  1.        Title

                1.1.        Provide the working title of your study. It may be the same title that you submit for publication of your final manuscript, but it is not a requirement.

 Neural Correlates of Emotion Regulation in Adults with ADHD

    2.        Authorship

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    3.        Research Questions

                3.1.        Please list each research question included in this study.

1. What are the brain activations during passive viewing of emotional stimuli and during emotional reappraisal (ER) of emotional stimuli in the participating groups?
2. How does emotional reappraisal (“think of the picture as happening far away, in the past, or both”) change the behavioral and functional neurological responses to negative emotional stimuli in neurotypical adult controls and adults with ADHD?
3. How do the effects of reappraisal on behavioral and functional neurological responses differ between adults with ADHD and neurotypical control adults?

    4.        Hypotheses

                4.1.    For each of the research questions listed in the previous section, provide one or multiple specific and testable hypotheses. Please state if the hypotheses are directional or non-directional. If directional, state the direction. A predicted effect is also appropriate here.

1. (Non-directional) In healthy controls, we expect results consistent with our previous findings (Uchida 2015, Ochsner 2002):
   1. Significant amygdala activation during passive viewing of threatening stimuli compared to neutral stimuli;
   2. Significant PFC activation, particularly in the dorsal/anterior stream, accompanied by reduced amygdala activation during the emotion reappraisal task compared to passive viewing of threatening stimuli;
   3. Significant insula activation during passive viewing of disgusting stimuli compared to neutral stimuli.
2. (Non-directional) We hypothesize that, compared to control participants, ADHD participants will exhibit significantly altered brain activation patterns during the emotion regulation tasks of disgusting and threatening stimuli.
3. (Directional) We expect effective behavioral reappraisal of emotional stimuli (emotional reappraisal task) in the control group; control participants will rate negative stimuli as less negative during the ER task than they would during passive viewing of equally negative stimuli. This would be consistent with our previous findings (Uchida 2015, Ochsner 2002).
4. (Non-directional) We predict that behavioral effectiveness of reappraisal of emotional stimuli will be significantly different between ADHD and control groups.