

TITLE: Picture This: Learning to Focus and Savor With a Smartphone

NCT: Not yet assigned

DATE: 12/5/25

PICTURE THIS STUDY PROTOCOL

The proposed intervention draws primarily from two paradigms, positive psychology interventions (PPI) and cognitive bias modification (CBI), and marries components of each into a technology-enhanced program designed to increase global well-being and decrease social isolation and depressive symptoms among college students. Although both intervention paradigms are in relatively early stages of investigation, they have garnered an impressive amount of empirical support indicating their success with regard to increasing psychological health. While they have grown out of very different traditions and theoretical cloths, both approaches also aim to uplift individuals who are languishing rather than flourishing and provide behavioral, cognitive, and attentional tools to increase the experience of positive emotion.

Although they come in various forms ranging from the intentional practice of positive thinking to writing letters of gratitude and increasing social interactions, all positive psychology interventions (PPIs) utilize practices, tools, and exercises to cultivate or increase the participant's sense of subjective well-being. They are, by definition, strengths-based and so do not necessarily intend to address deficits or heal pathology; rather, they are designed to optimize, to build, and to elevate. Recently, PPIs have been utilized with participants suffering from depression. While this application may at first blush seem at odds with the definition, a closer look provides clarity. Depression is characterized not only by high levels of negative affect but also low levels of positive affect. Research to date indicates that increased positive emotion in depressed individuals is beneficial with regard to "increased broad-minded coping," (Joiner & Frederickson, 2002), resilience from negative emotions (Tugade & Fredrickson, 2004), and even in preventing relapse (Fava & Ruini, 2003). Accordingly, such interventions are a natural fit for depression. A recent meta-analysis suggests that PPIs are superior to control or comparison groups in enhancing well being and in addressing depressive symptoms; however, PPIs may be relatively more successful for depressed participants and participants who self-select into the interventions (Sin & Lybomirsky, 2009).

Cognitive models of depression have long posited that individuals suffering from affective disorders (namely, Major Depressive Disorder) show information processing deficits that include increased attention to negatively-valenced cues. For example, when presented with both sad and neutral faces, subjects diagnosed with MDD selectively attended to the sad face, whereas control subjects divided attention between the sad and neutral faces (Gotlib et al., 2004). More recent work indicates that dysphoric individuals lack a protective bias toward positive stimuli (Ellis et al., 2011) and that they have difficulty disengaging from "mood-congruent (i.e., sad, negative)" stimuli (Bradley et al., 1997; Mathews & MacLeod, 2005). There is also some evidence that depressed individuals may be more likely to interpret ambiguous stimuli as threatening. Recently, researchers have tested cognitive bias modification interventions (CBI), which are designed explicitly to modify dysfunctional patterns of information processing including both attentional and interpretation biases. In their meta-analysis of 45 CBM studies, Hallon & Ruscio (2011) found, overall, a medium effect size for the CBMs on cognitive biases and a small, but significant, effect on anxiety and depressive symptoms before the data was corrected for publication bias. Although the effects were no longer significant after correction for publication bias, the authors report a larger and more robust (while still insignificant) effect for CBMs when measured in the context of a stressor, giving credence to the diathesis-stress cognitive paradigm. They also noted that interpretational biases were impacted relatively more than attentional biases by the intervention manipulation, and anxiety symptoms relatively more than depressive symptoms.

Building upon these two disparate bodies of research, the current project aims aim to test a set of exercises using Smartphones with college and graduate students designed to retrain attention toward moments/events/people that elicit positive emotions, encourage the savoring of such moments, increase social connectedness, and in turn, decrease depressive symptoms. The aims will be achieved by recruiting college/university/graduate students who provide consent to participate in a randomized trial of the intervention and who will be randomly be assigned to 1 of 4 conditions.

- 1) Those participants who are randomized to the active Picture This! savoring condition will be asked to use their Smartphones to take at least two photographs each day for 3 weeks of something that brings them joy or peace and to upload their pictures daily to a drive accessed by study staff (instructions for each condition may be found in Appendix A). Each evening, they will be directed to

complete an online exercise in which they review the photograph(s) taken that day. They are also asked to complete several questions via an internet survey.

- 2) Participants randomized to the Picture This! Plus Social Sharing will do everything as described for the Picture This! group. In addition, each week, they will be directed to share the photos they took during the prior week with a friend or family member (see script provided in Appendix B).
- 3) Those participants who are randomized to the active control condition (Document This!) will also be asked to take 2 photographs each day using a Smartphone and to upload their pictures daily to a drive accessed by study staff. Rather than focusing on and capturing a photo of stimuli that evokes positive emotion, however, they will be directed to take pictures of things in their lives or surroundings that are representative of a “day in the life”. Like the participants in the Picture This! and Picture This! Plus Social Sharing Groups, they will also be asked to complete an online exercise each evening in which they review their documentary photos each evening and also asked to complete a series of questions via an internet survey.
- 4) Finally, participants randomized to the passive control group will NOT be directed to take any pictures during the 3 week intervention period.

All research participants in all 4 groups will be asked to complete a weekly online survey asking about whether they shared the pictures they took as a part of the study or as a part of their regular life (see Appendix F).

At the end of the intervention, all subjects will be provided a list of local mental health resources and will also be provided with the instructions for all 3 picture taking conditions (should they wish to implement any of the other exercises on their own time).

2. Identification of Subjects:

Subjects must freely volunteer to participate. No coercion, implicit or otherwise, is permitted. Describe how potential subjects will be identified and approached (e.g., in class, door to door solicitation, through an ad, etc.). If the contact will be made in person, provide the statement that will be made orally to the potential subject(s). If the contact will be made in writing, submit a copy of the written communication text with this application.

Approximately **240** potential participants will be recruited at Clark University **and at other universities in the larger Worcester community** via flyering **around campus as well as around Worcester in off campus public locations**, email announcements, in-class announcements, **electronic advertisement boards** and via the Clark psychology subject pool. We would also like to post the contents of the flyers on a Facebook page created for the LEAF lab **as well as Prof. McKee’s website hosted by Clark. In order to extend recruitment beyond Clark, we will attempt to contact officials at other local universities to determine whether they will allow recruitment on their campuses and will follow their guidelines regarding local IRB approval, posting flyers on campus, email blasts, postings on electronic advertisement boards. Upon approval on other campuses, we would use all of the aforementioned resources (flyers on campus, emails, etc.) as appropriate.**

Interested students will be screened for eligibility **either in person or over the phone** (See Appendix C). If eligible, they will be schedule for an appointment, consented, asked to complete a series of questionnaires **and 2 computer tasks**, and then randomly assigned to **1 of 4 groups**.

There is no deceit involved in the study.

3. Testing Procedure:

Outline the testing procedure in sufficient detail to permit the Committee's assessment of potential psychological or physical implications (e.g. length of experiment, possible deception, physical or psychological discomfort). Attach a copy of any questionnaire or written test to be used in the study. For interviews, provide a copy of the interview questions to be used. Some research may be exempted, upon

review, from the IRB. A list of possible exempted research is available on this web page link. If you state that "minimal risk" may occur, please explain why (i.e. subject matter covered, the way responses are gathered, etc.)

Participants in all 4 groups who provide informed consent will be asked to complete a contact information sheet (in which they will be asked to provide name, telephone number, address and email address) and a baseline assessment packet that includes the following measures (see Baseline Questionnaire Packet for actual measures). Given the length of the questionnaire packets at baseline and follow-up, participants will be asked to stop and take a 5-minute break after approximately 25-30 minutes to reduce fatigue and increase the likelihood of gathering quality data. Participants will also be asked to complete a computerized attentional bias task, in which they are shown a series of neutral and sad or neutral and happy faces for a brief duration (e.g., 500-1000ms). The images are removed and one image is replaced with either an O or Q. The participant is asked to indicate on a response box which letter replaced the image. This task is a test to determine whether the subject has a negative attentional bias. They will also be asked to complete a second computer task in which they are shown a series of faces, starting from neutral, that eventually morph into happy, angry, or sad faces. Participants are asked to indicate (by pressing a key or response box) when they can identify the emotion and then are asked to identify the emotion.

- 1) **Demographics and psychiatric history** measure created for this study and includes information about sex, age, relationship status, income, and individual and family current and past psychiatric diagnostic status.
- 2) **Modified Differential Emotion Scale (MDES)** is a scale that includes 20 different positive and negative emotional states. Respondents are asked to indicate how often in the past month they have experienced each emotion.
- 3) **Self-Other Four Immeasurables Scale** is a 16 item scale designed to measure kindness, compassion, joy, and acceptance toward self and others. Respondents use a 5 point Likert scale to indicate how often they have experienced the thoughts, emotions, and behaviors in the past week.
- 4) **Ambiguous Situation** task consists of 10 statements that can be interpreted in either a positive/neutral or negative light. After reading each statement, the participant is asked to rank order 4 potential interpretations of the scenario they've just read in terms of how closely they resemble the scenario.
- 5) **Santa Clara Brief Compassion Scale** is a 5 item version of the Sprecher and Fehr Compassionate Love Scale. Respondents use a 7 point Likert scale to indicate how well the statement applies to them. An example item is "I tend to feel compassion for people, even though I do not know them."
- 6) **Gratitude Questionnaire (GQ-6)** consists of 6 statements regarding gratitude and thankfulness to which respondents are to indicate, using a 7 point Likert scale, how well the statement applies to them.
- 7) **Cognitive Style Questionnaire Short Form (CSSF)** requests that participants respond to 8 hypothetical negative and positive situations in order to assess the 3 components of hopelessness theory (i.e., stability, global of the negative event, likelihood of negative consequences of the event, and the events' negative implications for the self worth of the individual).
- 8) **The Beck Depression Inventory-II (BDI-II)** is a 21 item self report measure of depressive symptoms in which participants indicate the degree to which they have experienced each symptom in the past 2 weeks. The question about suicide has been deleted from the questionnaire.
- 9) **State-Trait Anxiety Inventory (STAI)** consists of 20 statements describing positive and negative emotional and physical states. Individuals are asked to indicate how often each statement generally describes how they feel. (Note: Although a copy of the STAI is included in the Baseline and Follow-up Assessment questionnaire packets for your review, it will be purchased from Mindgarden.)
- 10) **Savoring Beliefs Inventory (SBI)** is a 24 item measure on which participants are asked to indicate how strongly they agree or disagree with statements about reminiscing about happy times and anticipating happy times.
- 11) **Carolina Empirically Derived Mindfulness Inventory (CEMDI)** includes 22 items that assess several facets of mindfulness (i.e., Observe, Non-judgment) and emotion regulation (i.e., Acceptance) Participants indicate on a 5 point scale how often each item is true (anchors: never or very rarely to very often or always).
- 12) **Brief Satisfaction with Life Scale (BSWLS)** consists of 5 statements describing global satisfaction with their current life conditions. Using a 7 point Likert scale, respondents are asked to indicate how strongly they agree or disagree with each statement.

- 13) **Rosenberg Self Esteem (RSE)** is composed of 10 statements regarding general notions of self perception. The respondent is directed to indicate how strongly he/she agrees with the statement (i.e., I take a positive attitude toward myself) using a 7 point Likert scale.
- 14) **Scale of Physical Symptoms** consists of a list of 9 physical symptoms including shortness of breath, runny or congested nose, and chest or heart pain. Participants indicate how often they've experienced such symptoms over the past month using a 7 point scale, ranging from Not at All to Frequently.
- 15) **Pittsburgh Sleep Quality Inventory (PSQI)** is a self report measure designed to assess sleep difficulties, sleep quality, and to gather data regarding bedtimes, waking times, and number of hours slept.
- 16) **Social Connectedness Scale (SCS)** is an 8 item scale that assesses an individual's sense of connection and disconnection to society, peers, etc. Two additional items have been added to the original scale to assess connection/disconnection to nature and to a spiritual/religious community.
- 17) **MOS Social Support Scale** is composed of 19 statements describing possible supports (e.g., advice, information, help with chores) to which the respondent is asked to indicate how often each is available to him/her.
- 18) **Perceived Stress Scale (PSS)** asks respondents to indicate how often in the past month they have felt stressed, nervous, unable to cope, etc., using a 5 point Likert scale.
- 19) **Life Events Scale (LES)** requires individuals to indicate which of the possible positive negative life events he/she has experienced during the most recent 6 months.
- 20) **Emotion Socialization Scale of the Emotions as Child Scale (EAC)** was modified slightly by Garside and colleagues to include both mother and father responses to the respondent's emotional displays as a child. Using a 7 point Likert scale, participants indicate how often each parent responded to sadness, for example, with 15 different possibilities.
- 21) **Emotion Regulation Questionnaire (ERQ)** directs participants to indicate how strongly they agree or disagree with 10 statements describing ways people typically regulate or manage emotion.
- 22) **Ten Item Personality Inventory (TIPI)** is a very brief measure of personality. Participants are asked to indicate the extent to which each of the statements describes them.
- 23) **Test of Self Conscious Affect – 3 (TOSCA-3)** is a scenario based measure composed of 16 scenarios of potential positive and negative occurrences in work and social arenas of life. It is designed primarily to assess shame and guilt responses but also includes pride. The respondent is asked to respond to several questions following the scenarios indicating the likelihood of reacting in certain ways. Sixteen of the 32 scenarios are presented at baseline.
- 24) **Irritability Question – One question designed to assess participant irritability at the conclusion of completing the questionnaires was added.**

Following completion of the questionnaire packet and the computerized tasks, the participant will be randomized to 1 of 4 groups. All groups will be provided a packet of instructions to guide their participation in the coming weeks, and the packet will be reviewed with the participant by someone on the research team (see Appendix A). Participants in the 3 picture taking groups will also be provided instructions to create a login to the research drive if they do not have an account and will be provided instructions regarding how to upload their photographs to the research drive.

In brief, both the Picture This! and the Picture This! Plus Social Sharing groups will be asked to utilize their Smartphones to take photographs on a daily basis for 21 days. The participants in the Picture This! and Picture This! Plus Social Sharing Group are asked to notice and then photograph events/situations/people/places/cues that elicit positive emotion (i.e., joy, awe, gratitude). They are asked to take at least two photographs each day. Participants in the active Document This! control group are also asked to take at least two photographs each day for 21 days that they feel is a good representation of their daily lives. The passive control group is not asked to take any pictures over the 21 day period. Each day, participants in the active conditions are asked to upload the photographs taken that day to a Google Drive accessed only by study staff. Participants will not have access to other participants' photographs, only their own. Participants will be informed in the consent form that submission of photographs poses a risk to confidentiality because the photos may include "self-shots" (photos they have taken of themselves) or photos of other things that could be linked back to them personally if by chance the trained and ethically-bound research assistants happen to know the participants.

At the conclusion of the study, participants will be asked in a separate Photo Release Form if they would provide permission to study personnel to use their photographs in research manuscripts, grant proposals, educational presentations, and other media presentations (see Appendix E).

All 4 groups are asked to provide an active email address and instructed to complete a short series of questions nightly that will be emailed to them from our lab email Gmail address. The email will include a link to a survey powered by Google Docs, which includes the MDES, modified to ask participants about feelings experienced during the past 24 hours (see above for description), and 6-9 additional questions designed specifically for this study (see Appendix D for questionnaires designed for both the active and control groups). The 3 active condition groups are also asked to complete a nightly savoring exercise and to answer several questions about the exercise via a link to the exercise sent to their email (see Appendix D).

Participants in all 3 active control groups will also be given the opportunity to choose whether they would like to be reminded to take photographs via text message or email. The text messages will be generated from the study Gmail account. Participants are reminded in the consent form that they are responsible for any charges accrued for receiving text messages if they choose that option.

At the end of each 7 day period, participants in the active **Picture This! Plus Social Sharing Group** are asked to share their photographs with a friend, relative, or loved one of their choice. Email reminders to complete the sharing exercise will be provided. The sharing should be done in person, rather than via email or over the phone. The participant may choose with whom to share the pictures and may decide to show the same person his/her pictures each week for the 3 week period or may decide to share with different people each week or some combination thereof. Scripts are provided to guide the participants (see Appendix B). Given that the participants may have taken many more than the required photographs during the prior week for this project, the time it takes to share them will vary. However, participants will be asked to limit the interaction to approximately 15 minutes. Participants in the Picture This! group and the Document This! control group are not asked to share their photographs. Following the sharing activity, participants in the Picture This! Plus Social Sharing Group are asked to answer 5 questions online, again following a link they will have received by email (see Appendix E). To keep payment equal, all other participants are also asked to complete a weekly survey of 5 questions about taking and sharing photographs.

At the completion of the 3rd 7 day period, all participants will be invited back into the laboratory to complete an exit questionnaire packet and to repeat the 2 computerized tasks they completed at baseline. This packet will include the following measures:

- 1) Demographics and Psychiatric History Follow-up
- 2) Modified Differential Emotion Scale (MDES)
- 3) Self-Other Four Immeasurables Scale
- 4) Ambiguous Situation (with 10 novel statements)
- 5) Santa Clara Brief Compassion Scale
- 6) Gratitude Questionnaire (GQ-6)
- 7) Cognitive Style Questionnaire Short Form (CSSF)
- 8) Beck Depression Inventory – II (BDI-II)
- 9) State-Trait Anxiety Inventory (STAI)
- 10) Savoring Beliefs Inventory (SBI)
- 11) Carolina Empirically Derived Mindfulness Inventory (CEDMI)
- 12) Brief Satisfaction with Life Scale (BSWLS)
- 13) Rosenberg Self Esteem
- 14) Scale of Physical Symptoms
- 15) Pittsburgh Sleep Quality Inventory (PSQI)

- 16) Social Connectedness Scale (SCS)
- 17) MOS Social Support Scale (MOS)
- 18) Perceived Stress Scale (PSS)
- 19) Life Events Scale (LES) Respondents will be asked to consider the time that has elapsed since baseline (which should be approximately 4-5 weeks).
- 20) Emotion Regulation Questionnaire (ERQ)
- 21) TOSCA-3 with 16 novel scenarios
- 22) Irritability Question
- 23) Intervention Assessment – 5 questions created by the project staff to assess participant satisfaction with prescribed exercises and to elicit suggestions for improvement.

The following compensation/incentive schedule for completing questionnaires and participating in the study will be utilized:

- Participants who complete the baseline questionnaire packet and computer tasks will be compensated \$10 or be provided with class credit via the psychology subject pool.
- Participants who complete the exit questionnaire packet and computer tasks will be compensated \$19 or be provided with class credit via the psychology subject pool.
- Participants will be compensated \$1/day for completing the nightly online questions for a potential total of \$21.
- Participants will be compensated \$1/each weekly survey completed for a potential total of \$3.

Hypothesized Outcomes

H1: Participants in the Picture This! (PT) and Picture This! Plus Social Sharing (PTPSS) conditions will evidence increased well-being as indexed by measures of: a) depressive symptoms, b) positive affect, c) savoring beliefs, d) mindfulness e) life satisfaction, f) self esteem, g) gratitude, h) physical health and sleep quality, and i) perceived social support, relative to participants in the active control and no picture control conditions.

H2: Participants in the Pictures This! Plus Social Sharing will demonstrate greater improvement in perception of social support than those in any other condition.

Mediators of Change.

H3: Participants in the PT and PTPSS conditions will show significant changes in automatic cognitive processes including attentional biases, interpretational biases, and cognitive style assessed via behavioral tasks and self report.

H4: Changes in the aforementioned cognitive processes will account for the positive changes in mental and physical health.

H5: Participants in the PS and PTPSS conditions will demonstrate significant changes in behavioral indicators of attentional shifts. We anticipate participants in the active experimental conditions will a) take increasingly more photographs over the course of the intervention and b) will include more social behavior as the focal point.

Supplementary Analyses

H6, exploratory: In order to inform future implementation and potential mechanisms of change, we will examine photographic content. We also anticipate changes in the quality of the photographs over the course of the intervention for the participants in both active experimental conditions. It is possible that the photographic content would be judged by independent raters to be increasingly positive over the course of the intervention. Alternatively, it is plausible that as the participant's ability to attune to the positive cues in the environment

develops, the capacity to find joy in even the most mundane objects/moments will be evident in photographs judged by independent raters to have less objectively rated positive appeal.

H7: Depressive symptoms will moderate the associations between intervention participation and daily positive affect, life satisfaction, and perceived social support, such that participants with higher levels of pre-intervention symptoms will show larger improvements in outcomes in the intervention conditions.

H5b and H6 are straightforward between-groups analyses, for which we will use ANOVA to test for significant differences between groups on the outcomes of interest. H1-H3 and H5a will be tested using mixed-factor ANOVA, with condition as a between-subjects factor and the within-subjects factor being pre-intervention measure of the outcome of interest included as predictors of the post-intervention outcome (e.g., perceived social support). Planned contrasts will probe for significant differences in effects between the experimental conditions and each control condition, as appropriate. H7 will be tested using two additional predictors, the main effect of the individual difference of interest (e.g., depressive symptoms) as well as the interaction between the individual difference and condition. H4 (mediation) will be tested using the most up-to-date evidence for bootstrapping estimates (see Hayes; Preacher & Hayes, 2008).

Finally, the daily reports will provide critical information about how long the intervention may take to set in (see Fredrickson et al., 2008) and whether there is an optimal training period; likewise, the daily photographic evidence may be quantified to determine degree of positivity and social connection, which may show increases over time (see H5a). Algoe will conduct more complex statistical tests including exploratory growth curve analyses to test for this information that will optimize future implementation.

Clark University
Consent to Participate in a Research Study

Consent Form Version Date: 2-6-14

Title of Study: Picture This: Learning to Focus and Savor with a Smartphone

Person in charge of study: Laura G. McKee, Ph.D.

Where they work: Department of Psychology, Clark University

Other people who work on the study:

Clark Graduate and Undergraduate Students; Sara Algoe, Ph.D. at the University of North Carolina at Chapel Hill; UNC-CH graduate and undergraduate students

Study contact phone number: 1-508-793-7552

Study contact Email Address: LEAFLab.ClarkU@gmail.com

What is the purpose of this study?

The purpose of this study is to determine whether we can teach young adults to perform a set of exercises using the camera feature on their Smartphones that may impact well being by the end of the study.

Why are you being asked to be in this research study?

You are being asked to participate in this study because you attend a college or university in the larger Worcester area, are 18 years of age or older, have daily access to a Smartphone with a camera, daily access to the internet and an active email address, and have indicated interest in the research project.

How many people will take part in this study?

Approximately 240 young adults in the greater Worcester area will participate in this study.

What will happen during this study?

If you choose to participate, you will be asked to complete a packet of questionnaires at the beginning of the study and again approximately 4-5 weeks later at the end of the study. The questionnaire packet will include a number of measures that ask you about your emotions, the way you see the world, your mental health history, your social life, experiences you had as a child and experiences you have had more recently. You will also be asked to complete two tasks on the computer designed to test your attention toward and sensitivity to images. The questionnaires and computer tasks are designed to take approximately 1.5 hours. After you complete the questionnaire packet and computer tasks today you will be randomly assigned to one of four groups. People assigned to three of the four conditions will be asked to take at least 2 pictures daily, upload them to Google Drive so that the research team has access to them, and complete a nightly exercise to answer questions about the pictures. Examples of the kinds of things people in these 3 groups might be asked to photograph are similar to or include: pictures of things that help them get organized, pictures of things they would like to change, pictures of things that bring them joy or gratitude, pictures of their favorite places in their neighborhoods, pictures to document their days. Some people who are asked to take daily pictures will also be asked to share their photos with another person once each week. Other people will not be asked to take pictures. All participants will be asked to complete a nightly questionnaire to assess emotions and sense of overall well-being from the day. All participants will

also be asked to complete 3 weekly surveys of up to 5 questions about taking and sharing photographs. At the end of the study, all participants, including people randomly assigned to the group not asked to take pictures will learn in greater detail what people in the other conditions did in case they would like to try those tasks for themselves in the future.

If you are in the one of the groups randomly assigned to take pictures each day, we will send you a daily reminder to take the photographs every day the first week and every third day the second week. On the information sheet, you will indicate whether it is your preference to receive these reminders via email or text message. Please remember that if you choose the text option, you will be responsible for any charges to your account for receiving the text. The study does not offer compensation to pay for you to receive texts.

You may choose to discontinue participation in the study at any time and you may choose to skip any question(s) that are asked as a part of the initial and follow-up questionnaires or as a part of the nightly or weekly emails or any activities assigned as a part of the study.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study; however, the information that we gather may contribute to the development of programs aimed at promoting mental health and well-being.

What are the possible risks or discomforts involved from being in this study?

We do not anticipate any risks or discomfort to you from being in this study. If you feel uncomfortable completing the questionnaires, computer tasks or taking photographs, you may stop at any time. **You may discontinue participation in the study at any time for any reason.** If you feel upset by a question asked or by a topic raised, please alert study-related personnel. We will also provide all participants with the contact information for local mental health resources when they have completed the study. While it is not anticipated, technological issues with the email or text reminders and/or the links to the daily/weekly surveys may occur resulting in you receiving more or fewer messages than intended. If you feel you are receiving too many or too few reminders/links, please make study personnel aware so that the issue can be addressed.

How will your privacy be protected?

Every effort will be taken to protect your identity as a participant in this study. Except for a few rare conditions (for example, if you indicate that you are a planning to hurt yourself or someone else), confidentiality will be protected to the extent of state and federal law.

Your name will not be identified in any report or publication of this study or its results. You will be given a number, and the answers you provide to the questionnaires will be connected to this number, not your name. The hard copies of study information we collect will be stored in locked file cabinets in Dr. McKee's laboratory office. At the end of the study, we will delete the Google Drive folder where you uploaded your pictures. The photos will be saved: soft copies will be stored on Dr. McKee's computers accessed only by lab members as well as on jump drives or disks stored in locked filing cabinets in Dr. McKee's lab. Your pictures will be tied with your data, and both will be identified with a number, not your name. Despite our efforts to protect your privacy, it is possible that the content of your pictures will tie them back to you, especially if your photographs include self-portraits or pictures of other identifying information; however, only research staff will have

access to the photographs. It is important to know that providing access to the photos provides a risk for breach of confidentiality in the case that you personally know someone on the study team (who, however, are all ethically bound to keep your data confidential) or in the event that our data files or security are compromised. In addition to the study staff at Clark University, we would also like your permission to share the photos with collaborator Dr. Sara Algoe at the University of North Carolina at Chapel Hill and her lab.

This consent form will be stored separately from the questionnaires you complete.

Will you receive anything for being in this study?

As compensation for your time and participation, you may choose from two options. Please indicate which option you are agreeing to by checking the box beside it.

All study compensation is awarded at the completion of the study, and completion of both Time 1 and 2 questionnaires is required to receive the study credit or the \$29. Participants will be paid for the number of daily/weekly questionnaires they complete.

- ☐ Option 1 Time 1& 2 Questionnaires– 1 Credit for Psychology Subject Pool (Clark students only)
Daily Completion of Online Questionnaires for 21 days - \$1/day for potential total of \$21
Weekly Completion of Online Questionnaire for 3 weeks - \$1/survey for potential total of \$3
TOTAL: 1 credit toward required research participation; up to \$24

- ☐ Option 2 Time 1&2 Questionnaires – \$29
Daily Completion of Online Questionnaires for 21 days - \$1/day for potential total of \$21
Weekly Completion of Online Questionnaire for 3 weeks - \$1/survey for potential total of \$3
TOTAL: up to \$53

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researcher listed on the first page of this form (Dr. Laura McKee). All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board chair, Dr. James P. Elliott, at 508-793-7152.

What if you are feeling down or stressed and need to talk with someone?

If you are a Clark student, please contact the Clark University Counseling Center. Counseling Services (508-793-7258) is located at 501 Park Avenue and is open Monday through Friday, 9 a.m. to 5 p.m. You may also contact the 24-hour emergency services hotline at Community Healthlink (800-977-5555) of (866-549-2142).

You will be given a copy of this consent form for your records.

This study has been approved by the Clark Committee for the Rights of Human Participants in Research and Training Programs (IRB). Any questions about human rights issues should be directed to the IRB Chair, Dr. James P. Elliott at 508-793-7152.

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

Signature of Research Participant

Date

Printed Name of Research Participant

Signature of Person Obtaining Consent

Date

Printed Name of Person Obtaining Consent



IRB Protocol #: 2012-007
IRB Approval: [Signature]
Approval Date: 10/2/2015
Void After: 10/16/2016