Effects of Awe on Health

11/22/2016

8.9 * PROCEDURES / METHODS: (REQUIRED)

Describe the research methods and study activities taking place at each site (e.g. what will participants be asked to do and what will members of the study team do?). If there will be multiple participant groups or study sites, explain what will happen with each group or study sites. If some of the activities would occur even if the person were not in the study, as in the case of treatment or tests performed for diagnostic purposes, clearly differentiate between those activities that will be done solely for research purposes and those that are happening as part of routine care. Please call our office at 415-476-1814 and ask to speak to someone on the Expedited Review team if you need help differentiating between what parts are research and what parts aren't.

Aim 1. **To examine the relationship that emotional reactivity has with mental health symptoms in older adults**

Methods

Laboratory Assessment of Emotion

Tasks. We will use a laboratory-based approach to measure emotional reactivity (i.e., ANS reactivity, facial expression, and subjective experience) in response to film clips. After sitting quietly through a 60-second pre-film resting baseline period, participants will watch a 90-second film clip that elicits either a negative or positive emotion. For example, the film clips will depict a doctor cleaning earwax from a girl's ear (disgust), babies playing (love), sweeping views of broad landscapes (awe), and a woman reading a sad letter from an admirer (sadness). After film viewing, participants will be asked questions about their subjective experience.

ANS Physiology. We will obtain continuous recordings of the following ANS measures: (1) skin conductance level, (2) pre-ejection period, (3) respiratory sinus arrhythmia, (4) heart rate, (5) finger pulse amplitude, (6) finger pulse transmission time, (7) respiration period, (8) respiration depth, and (9) finger temperature. The participant will sit in a chair while the study staff first cleans the area where the EKG sensors will be placed with rubbing alcohol and light exfoliating gel. This is done to remove dead skin cells from the area that the sensors will be placed. Then electrode gel will be placed on the back of the sensors, and the sensors will be placed on the participant. For measures of breathing, a breathing belt will be placed around the participant's midsection, ensuring it is not too tight for the participant. For sensors placed on the hand, electrodes and electrode gel will be placed on the fingers. Mean baseline levels will be used to investigate resting ANS activity, and reactivity scores will be calculated by subtracting the mean level of activity during a resting baseline period from the mean level during a trial.

Facial Expression. Participants will be videotaped using a remote-controlled, high-resolution video camera in the experiment room. Trained coders will use a modified version of the Emotional Expressive Behavior coding system. Coders, who will be unaware of the nature of the trial, will code each second for ten emotional behaviors (anger, disgust, happiness/amusement, contempt, sadness, embarrassment, fear, surprise, sleepiness, confusion, and interest) on an intensity scale ranging from 0 (not present) to 3 (maximum intensity). We will sum the intensity scores for each emotional code during the most intense 30 seconds of each film.

Subjective Experience. Participants will be asked to report on their subjective experience before the testing session begins and after each trial. They will be asked, “Did you feel ___ while watching the movie?” and will be given the following response choices: 0= no, 1= a little, 2= moderately, 3= quite a bit, or 4= extremely.

Baseline questions

Physical Health

Physical Symptoms. Participants will indicate whether they have experienced any of the following sensations: headaches, faintness/dizziness, stomachache/pain, shortness of breath, chest pain, acne/skin irritation, runny/congested nose, stiff or sore muscles, stomach upset/nausea, irritable bowels, hot or cold spells, poor appetite, coughing/sore throat, or other in the past month. Previous studies have found this approach is a reliable and valid index of self-perceived health status. We will sum the 13 items within the report to create a total physical symptom score.

Physical Exercise. The Godin Leisure-Time Exercise Questionnaire will be used to measure the frequency of strenuous, moderate, and mild exercise that participants have engaged in over the past week. Body Mass Index will be calculated from height and weight measurements obtained during the laboratory visit.

Sleep. Selected questions from the Pittsburgh Sleep Quality Index will be used to assess subjective sleep latency, duration, calculated sleep efficiency, and overall sleep quality.

Mental Health

Emotional Symptoms. Participants will complete questionnaires to assess the following domains: anxiety (i.e., Generalized Anxiety Disorder- 7 Item Scale and State-Trait Anxiety State subscale), depression (i.e., Center for Epidemiologic Studies Depression Scale), obsessions and compulsions (i.e., Yale-Brown Obsessive Compulsive Scale), mania (i.e., Altman Self-Rating Mania Scale), emotion dysregulation (i.e., Difficulty in Emotion Regulation Scale), irritability (i.e., Irritability Subscale of the Buss Durkee Hostility Inventory), lability (i.e., Center for Neurological Study Lability Scale), rumination (i.e., Rumination-Reflection Questionnaire), subjective emotional experience (i.e., Positive and Negative Affect Schedule), and intensity of emotional experience (i.e., Affect Intensity Measure Simplified).

Well-Being. Participants will complete measures that assess their social network size and complexity (i.e., Social Network Index), loneliness (i.e., The Revised UCLA Loneliness Scale), subjective happiness (i.e., Subjective Happiness Scale), and life satisfaction (i.e., The Satisfaction With Life Scale).

Prosociality. We will measure trait levels of positive emotional experience (i.e., Dispositional Positive Emotions Scale), compassion (i.e., compassion subscale of the Big Five Inventory-2), and empathy (i.e., Empathic Concern subscale from the Interpersonal Reactivity Index).

Aim 2. **To determine whether a novel awe intervention improves subjective experience and reduces symptoms in older adults**

Methods

Awe Walk Intervention

After the laboratory assessment, participants will be randomized into one of two 8-week conditions: (1) awe condition or (2) control condition. All participants will be instructed to take a weekly 15-minute walk. In the awe condition, participants will be instructed to pay attention to the vastness and novelty of the environment around them. In the control condition, participants will receive no additional instructions.

Daily questions

Daily Emotional Experience, Life Satisfaction, Prosociality

Emotional Experience. On each day of the 8-week intervention, participants will report how much they experienced awe, wonder, and amazement in addition to admiration, amusement, anger, annoyance, appreciation, anxiety, compassion, fear, happiness, pride, sadness, relaxed, and warmth. Items will be measured on 10-point Likert scales (1= not at all, 10= as much as I've ever felt).

Life Satisfaction and Prosociality. Participants will also respond on a daily basis to statements assessing their life satisfaction ("Today I felt that my life was... terrible to terrific") and prosociality ("How much did you engage in acts today that involved helping someone else or doing something for a good cause?"). Both items will be measured on 10-point Likert scales (1= not at all, 10= as much as I've ever felt/done). At the beginning of the study, participants will recreive an email from study staff to an address the participants designate as an email in which they would like to maintain study correspondance. In this first email, there will be a personalized link in which they will open and it will direct them to the secure UCSF-supported Qualtrics platform where they can access all study questionnaires. All answers will be securely stored on the private, secure Qualtrics account managed by study staff.

Post-Intervention Follow-Up Assessment

At the conclusion of the 8-week intervention and at 3- and 6-months post-intervention, participants will again complete the physical and mental health questionnaires that they completed during their baseline visit.