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Objective: The association between adverse childhood experiences (ACEs) and adult depression and anxiety has been well described (Aafjes-van Doorn et al., 2020; Dolbier et al., 2021; Herzog & Schmahl, 2018). However, cognitive flexibility, as a potential moderating factor of this relationship, has been underreported (Kalia et al., 2021). We hypothesize that increased ACEs will be associated with increased symptoms of depression and anxiety, and cognitive flexibility will exhert a moderating role in this relationship.
Participants and Methods: Participants from the Evelyn F. McKnight University of Miami Frailty Registry were included in the study. 224 adults (M_{age}= 66.30, SD = 11.63; 59.4% female; 62.1% Hispanic/Latinx) without primary neurological disorders were recruited from University of Miami clinics and community centers. Participants completed a demographic questionnaire and neuropsychological evaluation including the Adverse Childhood Experiences inventory, Beck Depression Inventory, Beck Anxiety Inventory, and the Wisconsin Card Sorting Test (WCST). Current data were initially analyzed using descriptive statistics and correlations among variables. A series of hierarchical multiple linear regressions (HLR) were conducted to examine the effect that age has on cognitive flexibility (measured by number of perseverative errors on the WCST), as well as the association between number of ACEs endorsed on symptoms of depression and anxiety in late life.
Results: Correlation analyses revealed a negative correlation between total ACE score and cognitive flexibility (r=-.16, p=0.03); a positive correlation between age and cognitive flexibility (r=0.19, p=0.01); and positive relationships between ACE score and both BDI (r=0.35, p<0.001) and BAI (r=0.28, p<0.001) scores. Correlations further revealed a negative correlation between cognitive flexibility and both BDI (r=-0.18, p=0.014) and BAI (r=-0.14, p=0.048) scores. A series of hierarchical multiple linear regressions revealed that total number of ACEs had a statistically significant effect on both depression (f=7.24, p<.001, ΔR^2=0.072) and anxiety (f=4.57, p<.001, ΔR^2=0.044) symptoms, in models adjusted for demographic correlates (i.e., age, sex, race, ethnicity). While the overall moderation model examining the effect of cognitive flexibility on the relationship between ACEs and psychopathology was significant (f=6.04, p<.001, ΔR^2=0.191), the interaction was not significant (p=.4199). However, HLRs further revealed a statistically significant effect of age on cognitive flexibility (f=6.77, p=0.01, ΔR^2=0.034).
Conclusions: Current findings support past research showing higher number of ACEs are associated with more symptoms of depression and anxiety in later life. However, cognitive flexibility did not moderate the relationship between ACEs and symptoms of depression and anxiery. This suggests cognitive flexibility might not play a significant role in the association between childhood trauma and symptoms of depression and anxiety in later life. Alternatively present results could be attributed to a small sample size, or the specific measure of cognitive flexibility used. This study expands on prior research highlighting the role of cognitive flexibility on age, with age serving as a prominent feature in the association between ACEs and adult depression and anxiety. Further research examining the role of cognitive flexibility in younger and middle years and its association with ACEs and psychopathology may provide unique insights on how to intervene earlier in the life course before cognitive flexibility begins to decline.

Categories: Mood & Anxiety Disorders
Keyword 1: cognitive functioning
Keyword 2: mood disorders
Keyword 3: aging (normal)
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58 Examining the Link Between Self-Reported Anxiety and Aggressive Behaviors

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Objective: It is well known that there are differences between men and women in anxiety and aggression. Moreover, prior research has shown an association between anxiety and aggression but the strength of these associations in males and females has not been well characterized, and it remains unclear whether such associations are driven by comorbid disorders such as posttraumatic stress disorder (PTSD) or substance abuse. Therefore, we examined these associations in a large sample of males and females, and statistically controlled for the aforementioned potential confounding variables.
Participants and Methods: A total of 13,313 adults completed the survey on Amazon Mechanical Turk between April 2020 and April 2021, including 5,598 females (Mage=36.4, SD=11.9) and 7,654 males (Mage=37.81, SD=12.7). Aggression was measured using the Buss Perry Aggression Questionnaire (BPAQ), while the Generalized Anxiety Disorders (GAD-7) scale was used to gauge anxiety levels. PTSD was assessed with the PC-PTSD scale, and alcohol misuse was assessed with the Alcohol Use Disorders Inventory (AUDIT). Data were analyzed with zero-order correlations and linear regression to control for the effects of PTSD and alcohol misuse. Lastly, we used a Fisher r-to-z transformation to compare the correlations between males and females for both physical and verbal aggression with anxiety.
Results: Higher aggression (i.e., BPAQ) was correlated with greater anxiety (i.e., GAD; $r(13213)=0.482$, $p<0.0001$)). This association between anxiety and aggression held even when other potential confounders were controlled, such as PTSD ($p<0.0001$), and alcohol misuse, $p<0.0001$. Additionally, the correlation between anxiety and physical aggression was significantly stronger in males than females ($z=5.02$, $p<0.0001$), a pattern that was also true for the association between anxiety and verbal aggression ($z=4.13$, $p<0.0001$).
Conclusions: Our findings suggest that there is a linear relationship between the severity of anxiety and the severity of both verbal and physical aggression, that these associations tend to be stronger among males, and are not accounted for by associated conditions such as PTSD or alcohol misuse. This data augments existing research on the factors that contribute to aggression and further suggest that anxious feelings are more directly associated with aggression in males. These findings raise the possibility that interventions that target anxiety may prove helpful in reducing aggressive behavior among males. It may be fruitful for future work to identify neural systems that are associated with both anxiety and aggression and which are also modulated by sex. While measures of neurochemistry were not collected here, prior research has suggested that there are sex differences in brain systems that rely on serotonergic neurotransmission and arginine vasopressin, which could provide a target for future work.

Categories: Mood & Anxiety Disorders
Keyword 1: aggression
Keyword 2: anxiety
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59 The Impact of Anxiety on Memory Performance in Older Adults with Depression

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Objective: Late life depression (LLD) refers to a diagnosis of major depressive disorder in people older than 60, and has been linked to significant cognitive impairment and increased risk of Alzheimer's disease. Although anxiety and depression are highly comorbid, the impact of anxiety on cognition in LLD is far less researched. This is important given that over 20% of middle aged and older adults endorse clinically significant chronic worry. Generalized anxiety disorder in older adults with major depression is associated with poorer cognition and worse treatment outcomes compared with those without anxiety. Therefore, the purpose of the study is to examine the role of anxiety on memory in LLD. We hypothesized that presence of anxiety among older depressed adults would be associated with worse cognitive performance over time.
Participants and Methods: Participants included 124 individuals (69.4% female, 90.3% Caucasian) aged 60 or above (M = 71.5, SD = 7.4) who met criteria for major depression, single episode or recurrent. They completed the State Trait Anxiety Inventory, Montgomery

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