

capacities. Previous research by this group has demonstrated the importance of emotion processing in the context of sex and aging in depression. We hypothesized that females would (1) score higher on the Cognitive Reappraisal Facet of the ERQ, (2) be more successful in utilizing cognitive reappraisal skills in response to negative stimuli; and (3) have self-report scores on the ERQ that more closely match their success at cognitive reappraisal than would males.

Participants and Methods: 52 older adults (30 female, mean age = 64.40, mean education = 16.15) with degrees of depression symptom severity ranging from absent to severe completed the Emotion Regulation Questionnaire (ERQ). This consists of 10 prompts (e.g., “I control my emotions by changing the way I think about the situation I’m in.”) which are answered using a seven-point Likert scale. They subsequently completed an Emotion Regulation Task (ERT) during functional MRI immediately following a clinician-administered Montgomery-Asperg Depression Rating Scale (MADRS). The ERT is a 20-minute task performed in the scanner that prompts subjects to “look”, “maintain”, or “reappraise” a subsequent image using a five-point Likert-Type scale. After five seconds of viewing images varying in valence from neutral to different degrees of negative affect (validated by the NIMH’s International Affective Picture System (IAPS), they are asked “How Negative do you feel?”

Results: Only the first of our three outcome measures was successfully predicted by the model including age, MADRS scores, and sex as predictors. Scores on the ERQ cognitive reappraisal facet with sex accounted for 11.3% of the variance ($F=7.344$, $p=.009$). Age and depression symptom severity did not reach significance. Performance on the ERT itself and the correlation between the two were not meaningfully modeled.

Conclusions: Women showed both better cognitive reappraisal abilities overall and more insight into the level of those abilities, findings that fall in line with most ER literature. However, we found that females were also more likely than males to be skewed in the positive or “overconfident” direction; to overestimate those same abilities. This information is useful for clinicians interpreting self-report information in the emotion regulation domain. These findings may not generalize to a more diverse (racially and socioeconomically) population and given the

cognitive nature of the reappraisal strategy; these results may not extend to a less educated population. These data will be useful to inform the interpretation of fMRI images from this same experiment.

Categories: Emotion Regulation

Keyword 1: emotional processes

Keyword 2: depression

Keyword 3: aging (normal)

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32 Effects of Emotion Regulation and Emotional Lability/Negativity on Academic Achievement Among Youth With and Without ADHD

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Objective: Youth with attention-deficit/hyperactivity disorder (ADHD), characterized by symptoms of inattention and hyperactivity, often experience challenges with emotion regulation (ER) and/or emotional lability/negativity (ELN).¹⁻³ Prior work has shown that difficulties with ER and ELN among young children contribute to lower academic achievement.⁴⁻⁶ To date, research examining associations between ADHD and academic achievement have primarily focused on the roles of inattentive symptoms and executive functioning.⁷⁻⁸ However, preliminary work among youth with ADHD suggests significant associations between disruptions in emotional functioning and poor academic outcomes.⁹⁻¹⁰ The current study will examine associations between ER, ELN, and specific subdomains of academic achievement (i.e., reading, spelling, math) among youth with and without ADHD.

Participants and Methods: Forty-six youth (52% male; $M_{age}=9.52$ years; 76.1% Hispanic/Latino; 21 with ADHD) and their parents were recruited as part of an ongoing study. Parents completed the Disruptive Behavior Disorders Rating Scale¹¹ and Emotion Regulation Checklist¹² about their child. Youth completed the Wechsler Abbreviated Scale of

Intelligence-II¹³ and three subtests [Spelling (SP), Numerical Operations (NO), Word Reading (WR)] of the Wechsler Individual Achievement Test-III.¹⁴ Univariate analysis of variance assessed differences in emotional functioning and academic achievement among youth with and without ADHD. Correlation and regression analyses were conducted to examine the association between emotional factors and the three subtests of academic achievement.

Results: Youth with ADHD exhibited significantly higher ELN ($M=30.7$, $SD=8.7$) compared to their peers ($M=23.2$, $SD=5.8$), when controlling for child age, sex, and diagnoses of conduct disorder and/or oppositional defiant disorder [$F(1,41)=8.96$, $p<.01$, $\eta_p^2=.18$]. With respect to ER, youth with ($M=24.8$, $SD=4.2$) and without ADHD ($M=25.8$, $SD=4.3$) did not differ [$F(1,41)=.51$, $p=.48$]. Surprisingly, within this sample, ADHD diagnostic status was not significantly associated with performance on any of the academic achievement subtests [WR: $F(1,41)=.29$, $p=.59$; NO: $F(1,41)=.91$, $p=.35$; SP: $F(1,41)=2.14$, $p=.15$]. Among all youth, ER was significantly associated with WR ($r=.31$, $p=.04$) and SP ($r=.35$, $p=.02$), whereas ELN was associated with performance on NO ($r=-.30$, $p=.04$). When controlling for child age, sex, IQ, and ER within the full sample, higher ELN was associated with lower scores on the NO subtest ($b=-.56$, $SE=.26$, $p=.04$). The associations between higher ER and WR scores ($b=1.12$, $SE=.51$, $p=.03$), as well as higher ER and SP scores ($b=1.47$, $SE=.56$, $p=.01$), were significant when controlling for child age and sex, but not ELN and IQ ($p=.73$ and $p=.64$, respectively). **Conclusions:** As expected, youth with ADHD had higher ELN, although they did not differ from their peers in terms of ER. Results identified distinct associations between ER and higher reading/spelling performance, as well as ELN and lower math performance across all youth. Thus, findings suggest that appropriate emotional coping skills may be most important for reading and spelling, while emotional reactivity appears most salient to math performance outcomes. In particular, ELN may be a beneficial target for intervention, especially with respect to improvement in math problem-solving skills. Future work should account for executive functioning skills, expand the academic achievement domains to include fluency and more complex academic skills, and assess longitudinal pathways within a larger sample.

Categories: Emotion Regulation

Keyword 1: attention deficit hyperactivity disorder

Keyword 2: academic achievement

Keyword 3: emotional processes

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33 Depressive Symptoms Drive the Underutilization of Cognitive Reappraisal in Veterans with PTSD

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Objective: Adaptive emotional regulation strategies, such as cognitive reappraisal, are related to better neuropsychological functioning in the general population. Individuals with PTSD demonstrate difficulty with both emotional regulation and cognitive performance that contribute to clinical presentation (e.g., negative mood, irritability). However the extent to which neuropsychological functioning is associated with emotion regulation, alone and in concert with common comorbid symptoms like depression, remains understudied in this population. Better understanding how specific neuropsychological functions relate to cognitive reappraisal could point to novel treatment targets given preliminary evidence that certain cognitive training techniques can improve neuropsychological and affective outcomes. The present study aims to investigate the relationship between clinical symptoms of PTSD and depression, working memory capacity, and cognitive reappraisal in Veterans with PTSD. We hypothesized that clinical symptoms and working memory capacity would interact to predict cognitive reappraisal, such that elevated depression would relate to worse cognitive reappraisal, particularly for individuals with poor working memory capacity.

Participants and Methods: Measures of working memory (symmetry span task), mental health symptomatology (Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) and Beck Depression Inventory-II (BDI-II)), and emotional regulation (Emotion Regulation Questionnaire (ERQ)) were collected in 38 Veterans. A regression analysis was conducted with total