Title: Telehealth Behavioral Migraine Management

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ID: **2019-10345**
IRB Approval Date: **06/12/2023**

SYNOPSIS

Migraine is a prevalent and disabling chronic illness that impacts approximately 40 million people in the United States and is a leading specific cause of years lived in disability worldwide[1]. Behavioral Migraine Management (BMM) delivered in four in-person sessions and a patient manual over three months has demonstrated efficacy to reduce migraine frequency and migraine-related disability[2]. However, access to behavioral headache treatments is poor; barriers include lack of local access to behavioral treatment providers and challenges in transportation and scheduling appointments[3]. The current project aims to address access to care by evaluating three modes of adapting the existing BMM protocol to remote delivery: a version with both telephone-based therapist contact and online modules (TeleBMM), a version with only telephone-based therapist contact (CBT-HA), and a version with only online modules (ED). Remote delivery are innovative approaches to increase access to care, and have promise for reaching underserved populations, such as the urban poor.

PRIMARY OBJECTIVE

This project aims to develop the protocol and obtain feasibility and acceptability information for three remove delivery versions of the BMM protocol in a three-arm pre-post pilot study. I aim recruit 60 people with migraine from the Montefiore Headache Center in the Bronx NY. Participants will select either TeleBMM, CBT-HA, or ED. Adherence to the treatment protocol will be monitored. They will complete headache diaries for 12 weeks, complete questionnaires pre and post.

PRIMARY OUTCOME VARIABLES

Primary outcomes will be feasibility (patient adherence to protocol) and acceptability (patient satisfaction survey).

STUDY DURATION

The study will last for approximately 6 years, beginning in July 2019 and finishing by July 2025.

STUDY DESIGN

This is a three arm, pre-post study.

STUDY POPULATION

Inclusion criteria are: 1) physician diagnosis of migraine, 2) current self-reported symptoms meeting the International Classification for Headache Disorders – 3 (ICHD-3) criteria for migraine, 3) self-reported at least 4 headache days per month, with at least one day without headache 4) aged 18-65, 5) can read English, and 6) capacity to consent. Exclusion criteria are: 1) psychiatric illness that would interfere with study participation or 2) meeting criteria for probable medication overuse headache.

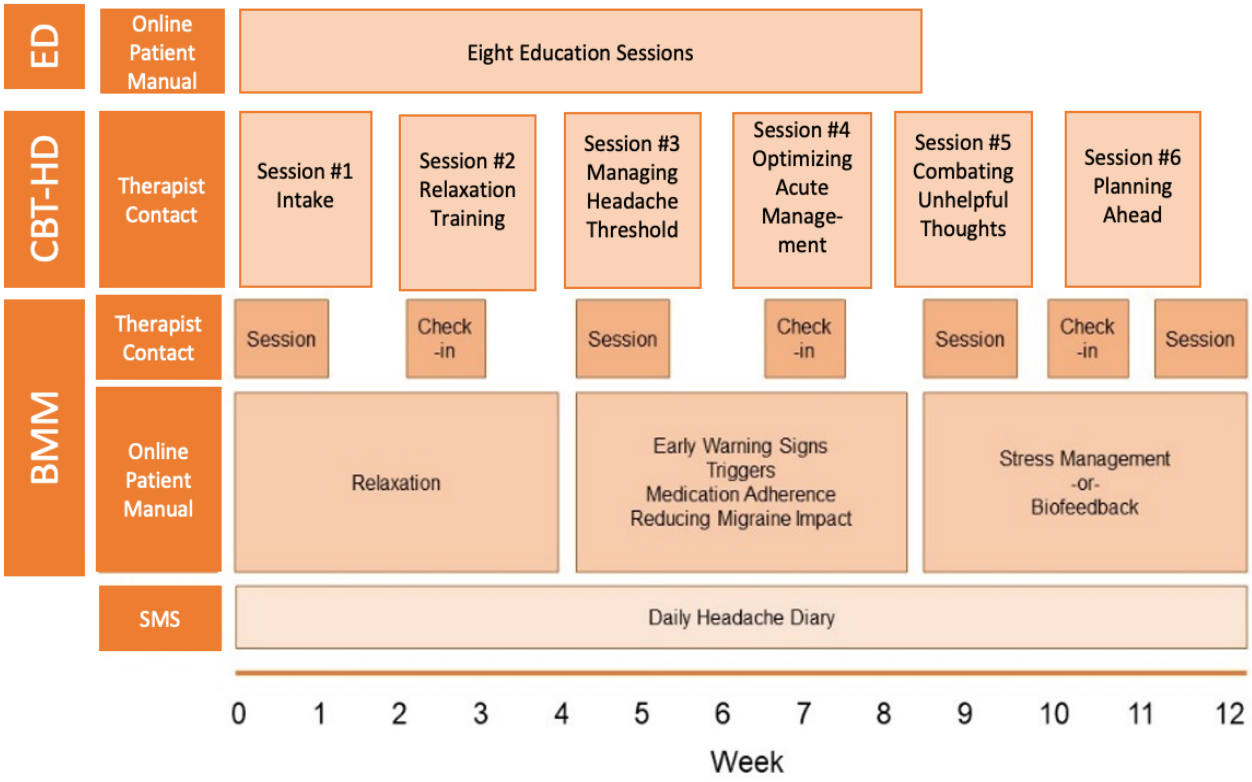
NUMBER OF PARTICIPANTS

There will be a total of 60 participants.

NUMBER OF STUDY SITES

The study will be conducted at the Seng (Headache & Adherence) Lab, Van Etten Building, 1225 Morris Park Ave, Bronx, NY 10461. Participants will be recruited from the Montefiore Headache Clinic, Hutchinson Tower #2,1250 Waters Pl, Bronx, NY 10461.

STUDY FLOW CHART


ED
Online Patient Manual
Eight Education Sessions
CBT-HD
Therapist Contact
Session #1 Intake
Session #2 Relaxation Training
Session #3 Managing Headache Threshold
Session #4 Optimizing Acute Manage-ment
Session #5 Combating Unhelpful Thoughts
Session #6 Planning Ahead
BMM
Therapist Contact
Session
Check -in
Session
Check -in
Session
Check -in
Session
Online Patient Manual
Relaxation
Early Warning Signs
Triggers
Medication Adherence
Reducing Migraine Impact
Stress Management
-or-
Biofeedback
SMS
Daily Headache Diary
0 1 2 3 4 5 6 7 8 9 10 11 12
Week

1.INTRODUCTION

1.1 Introductory Statement

This document is a protocol for a human research study. This proposal will use mobile electronic headache diaries to 1) assess the roles of individual differences and conditions in adherence to preventive and acute migraine headache management strategies, and 2) develop a tailored Clinical Decision Support Tool to improve adherence to preventive and acute migraine management strategies. The purpose of this protocol is to ensure that this study is to be conducted according to ICH GCP guidelines (CRF 21 Part 312), applicable government regulations and Institutional research policies and procedures

2. BACKGROUND

2.1 Background/Prevalence of Research Topic

Migraine is a chronic, painful condition with episodic attacks of head pain, nausea/vomiting, and sensitivity to light/sound. Migraine is common, affecting 1 in 7 Americans annually [4]. Migraine is the most disabling neurological disease worldwide [5], and costs the U.S. healthcare system $4.3 billion annually [6]. One-quarter of people with migraine meet criteria for being offered prevention[7]. Behavioral Migraine Management (BMM) is an evidence-based minimal contact behavioral migraine treatment that includes components of relaxation, cognitive behavioral therapy and biofeedback[2]. Previous research has demonstrated that BMM reduces migraine frequency compared to placebo, and migraine-related disability compared to both placebo and preventive medication (beta-blocker)[2].

3.RATIONALE/SIGNIFICANCE

3.1 PROBLEM STATEMENT

Migraine is a common [8], disabling [1], and costly [9] disorder characterized by episodic, painful symptoms. BMM has demonstrated efficacy to reduce migraine frequency and migraine-related disability[2]. However, access to nonpharmacologic migraine treatments such as BMM remains limited[3]. The original BMM protocol was a limited contact approach consisting of 4 in-person clinic visits, three check-in phone calls, and a physical patient manual.

3.2 PURPOSE OF STUDY/POTENTIAL IMPACT

This study will develop updated telehealth versions of the BMM protocol. For the TeleBMM arm, the patient manuals will be adapted to online versions and the in-clinic sessions will be adapted to telephone sessions. For CBT-HD arm, both the manual content and session content will be delivered through telephone sessions. We will also evaluate a third, more accessible behavioral treatment option of delivering content through online education modules only (ED). These treatments will increase access to care by reducing barriers to care delivery.

3.3 POTENTIAL RISKS AND BENEFITS

3.3.1 POTENTIAL BENEFITS

Individual study participants, may experience reduced headache attack frequency and reduced migraine-related disability. Societal benefits include enhanced understanding of the feasibility and acceptability of telehealth versions of evidence-based behavioral headache interventions.

3.3.1 POTENTIAL RISKS

Study risks are minimal. Participants may experience an intense emotional experience while engaging in relaxation or biofeedback exercises. Participants may feel uncomfortable discussing headache-related burden or other difficult subjects during treatment. Finally, there is a risk that a data breach could reveal private information collected as part of the study.

Protections Against Risk – Participants will be informed of potential risks and provided with strategies to address intense emotional experiences or discomfort during treatment. Participants will be given a random study identification number. Participants data will be collected in REDCap, a secure online data capture software. Data will be de-identified and converted to electronic databases and stored in password-protected files on a password-protected computer in the locked lab. The list linking participant names to identification numbers will be kept in REDCap and destroyed immediately after the last participant information is entered in a de-identified database, no more than 6 months after the last day of data collection. Research assistants will call participants at least once per month throughout the study to assess for adverse events. The PI will also

monitor each participant's recorded headache diaries monthly to assess for adverse events. If either of these procedures identify a potential adverse event, the PI will call the participant to assess the potential adverse event. If the event meets adverse event criteria, the PI will immediately inform the IRB and the NIH. If the adverse event requires medical or professional intervention, the PI will immediately contact the participant's primary clinician at the MHC and develop an intervention plan.

4. STUDY OBJECTIVES

4.1 HYPOTHESIS

Primary: We hypothesize that TeleBMM, CBT-HA and ED will be feasible (at least half of participants will attend all four study sessions and complete all three self-guided modules) and acceptable (the average patient satisfaction rating will fall above 4 on a 5-point Likert satisfaction scale).

Secondary: We hypothesize that TeleBMM and CBT-HA will reduce headache days/month and migraine-related quality of life as measured by the Migraine Specific Quality of Life Questionnaire (MSQ). We will also explore whether ED alone reduces headache days/month and MSQ.

4.2 PRIMARY OBJECTIVE

To evaluate the feasibility and acceptability of updated versions of the BMM protocol.

4.3 SECONDARY OBJECTIVEs (if applicable)

To evaluate pre-post changes in headache days and migraine-related quality of life over a 3-month course of TeleBMM, CBT-HA, and ED.

5. STUDY DESIGN

5.1 GENERAL DESIGN

5.1.1 STUDY DURATION

The study will last for approximately 6 years, from July 2019 to July 2025.

5.1.2 NUMBER OF STUDY SITES

This is a single site study. The study will be conducted at the Seng (Headache & Adherence) Lab, Van Etten Building, 1225 Morris Park Ave, Bronx, NY 10461. Participants will be recruited from the Montefiore Headache Clinic, Hutchinson Tower #2,1250 Waters Pl, Bronx, NY 10461.

5.2 OUTCOME VARIABLES

5.2.1 PRIMARY OUTCOME VARIABLES

The primary outcome variables will be 1) feasibility, as assessed by completion of online modules and telehealth sessions, and 2) acceptability, as assessed by the overall satisfaction question on a satisfaction survey.

5.2.2 SECONDARY OUTCOME VARIABLES

Secondary outcomes will be 1) headache days/28 days as assessed by daily headache diary, and 2) migraine-related disability as assessed by the migraine-specific quality of life questionnaire (MSQ[10]).

5.3 STUDY POPULATION

5.3.1 NUMBER OF PARTICIPANTS

There will be a total of 60 participants in the study.

5.3.2 ELIGIBILITY CRITERIA

Inclusion criteria are: 1) physician diagnosis of migraine, 2) current self-reported symptoms meeting the International Classification for Headache Disorders – 3 (ICHD-3) criteria for migraine, 3) self-reported more than 4 headache days/month, 4) aged 18-65, 5) can read English, and 6) capacity to consent. Exclusion criteria are psychiatric illness that would interfere with study participation.

Eligibility will be determined by a phone screen provided by a research assistant, supervised by the PI.

6. METHODS

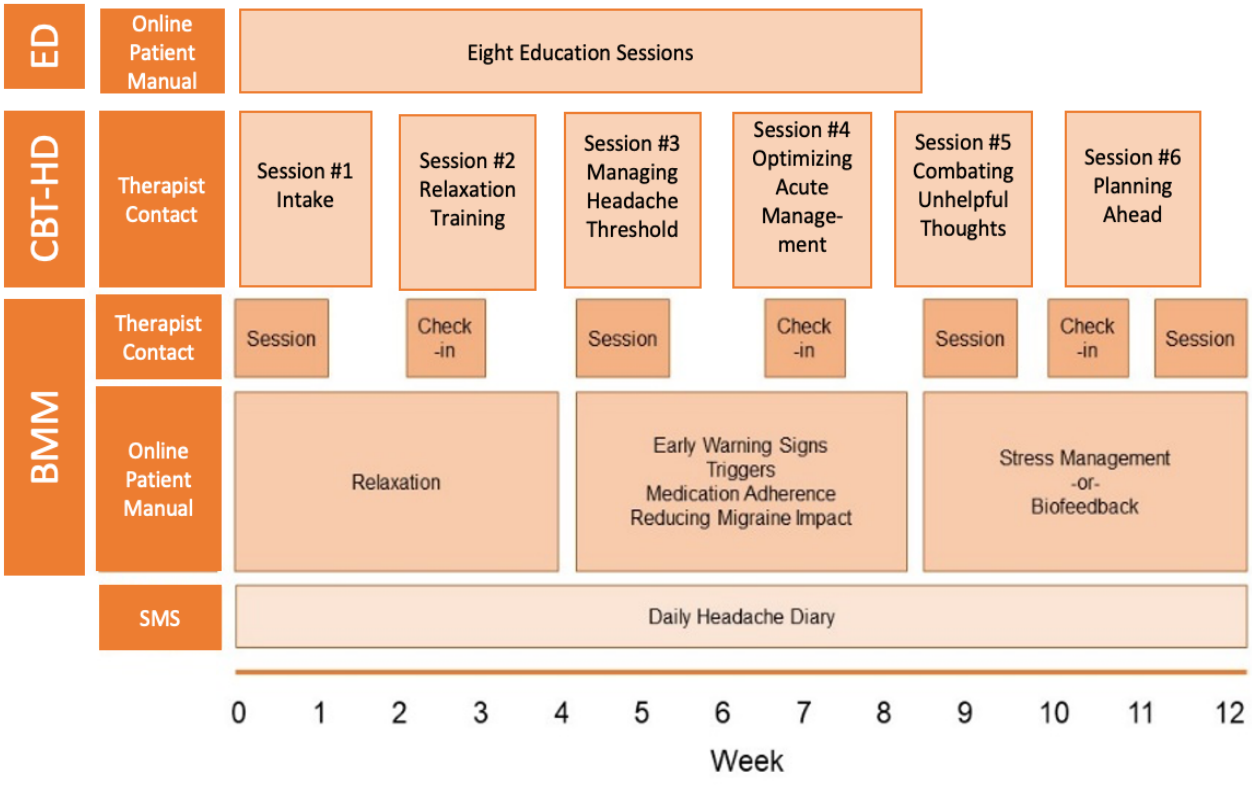
6.1 INTERVENTION

6.1.1 DESCRIPTION OF INTERVENTION

Participants will complete a daily headache diary throughout the course of treatment.

Participants have a choice to participate in one of three intervention options:

1. **Education modules**: Participants will receive eight online weekly educational modules about migraine that will take you approximately 15 minutes to complete in the following categories: Relaxation, Early Warning Signs, Triggers, Medication Adherence, Reducing Migraine Impact, Stress Management, Biofeedback, and Relapse Prevention.
2. **CBT-HD:** This treatment course follows "Cognitive Behavioral Therapy Headache Diseases: Therapist Manual" by Grinberg, Marth, and Seng (2021), or CBT-HD. Participants who choose CBT-HD treatment will receive six 50-minute telephone sessions, once every two weeks. These sessions will be provided by a doctoral psychology student in a clinical health psychology program covering these topics. Participants will complete a daily headache diary throughout the course of treatment. Participants will also complete brief questionnaires after each session.
3. **TeleBMM**: TeleBMM is an adaptation of the evidence-based BMM program[2]. Participants will receive weekly online education sessions in the following categories: Relaxation, Early Warning Signs, Triggers, Medication Adherence, Reducing Migraine Impact, Stress Management, Biofeedback, and Relapse Prevention. Participants will receive four monthly 50-minute telephone sessions with a doctoral psychology student in a clinical health psychology program covering these topics, and three check-ins to enhance adherence to behavior change strategies. Participants will also complete brief questionnaires after each session.



6.1.2 METHOD OF ASSIGNMENT/RANDOMIZATION

This is a non-randomized, naturalistic three-arm clinical trial evaluating three different modalities of administration of BMM. There are three treatment arms offered, and patients will select their treatment arm: education-only, TeleBMM, or CBT-HD. **6.1.3 Selection Of Instruments/Outcome Measures**

All measures were selected using materials from the National Institutes of Neurologic Disorders and Stroke (NINDS) Common Data Elements (CDE) initiative.

6.1.4 Intervention Administration

ED: Participants will receive education modules weekly by email for 8 weeks.

TeleBMM: The intervention will be administered through multiple modalities.

1. Participants will receive weekly online modules.
2. Participants will receive monthly 50-minute telephone sessions with a doctoral-level clinical health psychology graduate student.
3. Participants will receive 3 15-minute telephone check-ins to enhance adherence to behavior change.

CBT-HD: Participants will receive a 60-minute initial intake and six 50-minute follow-up telephone visits every 2 weeks.

For all TeleBMM and CBT-HD, the graduate student therapists have completed initial training in therapy and clinical health psychology treatment techniques. Therapists are all actively engaged in a lab conducting research on behavioral treatment of headache disorders. Therapists will be supervised by Dr. Elizabeth Seng, Ph.D., a licensed clinical psychologist and expert in behavioral migraine treatments. Therapists will receive weekly individual supervision and monthly group supervision to enhance fidelity to the treatment protocol.

6.1.5 Reaction Management

The expected risks of the TeleBMM and CBT-HD interventions are feeling emotionally overwhelmed during relaxation and biofeedback, or discomfort discussing challenging topics in treatment sessions. This risk is considered minimal. Participants may reach out to the research assistant at any time if they experience discomfort or distress related to the study. For the ED intervention, the expected risk is feeling uncomfortable when considering the extent of disability migraine has caused in one's life. The PI will also monitor participant's headache diary recordings to evaluate reactions to the study. Participants who report, or are suspected to have, clinically significant discomfort or distress during the study will immediately be reported to the PI, Dr. Elizabeth Seng, Ph.D., clinical psychologist. Dr. Seng will assess the reaction and determine whether further action is warranted, such as an intervention plan or referral for treatment.

6.2 Assessments

6.2.1 Efficacy

Surveys

All surveys to be used have been uploaded via the iRIS website.

Demographics

NINDS CDEs will be used to evaluate: Age; Gender; Ethnicity; Race; Sexual Orientation; Education Level; Marital/Partner Status; Employment Status; Household and Income; Overall Health; Medical History; Height and Weight.

Migraine Symptoms

American Migraine Study/American Migraine Prevalence and Prevention (AMS/AMPP) Diagnostic Module. The AMS/AMPP Diagnostic Module [7, 11] is a survey based on the ICHD-2 criteria for migraine; migraine criteria remain unchanged in the updated ICHD-3b [12]. The sensitivity and specificity for migraine are 100% and 82% respectively [11].

Medications

Preventive. Preventive medication name, dose, frequency and timing of administration, route of administration, and start date will be evaluated using the NINDS CDE for medications taken on a regular basis.

Acute. Acute medication name, dose, frequency, route of administration, and start date will be evaluated using the NINDS CDE for medications taken on an as-needed basis.

Disability/Quality of Life

Migraine Specific Quality of Life Questionnaire (MSQ) v 2.1. The MSQ [10] is a commonly-used 14-item survey measuring quality of life in people with migraine. Items comprise three subscales (Role Restriction, Role Prevention, and Emotion Function) which have demonstrated adequate reliability and validity in a number of studies with migraine [10, 13].

Relationship Factors

Working Alliance Inventory. The Working Alliance Inventory (WAI) is an commonly used, reliable and valid set of two surveys given to providers (11 items) and patient (12 items) following a treatment session to evaluate the extent to which the therapist and patient have rapport and agree on the goals and tasks of treatment.[16]

Patient Satisfaction

Program Evaluation. The Program Evaluation survey is an 8-item, study-specific survey that evaluates the extent to which participants deemed the app to be effective (with response options on a 5-point Likert scale ranging from “not at all effective” to “very effective”) and the extent to which participants are likely to recommend the app to a friend with migraine (with response options on a 5-point Likert scale ranging from “not at all likely” to “very likely”). Items were based on the program evaluation survey from the previous BMM trial[2]

Daily Diary

The daily diary will include measures assessing a) **Menstruation**, b) **Headache Symptoms** using ICHD-3b migraine criteria [12], c) **Medication Usage** with items used in other headache medication adherence studies [14], and d) **Migraine Disability** using the Migraine Disability Index, an abbreviated daily version of the Migraine Disability Assessment[15].

6.2.1 Safety

Safety will be evaluated by:

1) Tracking adverse events reported by participants, and collected proactively in monthly check-ins conducted by the research assistant, as described below; and,
2) The PI will monitor symptoms recorded in participant’s headache diaries for any unexpected changes in symptoms.

6.2.1.2 Adverse Events Definition And Reporting

An adverse event (AE) is any troublesome medical occurrence in a subject during participation in the clinical study. An AE can include a sign, symptom, abnormal assessment, or any combination of these. A serious

adverse event (SAE) is any AE that results in one or more of the following outcomes: death, a life-threatening event, inpatient hospitalization or prolongation of existing hospitalization, a persistent or significant disability/incapacity, a congenital anomaly or birth defect, or an important medical event based upon appropriate medical judgment. We will use the HHS/NIH/NCI Common Terminology Criteria for Adverse Events (Version 4.0) grading scale; for reference, we have provided the criteria for headache AEs (Grades 1-3): Grade 1: Mild (mild headache pain); Grade 2: Moderate (moderate headache pain that limits instrumental activities of daily living); Grade 3: Severe or medically significant but not immediately life threatening (severe headache pain that limits self-care activities of daily living); Grade 4: Life-threatening consequences; Grade 5: death related to AE. When present, each AE will be categorized according to the likelihood that they are related to the CDST on a 4-point scale, ranging from definitely unrelated, possibly related, probably related, to definitely related. The expected risk of the TeleBMM intervention is feeling emotionally overwhelmed during relaxation or biofeedback, or experiencing discomfort during therapy sessions. This risk is considered minimal.

The research assistant will assess adverse events in monthly check-ins with participants. The PI will also monitor each participant's recorded headache diaries monthly to assess for adverse events.

If either of these procedures identify a potential adverse event, the participant will be called immediately to assess the potential adverse event. Participants who disclose potential adverse events to any study staff at any point during the study will immediately be reported to the PI, Dr. Elizabeth Seng, Ph.D., clinical psychologist. If the adverse event requires medical or professional intervention, the PI will immediately contact the participant's primary clinician at the MHC and develop an intervention plan and referral if necessary. If a participant experiences an adverse event, he or she will be given an opportunity to leave the study. Any SAEs that are possibly related to the study intervention will be reported to the IRB and NIH within 7 days. All AEs will be compiled and reported to the Einstein IRB and NIH in accordance with the Einstein IRB requirements. The PI will be responsible for assessing, rectifying and reporting AEs directly to the Einstein IRB and the NIH.

6.3 Study Procedures

6.3.1 Study Schedule

Screening and Enrollment: Potential participants will be identified by their providers. Up to 100 potential participants will be screened to identify 60 participants eligible and interested in the study. Potential participants will be contacted by phone or email (see "Recruitment Phone Script and Email" attached) by the research assistant to be screened for inclusion criteria.

Study Procedures: Participants will then receive an email from the research coordinator (see "App download email" attached) with instructions to download the study app. Participants will complete the informed consent and, if consent is granted, complete the baseline MSQ survey. Over the three-month study period, participants will complete a daily headache diary. Participants will complete the MSQ and Program Evaluation survey at the end of the 3-month study period.

6.3.2 Informed Consent

During the screening call, the research assistant supervised by the PI will inform prospective participants that the study seeks to evaluate the feasibility and acceptability of a telehealth version of an evidence-based behavioral treatment for migraine. Prospective participants will be informed about the three treatment modalities; if they meet inclusion criteria and are interested, they will be asked to select one. Participants will be informed about compensation for participation. If interested and eligible, the potential participant will be provided with an opportunity to provide online written informed consent ("Informed Consent" attached).

6.3.3 Screening

During the screening call, the research assistant will use the AMS/AMPP screener to assess for current ICHD-3 migraine symptoms, self-reported headache days/month, age, capacity to consent, self-reported psychiatric illness, and medication use ("Screener" attached). The research assistant will also collect basic demographics and clinical characteristics.

6.3.4 Enrollment

After potential subjects have completed the online informed consent document, the research assistant will assign them a random study identification number.

6.3.5 On Study Visits

All study visits occur over the phone.

TeleBMM Arm

Week	Study Visit	Visit Length
Pre-study	Screening	~20 minutes
0	Session 1: Relaxation	50 minutes
2	Phone Check-in	~15 minutes
4	Session 2: Migraine Skill Building	50 minutes
6	Phone Check-in	~15 minutes
8	Session 3: Stress Management or Biofeedback	50 minutes
10	Phone Check-in	~15 minutes
12	Session 4: Relapse Prevention	50 minutes

CBT-HA Arm

Week	Study Visit	Visit Length
Pre-study	Screening	~20 minutes
0	Session 1: Intake	50 minutes
2	Session 2: Relaxation Training	50 minutes
4	Session 3: Contributing Factors & Managing the Headache Threshold	50 minutes
6	Session 4: Optimizing Acute Management	50 minutes
8	Session 5: Combating Unhelpful Thoughts	50 minutes
10	Session 6: Planning Ahead	50 minutes

ED Arm

Week	Study Visit	Visit Length
Pre-study	Screening	~20 minutes

6.3.6 End of Study and Follow-Up

At the end of week 12, participants will complete the MSQ and Program Evaluation surveys, and their study participation will be concluded.

6.3.7 Removal of Subjects

Participants will be removed if they choose to voluntarily withdraw. All participants will be provided with a synopsis of their diary data to be used in their routine clinical care following the study. All participants will be able to retain access to study therapeutic materials after their participation.

6.4 Statistical Method

6.4.1 Statistical Design

This is a three-arm pre-post study design. Primary outcomes (feasibility and acceptability) will be described. Secondary outcomes (headache days/month and MSQ) will be evaluated longitudinally using mixed effects models for repeated measures.

6.4.2 Sample Size Considerations

An n of at least 15 is considered an appropriate sample size for pilot study when expecting a medium effect size.[17] With an n=20 in each group, and assumptions of drop out of 2 per group, we will have 80% power to detect an odds ratio of 1.28 in adherence to treatment (feasibility).

6.4.3 Planned Analyses

6.4.3.1 Primary Analyses

Basic descriptive statistics (e.g., means, standard deviations, frequencies) for variables of interest will be computed. Graphical approaches will be used to further explore the data where appropriate. Feasibility and acceptability will be described across all three arms, and in each arm individually.

6.4.3.2 Secondary Objectives Analyses

Within each arm, headache days/month and the MSQ will be evaluated using linear mixed effects for repeated measures analysis. The fixed effect will be time (Headache days = Months 1, 2, and 3; MSQ = pre vs post). Random effects will be intercept and time. The best-fitting covariance structure will be determined using Akaike's Information Criterion. A significant time fixed effect indicates that the outcome changed over time.

We will explore differences across arms, with headache days/month and the MSQ will be evaluated using linear mixed effects for repeated measures analysis. Fixed effects will be time (Headache days = Months 1, 2, and 3; MSQ = pre vs post), arm (TeleBMM, CBT-HA, and ED) and their interaction. Random effects will be intercept and time. The best-fitting covariance structure will be determined using Akaike's Information Criterion. A significant time fixed effect indicates that the outcome changed over time.

6.4.3.3 Safety

All AEs will be described by arm.

6.4.3.4 Analysis of Subject Characteristics

Basic descriptive statistics (e.g., means, standard deviations, frequencies) for variables of interest will be computed. Graphical approaches will be used to further explore the data where appropriate.

6.4.4 Subsets and Covariates

Models will be fitted unadjusted and adjusted for potentially relevant baseline variables: age, gender, education, baseline headache frequency.

6.4.5 Handling of Missing Data

For feasibility, dropouts will be included in the analysis. For acceptability, we will evaluate acceptability both on completers and assuming that individuals who dropped out were not satisfied (1 out of 5). Linear mixed effects model take into account missing data and yield robust estimates even in situations when observations are missing both at random, and not at random.

7. Trial Administration

7.1 Ethical Considerations

Subjects will be made aware that nominal payment will be provided as compensation. Gift Cards will be sent after participation (50 cents for each diary day).

The proposed research does not target vulnerable populations and will not involve any of the following vulnerable populations: fetuses, neonates, children, pregnant women, prisoners, institutionalized individuals.

Participants will provide data through an intake screener and electronic surveys. Participant data will be collected via REDCap, a secure online data capture software, through the headache diary application. Data will be de-identified and converted to electronic databases and stored in password-protected files on a password-protected computer in the locked lab. A list linking participant identification numbers will be kept in REDCap and will be destroyed immediately after all data has been entered (no more than 6 months after the end of data collection).

There is always a slight possibility that an unknown condition will be discovered during initial or follow-up interviews, or direct communication with the subject. If either of these procedures identify a potential condition, the research assistant will immediately inform the PI who will contact the participant. If the condition requires medical or professional intervention, the PI will immediately contact the participant's primary clinician. If the discovery of the condition meets adverse event criteria, the PI will immediately inform the IRB and the NIH.

7.2 IRB Review

This study will undergo a complete IRB review by the Albert Einstein College of Medicine IRB. It will be required to have yearly renewal reviews.

7.3 Subject Confidentiality

Each participant will be given a random study identification number. Only the PI, Research Coordinator and research assistant will have access to identifiable private information. Participants data will be collected REDCap, a secure online data capture software, through the headache diary application.

7.4 Unanticipated Problems

If there is any medical or psychological problem discovered, the PI will call the participant immediately to assess the problem. If the problem requires medical or professional intervention, the PI will immediately contact the participant's primary clinician and develop an intervention plan and referral if necessary. If a participant experiences an adverse event, he or she will be given an opportunity to leave the study.

All adverse events, whether anticipated or not, will be compiled and reported to the Einstein IRB and NIH in accordance with the Einstein IRB requirements. Any serious adverse events, whether anticipated or not will be reported to the IRB and NIH within 7 days.

7.5 Data Quality Assurance

7.5.1 Data Collection

7.5.1.1 Access to Source

Survey and daily diary data will be entered by the participant through the daily electronic headache diary, collected through the Status/Post app and captured by the REDCap system, a HIPAA-compliant secure online data capture software.

7.5.1.2 Data Storage/Security

The REDCap data capture system allows for transformation of data to a form that can be used with data analysis programs. The subject key with identifiable information will be destroyed after data collection is complete, no later than 6 months after data collection has concluded. We will export the de-identified data into

a password-protected database which will be held on the lab computer. All analyses are planned to be conducted by lab members named as key personnel on this protocol.

7.6 Study Records

REDCap Database

7.6.1 Retention of Records

The Identifiable Participant List will be destroyed no more than 6 months after data collection is finished. The remaining records will be retained as per Einstein Guidelines. If permission is needed to move or destroy the records, the PI (Elizabeth Seng) should be contacted.

7.7 Study Monitoring

The research assistant will conduct monthly check-ins with participants. The PI will monitor the daily headache diaries.

7.8 Data Safety Monitoring Plan

The risk of TeleBMM is considered minimal. If any of the procedures described above identify a potential adverse event for an individual participant, the participant will be called immediately to assess the potential adverse event. Participants who disclose potential adverse events to any study staff at any point during the study will immediately be reported to the PI, Dr. Elizabeth Seng, Ph.D., clinical psychologist. If the adverse event requires medical or professional intervention, the PI or will immediately contact the participant's primary clinician at the MHC and develop an intervention plan and referral if necessary. If a participant experiences an adverse event, he or she will be given an opportunity to leave the study. Any SAEs that are possibly related to the study intervention will be reported to the IRB and NIH within 7 days. All AEs will be compiled and reported to the Einstein IRB and NIH in accordance with the Einstein IRB requirements.

7.9 Study Modification.

Any modifications to the protocol will be submitted as amendments to the Einstein IRB for review. The change will be implemented after approval.

7.10 Study Discontinuation

The study would be discontinued if a participant reports an unexpected SAE deemed to be study related.

7.11 Study Completion

We anticipate completing data collection in February 2024 and initial data analysis in July 2024. We will notify the IRB as soon as data collection is completed.

7.12 Funding Source

This study was funded by a CTSA Catalytic Seed Grant for junior investigators with a career development award.

7.13 Publication plan

The PI (Elizabeth Seng, Ph.D.) holds primary responsibility for publishing the study results. Primary objective results will also be submitted for publication in a peer-reviewed journal within one year of completion of data collection.

7.2 IRB Review

References

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