here is how we will protect your data:

- Your name and contact information will be stored securely. It will be accessible only to research staff for the purposes of contacting you to complete the study and compensating you for your participation. That information will be stored separately from all of your answers to study questionnaires and all information you enter into the app. We will retain your name and contact information until the end of the record retention period required by state and/or federal law.
- Your responses to online surveys and anything you enter into the app will be stored using a secure server that provides the highest available level of protection for your confidentiality. These responses will be stored with a personal identification number (PIN) randomly generated for research purposes, not your name. Your PIN is kept separate from your personal information, so that none of your answers can be linked to anything that might identify you. Only the researchers will know the PIN.

We have a Certificate of Confidentiality from the federal National Institutes of Health. This helps us protect your privacy. The Certificate means that we do not have to give out information, documents, or samples that could identify you even if we are asked to by a court of law. We will use the Certificate to resist any demands for identifying information.

We can't use the Certificate to withhold your research information if you give your written consent to give it to an insurer, employer, or other person. Also, you or a member of your family can share information about yourself or your part in this research if you wish.

There are some limits to this protection. We will voluntarily provide the information to:

- a member of the federal government who needs it in order to audit or evaluate the research;
- individuals at the institution(s) conducting the research, the funding agency, and other groups involved in the research, if they need the information to make sure the research is being done correctly;
- the federal Food and Drug Administration (FDA), if required by the FDA;

- individuals who want to conduct secondary research if allowed by federal regulations and according to your consent for future research use as described in this form;
- authorities, if we learn of child abuse, elder abuse, or the intent to harm yourself or others.

The Certificate expires when the NIH funding for this study ends. Currently this is 8/31/22. Any data collected after expiration is not protected as described above. Data collected prior to expiration will continue to be protected.

You will not be identified in any research reports or presentations of this research. Here are the situations where we would share data with people outside of the research team:

Data identified only by the PIN (not your name or contact information) may be shared with other researchers doing similar work on other campuses, be combined with data from other campuses in some research reports, and/or may be used to develop procedures used in future studies. These data will be retained indefinitely, identified only by the PIN.

How will I be protected against the risk that I may be distressed?

If you become concerned about problems you're experiencing related to stressful events or your drinking, or if you experience discomfort as a result of your participation, you can contact the study team by phone or email during regular business hours to discuss your concerns. We will be happy to provide referrals for substance use or mental health counseling services.

You are free to participate in other mental health or alcohol-related programs such as support groups, treatment, therapy, etc. while involved in the study.

Your coach will monitor any significant increases in your alcohol use during your study participation, and may reach out by phone or email to give you referrals if needed.

[ ] Continue

OTHER INFORMATION

You may refuse to participate, and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled.

You should not incur any expenses from your participation in this research.

There are alternatives to participating in this study. If you choose not to participate in this study but still have questions about stressful events or alcohol, we can provide you with a list of community referrals.

A description of this clinical trial will be available on http://www.clinicaltrials.gov, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

This study is funded by the National Institute on Alcohol Abuse and Alcoholism.

[ ] Continue

RESEARCH-RELATED INJURY

If you think you have been harmed from this research, contact one of the study investigators right away. They will assist you or refer you for treatment. You may also reach out to them if you have questions about the study or your rights as a participant.

Dr. Emily Dworkin at 206-221-2380 or edworkin@uw.edu
Dr. Christine Lee at 206-543-6574 or leecm@uw.edu

[ ] Continue

Subject's Statement

If I have questions about the research, or if I have been harmed by participating in this study, I can contact:

Dr. Emily Dworkin at 206-221-2380 or edworkin@uw.edu
Dr. Christine Lee at 206-543-6574 or leecm@uw.edu
The THRIVE study coordinator at 206-437-2069 or uwthrive@uw.edu

If I have questions about my rights as a research subject, I can call the Human Subjects Division at (206) 543-0098 or call collect at (206) 221-5940.

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions.

[ ] **I accept.** I want to participate in this study.

[ ] **I do not accept.** By clicking here you will be permanently removed from the participant list. If you wish to return and decide later, simply close this window.

Would you like to have a copy of this information statement emailed to you for your personal records? If you do not email this statement now, but decide later that you would like a copy of this statement, you can get one by contacting the Principal Investigator at edworkin@uw.edu. The information statement will also be available to you in the Resources section of the app.

[ ] No, do not email me a copy of this information statement.
[ ] Yes, please email me a copy of this information statement.