Concise Summary

We are doing this study to learn more about a form of therapy designed to help people who have difficulties calming down when they get upset.

People in this study will have a remote screening visit (or in-person if preferred) that includes obtaining medical and psychiatric interviews, questionnaires about function and emotions, and be asked to provide details about several stressful experiences they have had over the past few weeks and in their lifetime.

Next we will ask participants to return for an MRI scan, where we will look at what happens in their brains when they are reminded of stressful or neutral memories.

Everyone who joins this study will come for a visit where they will learn about emotions and how to manage them and then practice this new learning on their personal stressors while having different types of *neurostimulation*. Neurostimulation involves placement of a wire coil shaped like an 8 on the scalp that produces very small electric currents in the part of the brain that is closest to the coil.

Everyone will be asked to return 1 week later to complete a stressor task, have a repeat MRI scan and complete questionnaires. Everyone in the study will return 1 month later to complete questionnaires, have 1 final stressor task, and an exit interview.

Participation in the study takes 1-3 months and includes 5 total visits. People in the study will be compensated for the parts of the study they finish.

About 2 out of 1000 people may have a seizure during the neurostimulation. The most common side effect is headache.

If you are interested in learning more about this study, please continue to read below.

The purpose of this e-consent form is to give you the information you will need to help you decide whether or not to be in the study.

We are asking you to take part in this research study because you have expressed interest in participating and have difficulties managing your emotions. You may ask any questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When all of your questions have been answered, you can decide if you want to be in the study or not. This process is called 'informed consent'. You will receive a copy of this signed and dated e-consent form for your records.

Research studies are voluntary and include only people who choose to take part. Please read this consent form carefully and take your time making your decision. As the study staff discusses this consent form with you, please ask him/her to explain any words or information that you do not clearly understand. We encourage you to talk with your family and friends before you decide to take part in this research study. The nature of the study, risks, inconveniences, discomforts, and other important information about the study are listed below.

Please tell the study staff if you are taking part in another research study.

Dr. Andrada D. Neacsiu will conduct the study that is paid for by the National Institute of Mental Health (NIMH). The sponsors of this study will pay Duke University to perform this research, and these funds may reimburse part of Dr. Andrada Neacsiu's and her research team's salary.

WHO WILL BE MY DOCTOR ON THIS STUDY?
If you decide to participate, Doctors Andrada Neacsiu and Tommy Fu will be your doctors for the study and may be in contact with your regular health care provider if needed during the study or after.

WHY IS THIS STUDY BEING DONE?
Repetitive transcranial magnetic stimulation (rTMS) involves placement of an electromagnetic coil over the scalp that produces very small electric currents in the part of the brain that is closest to the coil.

Understanding and managing emotions represents a set of psychological skills that have been shown to help with emotional distress in a variety of situations. There are signs that it can help people regulate their emotions better.

rTMS is a noninvasive and painless treatment that is approved by the Food and Drug Administration (FDA) for the treatment for depression, obsessive compulsive disorder, and smoking cessation. In this study, we will use rTMS differently than what it has been approved for by the FDA but within safety guidelines. We will use rTMS together with psychological skills training in one session to test if it is helpful in reducing problems with dealing with emotions and mental distress.

Using rTMS in studies for conditions other than depression, obsessive compulsive disorder, and smoking cessation is investigational. The word "investigational" means the study device is still being tested in research studies and is not approved by the U.S. Food and Drug Administration (FDA) for this condition.

The purpose of our research is to test whether combining psychological skills and rTMS during one clinic session can help to reduce negative emotions and problems with dealing with emotions in both a laboratory setting and in a person's everyday life.

HOW MANY PEOPLE WILL TAKE PART IN THIS STUDY?
About 240 people will take part in this study at Duke. We may enroll up to 400 people in order to have 240 people in the study.

WHAT IS INVOLVED IN THE STUDY?

	Assessment Day	MRI Day (MRI #1)	Neurostimulation Day	1 Week Follow Up (MRI #2)	1 Month Follow Up
Consent discussion	▲				
Medical and treatment history	▲			▲	▲
Questionnaires	▲	▲	▲	▲	▲
Autobiographical negative memory collection	▲				
Clinical Interview	▲				▲
Psychotherapy skills training and practice			▲	▲	▲
Urine pregnancy test		▲	▲	▲	
Neurostimulation			▲		
Brain Imaging		▲		▲	
Physiological recording		▲	▲	▲	▲
Executive functioning testing*	▲	▲*			
Qualitative assessment of skills use			▲	▲	▲
Exit Interview					▲

*Part may be completed at MRI #1 visit if first visit was remote

These activities are described in detail below.

Assessment Appointment (Remote):

If you choose to take part in this study, you will first be asked to sign and date this e-consent form. You have already completed the telephone or online screening, but we are not yet sure if you will be eligible for the study. Today's visit will last between 1 and 5 hours and will be completed remotely, unless you have already told the study team you would like to do this visit in-person. During your first study visit (today) you will talk with an assessor about your medical and mental health history. Questions will include your drug use, psychological problems, how you cope with stress, ways in which you tend to think about yourself, and how you get along with others. We will also ask questions about your personality, intelligence, and specific psychological problems such as anxiety and depression.

We will ask you about your treatment history, including any medications you may be currently taking (for example, prescription medications, over-the-counter medications and vitamins).

During this visit, we will also ask you to complete a number of questionnaires that tell us about your difficulties managing emotions, general mental health and distress, functional impairment, anxiety, depression, motivation and interest, and sleep.

If you are enrolled in this study, you cannot also be in cognitive behavioral psychotherapy. You can be in other types of psychotherapy and/or on medication for mental health problems as long as there have been no changes in your treatment in the past month and you agree not make any changes throughout the study (with the exception of a medical emergency).

If you have recently participated in other studies here in our clinic, you may not have to answer all of the interview questions that we normally ask during this visit. Instead, we will use the answers that you gave in your other recent visit when we review the data for this study. The study staff will review the results of the visit to decide if you continue to qualify for the study.

If you do not qualify to stay in the study, your time and your participation will be complete at this point.

If you continue to qualify for the study, an interviewer will do a short cognitive task with you that involves working with numbers and asking you to complete the task while being timed. You will then be asked to describe in detail several stressful experiences you have had during your lifetime as well as in the past few weeks. You will also be asked to write them down, review them with the interviewer, and rate how stressful each event is.

If your first visit is being done in-person, you will then complete a computer task that involves sorting cards into four different categories. This task will be done at the next visit, if today's visit is remote.

Sometimes the interviews and questionnaires can last longer than expected. If this first visit is lasting longer than planned, we may have to finish it on a second day. If that is the case, you will finish the interviews or the self-report scales before the next session. We will only ask you to finish the visit and questionnaires on the second day if you qualify for the study.

We will video record or audio record you as part of this study to make sure the research staff are doing the study procedures correctly. If you are not willing to be video-or audio-recorded, please indicate so below (you will still be eligible to be in the study).

Recordings will be kept strictly confidential and will be directly recorded on Duke office computers/laptops using a web camera directly connected to the computer's hard drive. The recordings will then be immediately transferred from the computer's/laptop's hard drive to the Duke protected hard drive that is maintained and secured by Duke in the Department of Psychiatry and Behavioral Sciences.

The folder that will contain these video/audio recordings is protected and only members of the study team who are listed as key study personnel can access them. The video/audio-recordings may be reviewed by the key research and clinical staff members in Dr. Neacsiu's team, and may also be used for training within Dr. Neacsiu's lab of new research staff, if you agree. At the end of the study, you may review the recordings and delete any portions you don't want us to save. You have the right to come in and erase any parts of the recording, but you do not have a right to copy our recordings or any of our research material. These recordings will be destroyed at least six years after the study is completed.

Please indicate below whether you are willing to be audio/ video-recorded as part of this research study.

- ○ I am willing to allow the researchers to video-record the interviews to see if the experimenter is following the protocol correctly.
- ○ I am willing to allow the researchers to ONLY audio-record the interviews to see if the experimenter is following the protocol correctly.
- ○ I am NOT willing to allow the researchers to record the interviews.

MRI Session #1:

As soon as possible after the assessment visit, we will have the first neuroimaging session (MRI Day #1) which will last about 2-2.5 hours. We will meet at Dr. Neacsiu's lab at Duke North Pavilion and walk together to MRI facility in the main Duke hospital (5-minute walk). If you are a female of childbearing potential, we will ask you to provide a urine sample to check if you are pregnant. We will not continue with the MRI visit if the pregnancy test is positive for your own safety. The Magnetic Resonance Imaging (MRI) instrument being used in this study has a part that is not commercially available and is considered investigational and is being used for research purposes only.

We will train you in the scanner task (i.e., how to respond based on prompts when seeing reminders of your own stressful memories). You will practice the strategies with an experimenter using "fake" distressing memories.

We will also ask you to complete some online questionnaires and an MRI safety screening form.

If you have never had a brain MRI, you will have the option to have a "mock scan" to familiarize you with the sights and sounds of the procedure using a practice MRI machine.

During the MRI portion of the session, you will lie on your back upon a narrow bed that will be pushed into the MRI machine. The MRI technician will provide padding for your head and knees to make you more comfortable while lying down. If you are uncomfortable or feel pain because of lying down, please tell the technician right away. The technician will position your head inside a head tube, and the platform will be pushed inside the MRI machine. You will be able to communicate with the technician during the MRI using a microphone and speaker in the MRI machine.

While in the scanner, you will be asked to remember the negative memories you listed in the first appointment. You will use the strategies you learned during the training session. You will also be asked to rate your experience after each memory. This portion of the study will take about 1 hour.

Intervention Groups:

If you qualify, before coming back for the intervention, you will be randomly assigned (like the flip of a coin) to learn one of two psychological skills. Both skills (thinking differently when upset, or improving awareness of emotions and regulation) have evidence for being effective. You will also be randomly assigned to receive one of two types of rTMS over the right side of your brain, the difference in the type of neurostimulation being the configuration that we use for the neurostimulation machine.

You will not know what condition exactly you were assigned to until the end of the study. Throughout the study we will talk to all participants as if they receive the same intervention regardless of your group. This

is to help you remain unbiased in your reporting of mood, distress levels and ability to manage emotions after undergoing any of the interventions above. This will help us to examine the true effects of brain stimulation. The types of neurostimulation you will receive may be different from other people. We will explain differences during the debriefing at the end of the study.

Neurostimulation Session:

When you return to the lab for the neurostimulation session, we will meet in a different building. This session will last 3-4 hours. If you are a female of childbearing potential, we will ask you to provide a urine sample to check if you are pregnant. We do this to ensure your safety.

Before you come in, we will check whether the brain neurostimulation we are planning is safe for you. The study team may review your medical history and some of the forms you completed during the assessment day. Based on the study team's review and the urine pregnancy test we will decide whether it is safe for you to continue with the study.

The use of rTMS in this study is considered investigational.

Baseline and pre-intervention assessments. Before the study intervention, we will ask you about any changes in your medications, caffeine, alcohol, & nicotine use on that day, your sleep habits, and current pain, physical distress, and drowsiness levels. You will also be trained in the psychological skill assigned to you using "fake" example stressors. The study team member will make sure you understand how to use this skill before moving forward with the rest of the visit.

You will then sit in a chair in front of a computer and we will attach several electrodes (one on each wrist and ankle as well as 2 fingers on one hand) that measure your body's physiological and muscle responses. Throughout this period and the intervention, we will study your body's stress level by measuring your "galvanic skin response" (GSR) and heart rate. Once you're set up, we will wait 5 minutes for your body to relax so we can collect your physiological baseline.

Establishing dose of brain stimulation and rTMS protocol. The rTMS equipment includes an electric stimulator and a wire coil. Turning the stimulator on and off produces brief electrical currents in the coil, and these currents create a magnetic field around that coil (also called a 'magnetic pulse). The wire coil is shaped like an '8', coated in plastic, and is a little larger than a piece of notebook paper. When the coil is held close to the head, it generates a magnetic field which can induce very small electric currents in the part of the brain that is closest to the coil. These currents are similar to the currents that the neurons (brain cells) in the brain create when communicating with each other.

Before applying rTMS, the study doctors will need to decide what "dose" of stimulation to use for you by establishing your personal "motor threshold." To establish this threshold, we will first place the stimulator over the part of your brain that controls the motor activity in your right hand. You will hear a clicking sound and feel a tapping sensation at your scalp. The stimulator will be adjusted to give just enough energy so that the motor region of the brain sends signals to your hand muscles, to make your hand twitch. The lowest amount of energy required to make your hand twitch is called the "motor threshold." Everyone has a different motor threshold. This will take about 15-30 minutes.

Using your brain imaging data, we will identify a specific area of the brain that we want to target during brain stimulation. The rTMS stimulation will be applied over this pre-determined area of your brain. We

will also connect you to our physiological recording equipment and record your GSR and heart rate baseline for three to five minutes. Once this set up is complete, the experimental task will begin. You will be instructed to engage in a different strategies as you listen to three of your personal stressors. While you are listening to these stressors, you will be receiving the type of rTMS stimulation that was assigned to you. You will be able to take a break in between each portion of the task. Before each break, we will ask you to rate your experience. At the end of the session, we will ask you to complete an online questionnaires about your expectation about the intervention, your current level of distress, level of dissociation, emotions, effort, and any side effects that you might have from neurostimulation.

Follow up assessments:

One Week Follow-up. You will be invited back for a follow up MRI scan one week after the neurostimulation visit. At your follow up MRI scan appointment, you will complete a urine pregnancy test if you are a woman who can get pregnant. You will complete some similar questionnaires as at your intervention visit regarding sleep, caffeine, alcohol, changes in medication and health, current level of distress and dissociation as well as drowsiness levels. Next, you will complete a 5-10 minute stressor task. Like during the intervention visit, you will be connected to physiological recording equipment but no TMS stimulation or machine will be used in this follow-up task. After a baseline, you will hear your fourth stressful event through headphones and be asked to try to lower your emotional arousal followed by silence for 5 minutes. You will then review the strategies to use in the scanner and practice with a few 'fake' examples. During the MRI part of the visit, you will lie on your back upon a narrow bed that will be pushed into the MRI machine with the same set up as described before. While in the scanner, you will be asked to remember the negative memories you listed in the First Appointment. You will use the strategies you practiced during the training session following the memories. You will also be asked to rate your distress after each memory. At the end of the MRI session, you will complete your expectation about intervention, your current level of distress, level of dissociation, and questionnaires similar to your first visit regarding mood, anxiety, difficulties managing emotions, general health and distress. Depending on the time, you may complete these questionnaires at the visit or online after the visit is over. The one week follow-up MRI visit should take 2-3 hours.

One Month Follow-up (Final Visit). You will be asked to return to the lab one month after your one week follow-up visit, for your last study visit. This final visit should take 1.5-2 hours. You will again complete questionnaires regarding your sleep, caffeine and alcohol use, changes in medication and health, current level of distress and dissociation as well as drowsiness levels. You will then complete the last 5-10 minute stressor task, using your final personal stressor where you are again connected to physiological recording equipment. After the task, you will complete your expectation about intervention, your current level of distress, level of dissociation. The interviewer will then check in with you regarding any psychological problems, such as depression and anxiety, which you may have reported at the initial assessment. You will complete a brief interview about treatment you received since starting the study and we will inform you about the group you were assigned to and debrief. You will complete a short interview asking about your feedback about the study and then answer questionnaires similar to the ones you did at the beginning of the study. Depending on the time, you may complete these questionnaires at the visit or online after the visit is over.

HOW LONG WILL I BE IN THIS STUDY?
Your participation in the study may last up to 3 months. This includes 5 visits: the screening visit, the 2 MRI sessions, the neurostimulation session, the 1 week follow-up and the 1 month follow-up.

We will try to have all procedures completed within six weeks but may extend to 12 weeks if finding times for you to come in is difficult.

WHAT ARE THE RISKS OF THE STUDY?
As a result of being in this study, you are at risk for the following side effects. You should discuss these with the study doctor and your regular health care provider if you choose.

Risks of rTMS:
The most serious known risk of TMS is seizures. TMS procedures come with a very low risk of seizures. Out of over 10,000 people given various forms of TMS to date, 16 people (less than 0.2%) have had a seizure. TMS can produce a seizure when a series of pulses is given at high power and when a repeated series of pulses are given extremely close together.

This study will use only levels of TMS that are within safety guidelines. Levels of TMS that fall within the safety guidelines have not been associated with seizures in people who have been evaluated medically and undergone the motor threshold test. No seizures have occurred in normal volunteers with the dosage of TMS used in this study.

To minimize this risk, we will medically screen you for any of medical reasons that could lead to seizures. For example, persons with epilepsy cannot be in this study. You will be watched carefully during the TMS for any signs of seizure or muscle twitching. In spite of these precautions, there is a chance that you will experience a seizure.

Should this occur, emergency facilities are available. If you have a seizure, you may require hospital admission and follow-up neurological evaluation. Having had a seizure may make it difficult for you to obtain medical insurance, future employment, and to drive. It is not known whether having had one seizure will make a person more prone to have future seizures. Should you have a seizure caused by TMS in this protocol, we will provide you with a letter stating the seizure was caused by a research procedure.

The most commonly reported side effect of TMS a "muscle-tension" type headache. About three out of ten people may experience a headache with the types of TMS used in this study. We will make every effort to reduce any discomfort.

If a headache occurs, it usually starts during or immediately after the TMS and lasts from minutes to hours. The headache usually goes away with standard over-the-counter pain medications. You may also have neck pain. You may also experience some discomfort on your head where the coil is placed. This is due to contraction of scalp muscles. If you experience pain and discomfort, we may apply lidocaine or a thin plastic sheet to help with the uncomfortable sensation.

Numbness of the face lasting for a short time has also been reported in rare instances and may last for several weeks after receiving the procedure. Fainting is considered a rare side effect of TMS and has been reported in people who faint during blood draws. If you experience fainting, you will be withdrawn from the study and have your blood pressure monitored until it returns to a healthy level.

The clicking noises produced by the TMS procedure are loud enough to be damaging to your ears. You will therefore be required to wear earphones and listen to white noise during the TMS procedures.

Additional rare side effects of TMS are dizziness, memory problems, trouble concentrating, and acute mood changes. If these happen, they usually do not last long and will resolve without need for treatment.

There may be other risks that are currently unknown. The long-term effects of rTMS are not known.

Risks of Topical Lidocaine

As noted, if you experience discomfort or pain with the TMS procedure, if you agree, topical lidocaine may be used to help make you more comfortable. There will only be one application of the topical lidocaine. Topical lidocaine belongs to a family of medicines called local anesthetics. This medicine prevents pain by blocking the signals at the nerve endings in the skin. This medicine does not cause unconsciousness as general anesthetics do as used in surgery. Tell your study doctor if you have ever had any unusual or allergic reaction to this medicine or if you have broken skin or open wounds where the topical drug will be used. As with any drug, many people have no side effects or only have minor side effects that resolve quickly on their own. The most common side effects typically occur at the area where the topical lidocaine was applied which include irritation where the lidocaine was used, burning, swelling, redness, or change in color of skin. Other possible side effects are headache and nausea. Let the study doctor/ team know if you are having any signs of an allergic reaction during the visit or soon after you leave. Signs of an allergic reaction include rash; hives; itching; swollen, blistered, or peeling skin with or without fever; wheezing; tightness in the chest or throat; trouble breathing, swallowing.

Risks of regulation strategies and behavioral assessment:

It is possible that you may experience some unpleasant thoughts or emotions from the interviews, questionnaires and/or stressor tasks on the computer. However, we have no reason to believe that any unpleasant thoughts or emotions will last long after the experiment is over. Some of the questions we will ask you as part of this study may make you feel temporarily uncomfortable, as they have to do with psychological problems such as depression, or anxiety.

You may refuse to answer any of the questions and you may take a break at any time during the study. If you are feeling very upset during an assessment interview or the stressor task, a trained staff member will be available to talk with you about these feelings.

If at any time during the interviews or the procedures you have strong thoughts of suicide, you should notify the study staff and a trained professional will be available to talk. The trained study staff will work with you to address these suicidal thoughts and if you are at imminent risk of suicide after the conversation, you will be taken to the nearest hospital emergency room (for example: Duke ER).

There is also a potential risk of loss of confidentiality. Every effort will be made by the study staff to keep your information confidential; however, this cannot be guaranteed.

If you have any medical adverse events (a bad effect) after leaving the TMS laboratory, please contact the Duke operator at 919-684-8111 and have Dr. Tommy Fu paged. If you have any psychological adverse events, please have Dr. Andrada Neacsiu paged at the same number.

There are no known risks of learning psychological skills (thinking differently when upset, or improving awareness of emotions and regulation), however, in case it is difficult to understand or use the techniques using your stressful events, it's possible that you may feel frustrated or disappointed.

Risks of MRI Scan:
Magnetic resonance imaging (MRI) uses a magnet and radio waves to make diagnostic medical images of the body. There have been no ill effects reported from exposure to the magnetism or radio waves used in this test. However, it is possible that harmful effects could be recognized in the future. A known risk is that the magnet could attract certain kinds of metal. Therefore, we will carefully ask you about metal within your body, including medical implants, devices such as pacemakers and internal defibrillators, or certain dyes found in tattoos. We will also keep the examining room locked so that no one carrying metal objects can enter while you are in the scanner.

If there is any question about potentially hazardous metal within your body, you will not undergo the MRI. This may exclude you from participation in this research study. The MRI involves entering a large room in which a magnet is present. You will be placed on a narrow bed and then slid into a small tunnel approximately 6 feet in length and 25 inches in diameter. You will be asked to lie still for about one hour on this bed. You will hear a loud machine-like banging noise. We will give you earplugs and/or headphones to protect your hearing. You may be asked to have a harmless monitoring device applied during the MRI.

Some people feel anxious when confined by the small space of the MRI machine. If you feel anxious or uncomfortable inside the MRI machine, you can tell the study staff over the intercom and you will be removed immediately from the MRI machine. You can also have voice contact and physical contact with someone in attendance if you desire.

Reproductive Risks:
For women of who can get pregnant: The effects of the MRI and TMS on a developing pregnancy are not known. In addition, the changes that women who are pregnant or breastfeeding undergo can affect the responses to some of the tests. Women who are pregnant or who are planning a pregnancy are not allowed to participate in the study.

If you are a woman who can get pregnant, a urine pregnancy test will be done on the day of the MRI scan and the rTMS session, and it must be negative before you can continue in this study.

Although there are no potential risks to a developing pregnancy in between the MRI or TMS sessions, if you become pregnant between sessions you will not be able to continue in the study. Therefore, we recommend that you either abstain completely from vaginal intercourse until your last session, or use an effective method of contraception for the same length of time. Effective methods include partner vasectomy, bilateral tubal ligation, intrauterine devices (IUDs), hormonal methods, or barrier methods (condoms, diaphragms, cervical caps) with spermicide. If you do become pregnant during the study or if you have unprotected sex during the study, you must inform your study physician immediately.

ARE THERE BENEFITS TO TAKING PART IN THE STUDY?

This study may be of no direct benefit to you, but you will help improve our knowledge about which strategies are helpful or unhelpful for people who experience strong negative emotions. A possible benefit is that the study could help develop personalized strategies for you to use to feel better when upset, but this cannot be guaranteed. We hope that in the future the information learned from this study will benefit other people with your condition.

WHAT IF WE LEARN ABOUT NEW FINDINGS OR INFORMATION DURING THE STUDY?

You will be given any new information gained during the course of the study that might affect your willingness to continue. If any unexpected abnormalities are found that might pose a significant health risk to you, Dr. Neacsiu will inform you so that you may seek follow up medical consultation with a doctor of your choosing.

POSSIBLE DISCOVERY OF FINDINGS RELATED TO MEDICAL IMAGING

It is possible that the MRI component of this study will identify information about you that was previously unknown, such as disease status or risk. This research scan is not a medical diagnostic test.

There are no plans to provide this information to you or your physician unless there is an unexpected finding on the scan that indicates a possible need for follow-up testing. This is rare, occurring in only about 3 of every 1000 people scanned. If this happens, your scan will be reviewed by a physician or the MRI technician, who may recommend further diagnostic testing. If this happens, the physician or MRI technician will discuss this with you and you will be asked for separate permission for the follow-up and further testing outside of this research study. The possible costs associated with this follow-up and/or further testing will be discussed with you at that time.

WHAT ALTERNATIVES ARE THERE TO PARTICIPATION IN THIS STUDY?

You do not have to participate in this study to get treatment for your mental health problems. Currently available treatments include many types of psychotherapy, medications, electroconvulsive therapy (ECT), and transcranial magnetic stimulation (TMS). Please talk to your doctor about these and perhaps other options.

WILL MY INFORMATION BE KEPT CONFIDENTIAL?

Participation in research involves some loss of privacy. We will do our best to make sure that information about you is kept confidential, but we cannot guarantee total confidentiality. Your personal information may be viewed by individuals involved in this research and may be seen by people including those collaborating, funding, and regulating the study. We will share only the minimum necessary information in order to conduct the research. Your personal information may also be given out if required by law. Except when required by law, you will not be identified by name, social security number, address, telephone number, or any other direct personal identifier in study records disclosed outside of Duke University Health System (DUHS).

All paper data and research forms will be kept in a secure locked cabinet in Dr. Neacsiu's office and will only be made available to members of the research team for this study. Your name and other personal identifying information will not be stored in the computer system databases that store your ratings, and thus individuals who might gain unauthorized access to your ratings will not know your identity.

Video and/or audio recordings which could contain identifiable information will be destroyed no more than 6 years after the study is completed.

Your records may be reviewed in order to meet federal or state regulations. Reviewers may include the representatives from the sponsor, and the Duke University Health System Institutional Review Board. If either of these groups review your research record, they may also need to review your entire medical record (if you receive your medical care at DUHS).

The Department of Health and Human Services (HHS) has issued a Certificate of Confidentiality to further protect your privacy. With this Certificate, the investigators may not disclose research information that may identify you in any Federal, State, or local civil, criminal, administrative, legislative, or other proceedings, unless you have consented for this use. Research information protected by this Certificate cannot be disclosed to anyone else who is not connected with the research unless:

1) there is a law that requires disclosure (such as to report child abuse or communicable diseases but not for legal proceedings);
2) you have consented to the disclosure, including for your medical treatment; or
3) the research information is used for other scientific research, as allowed by federal regulations protecting research subjects.

Disclosure is required, however, for audit or program evaluation requested by the agency that is funding this project (NIMH).

You should understand that a Confidentiality Certificate does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If you want your research information released to an insurer, medical care provider, or any other person not connected with the research, you must provide consent to allow the researchers to release it. This means that you and your family must also actively protect your own privacy.

Finally, you should understand that the investigator is not prevented from taking steps, including reporting to authorities, to prevent serious harm to yourself or others.

Your name and other personal identifying information will not be used in any scientific reports of this study, and will not be made available to representatives from award groups. Some people or groups who receive your health information might not have to follow the same privacy rules.

Once your information is shared outside of DUHS, we cannot guarantee that it will remain private. If you decide to share private information with anyone not involved in the study, the federal law designed to protect your health information privacy may no longer apply to the information you have shared. Other laws may or may not protect sharing of private health information.

The study results will be retained in your research record for at least six years after the study is completed. At that time, either the research information not already in your medical record will be destroyed or information identifying you will be removed from such study results at DUHS. Any research information in your medical record will be kept indefinitely.

The study results will be combined with results from other subjects and given to the FDA to support applications to use rTMS. All reasonable efforts will be made to keep your identity confidential.

Because of the need to release safety information to third parties, absolute confidentiality cannot be guaranteed. This information may be further disclosed by the sponsor of the study, NIMH. If disclosed by the sponsor, the information is no longer covered by federal privacy regulations.

Another risk to your confidentiality comes from someone intercepting emails we send to you. We will keep the information in e-mails brief, but an e-mail breach would get your e-mail address connected to a Duke study. No other information should be apparent if there is a breach. The link to the online survey is generic and does not "remember" your previous answers. Therefore, if someone else accesses the link from your e-mail they will not be able to see any answers that you have entered. We will use REDCAP, a Duke approved platform, to collect your information.

A description of this clinical trial will be available on www.ClinicalTrials.gov, as required by US law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this website at any time.

NIMH Data Archive (NDA): Data from this study will be submitted to the NDA at the National Institutes of Health (NIH). NDA is a large database where deidentified study data from many NIH studies are stored and managed. Sharing your deidentified study data helps researchers learn new and important things about science more quickly than before.

Deidentified study data means that all personal information about you (such as name, address, birthdate and phone number) is removed and replaced with a code number. The study researchers will have to collect your personal information from you in order to make that code number. The code number cannot be used to identify you. The study researchers will never send your personal information to NDA
.
It is possible that you will participate in more than one study that sends data to NDA. NDA can connect your data from different studies by matching the code number on your deidentified data from each study. This data matching helps researchers who use NDA data to count you only one time. It also helps researchers who use NDA to better understand your health and behavior without knowing who you are. During and after the study, the study researchers will send deidentified study data about your health and behavior to the NDA. Other researchers across the world can then request your deidentified study data for different research projects. Every researcher (and the institution to which they belong) who requests your deidentified study data must promise to keep your data safe and promise not to try to learn your identity. Experts at the NIH who know how to keep your data safe will review each request carefully to reduce risks to your privacy. Sharing your study data does have some risks, although these risks are rare. Your study data could be accidentally shared with an unauthorized person who may attempt to learn your identity. The study researchers will make every attempt to protect your identity.

You may not benefit directly from allowing your study data to be shared with NDA. NIMH will also report to Congress and on its website about the different studies using NDA data. You will not be contacted directly about the study data you contributed to NDA.

You may decide now or later that you do not want your study data to be added to NDA. You can still participate in this research study even if you decide that you do not want your data to be added to NDA. If you know now that you do not want your data in NDA, please tell your study doctor before leaving the clinic today. If you decide any time after today that you do not want your data to be added to NDA, call or email the study staff who conducted this study, and they will tell NDA to stop sharing your study data. Once

your data is part of NDA, the study researchers cannot take back the study data that was shared before they were notified that you changed your mind. If you would like more information about NDA, it is available on-line at http://nda.nih.gov.

WHAT ARE THE COSTS?
There will be no additional costs to you as a result of being in this study.

WHAT ABOUT COMPENSATION?
You will be compensated up to $300 for your participation and will be given a parking pass or a bus pass to cover your travel to Duke during days when you have in person visits. All payments will be made at the end of your participation.

When you finish the assessment day, and you are not eligible to participate in the full study, you will receive $20 plus a parking pass at the Duke Hospital parking garage or a bus pass (up to $3) to cover the cost of parking or bus fare, if applicable. If you are eligible, you will receive $50 for completing the interview and questionnaire portion.

After the initial screening day, compensation for the study depends upon the procedures that you complete. You will get $50 each for completing both imaging sessions and both follow-up visits. You will be paid $20 if you attempt to complete an MRI session but do not complete it (such as detected pregnancy or claustrophobia). You will also be compensated for parking at this visit.

If TMS is medically appropriate, you will be paid $100 for the neurostimulation day plus parking or bus pass. If you cannot tolerate the TMS procedure and stop early, you will be compensated $50 plus a parking pass or bus pass.

For eligible participants, all payments will be done at the end of the study.

WHAT ABOUT RESEARCH RELATED INJURIES?
Immediate necessary medical care is available at Duke University Medical Center in the event that you are injured as a result of your participation in this research study. However, there is no commitment by Duke University, Duke University Health System, Inc., or your Duke physicians to provide monetary compensation or free medical care to you in the event of a study-related injury.

For questions about the study or research-related injury, contact Dr. Neacsiu at 919-684-6714 or Dr. Tommy Fu at 919-684-2258 during regular business hours. If outside regular business hours, please contact the Duke operator at 919-684- 8111 and have Dr. Andrada Neacsiu and/or Dr. Tommy Fu paged.

WHAT ABOUT MY RIGHTS TO DECLINE PARTICIPATION OR WITHDRAW FROM THE STUDY?
You may choose not to be in the study, or, if you agree to be in the study, you may withdraw from the study at any time. If you withdraw from the study, no new data about you will be collected for study purposes unless the data concern an adverse event (a bad effect) related to the study. If such an adverse event occurs, we may need to review your entire medical record. All data that have already been collected for study purposes, and any new information about an adverse event related to the study, will be sent to the study sponsor.

Your decision not to participate or to withdraw from the study will not involve any penalty or loss of benefits to which you are entitled, and will not affect your access to health care at Duke. However, if you decide to stop participating, we encourage you to talk to a staff member so we can best assist you to find additional services if needed.

Nonparticipation or withdrawal from this study will not affect your job status if you are a Duke employee and will not affect your grades if you are a Duke student. If you do decide to withdraw, we ask that you contact Dr. Neacsiu in writing and let her know that you are withdrawing from the study.

Her mailing address is Box 102505, Duke University Medical Center, Durham, NC 27710 or you can email her at Andrada.neacsiu@duke.edu.

If you decide to leave the study for any reason and you have attended and/or completed the neurostimulation visit at the time you withdraw, you will be asked to continue in the study and complete both the one week and one month-follow-up sessions as per the regular study schedule and described earlier. Completing the 2 follow-up visits as planned in the study allows the study team to see if even learning an emotion regulation skill as taught in this study can still help those with difficulties regulating their emotions.

We will tell you about new information that may affect your health, welfare, or willingness to stay in this study. Your doctor may decide to take you off this study if your condition gets worse, if you have serious side effects, or if the study team determines that it is no longer in your best interest to continue.

Your data may be stored and shared for future research without additional consent if identifiable private information, such as your name and medical record number, are removed. If your identifying information is removed from your data, we will no longer be able to identify and destroy them.

The use of your data may result in commercial profit. You will not be compensated for the use of your data and samples other than what is described in this consent form.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

For questions about the study or a research-related injury, or if you have problems, concerns, questions or suggestions about the research, contact Dr. Andrada Neacsiu at 919-684-6714 during regular business hours, or the Duke operator outside of business hours at 919-684-8111 to have Dr. Neacsiu paged.

For questions about your rights as a research participant, or to discuss problems, concerns or suggestions related to the research, or to obtain information or offer input about the research, contact the Duke University Health System Institutional Review Board (IRB) Office at (919) 668-5111.

STATEMENT OF CONSENT

"The purpose of this study, procedures to be followed, risks and benefits have been explained to me. I have been allowed to ask questions, and my questions have been answered to my satisfaction. I have been told whom to contact if I have questions, to discuss problems, concerns, or suggestions related to the research, or to obtain information or offer input about the research. I have read this consent form and agree to be in this study, with the understanding that I may withdraw at any time. I have been told that I will be given a signed and dated copy of this consent form."

- ”Yes, I have read the consent document and I wish to participate in the study.”
- ”Yes, I have read the consent document and I DO NOT wish to participate in the study.”