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**The Relationship Between Alexithymia, Callous Affect, Aggression, and Emerging
Adulthood**

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Abstract

Emerging adulthood is a term used to define a time of development for college-aged (i.e. aged 18-29 years) individuals experiencing a period of identity exploration, instability, self-focus, feeling 'in-between', and a time of possibilities and optimism (Arnett, 2014). During emerging adulthood, it is common for young adults to experience elevated levels of psychopathic traits (Smits, et al. 2011). Psychopathic traits such as callous affect, impulsivity, and narcissism have been known to be a risk factor for aggressive behaviors (Marsee, et al. 2005). It was expected that higher levels of callous affect and Borderline Personality traits would be associated with higher levels of aggression. The study used a correlational design that used a series of self-report surveys to measure alexithymia (Preece, et al, 2018), callous affect (Williams, Paulhus, & Hare, 2007), borderline traits (Lohan, et al, 2020), emotional regulation (Zeman, et al., 2001, 2002), emerging adulthood (Reifman, Arnett, & Colwell, 2007), direct and indirect aggression (Bryant & Smith, 2001), and proactive and reactive aggression (Raine, et al., 2006). The results indicated that while all of the variables measured had a relationship to aggression, callous affect was the main predictive variable that was driving the relationship. In the future, it would be beneficial to examine the relationship alexithymia has to aggression as well as evaluate callous affect and alexithymia in regards to different demographics to determine if these results are generalizable to the whole population.

Alexithymia, Callous Affect, Aggression, and Emerging Adulthood

In developmental psychology, Erik Erikson proposed the theory that there are eight different developmental stages throughout the lifetime of a person (Erikson, 1964). These stages are defined by age ranges and developmental markers that indicate whether or not a person has reached maturity within that specific stage. The stages range from infancy to old age, each stage has an existential question that an individual must answer in order to emerge from that stage with the corresponding virtue (Erikson, 1950). The eight main stages include: Infancy or trust vs mistrust (under 1 year of age), Toddlerhood or autonomy vs shame (1-2 years of age), early childhood or initiative vs guilt (3-6 years of age), middle childhood or industry vs inferiority (7-10 years of age), adolescence or identity vs role confusion (11-19 years of age), early adulthood or intimacy vs isolation (20-44 years of age), middle adulthood or generativity vs stagnation (45-64 years of age), and late adulthood or integrity vs despair (65 years to end of life). As individuals progress through these stages of life they obtain different beliefs about themselves and the world around them.

Relatively recently, some psychologists have proposed that there should be an additional stage added in between adolescence and young adulthood, called emerging adulthood (Arnett, 2007). Emerging adulthood is a term now used to define a time of development for college aged (i.e. aged 18-29 years), due to the fact that it has been taking longer for individuals in this age range to hit markers of adulthood such as owning a home and being financially independent (Arnett, 2007). Individuals experiencing a period of identity exploration, instability, self-focus, feeling 'in-between', and a time of possibilities/optimism (Arnett, 2014). During emerging adulthood, it is common for young adults to experience elevated levels of psychopathy in order to develop a sense of identity (Smits, et al. 2011). Research has shown that there may be a

relationship between the period of exploration and self-focus that comes with adolescence and emerging adulthood and levels of psychopathic traits and aggression (Ostrov & Houston, 2008).

Psychopathic traits such as callous affect, impulsivity, and narcissism have also been known to be a risk factor for aggressive behaviors (Marsee, et al. 2005). Traits of psychopathy have shown to have a relationship to aggression. Psychopathy is characterized by three main traits: callous affect, impulsivity, and narcissism (Cleckley, 1941; Hare, 1991). Callous affect is characterized by lacking empathy and emotions, and by having no remorse for lacking those abilities to connect with other people in an emotional capacity. Callous affect has been found to have strong predictive value when evaluating aggression (Blader et al., 2013; Thornton et al., 2013) and other disorders such as Conduct Disorder (Pardini & Frick, 2013). In prior research, callous affect has shown to be a driving factor in predicting aggression when evaluating the other traits of psychopathy and emerging adulthood (Terranova & Sutz, 2022).

While callous affect has been studied heavily in recent years and has been noted as a marker for aggressive behavior in children (Thornton et al., 2013) and young adults (Franti et al., 2008), alexithymia has not been studied as closely as a related factor in aggression. Callous affect and alexithymia are similar in the fact that they both hinder empathy (Young & Kyranides, 2021), like those who exhibit psychopathic traits, specifically callous affect, people who have traits of alexithymia also have difficulties with emotional processing and problems identifying their own, and others, emotions (Frick, 2004; Hamaideh, 2017; Jenkins et al., 2014).

Alexithymia is defined as the difficulty of accessing one's emotions and understanding how one feels. Alexithymia appears to be another trait that has some value in predicting aggression (Farah, et al. 2018). Alexithymia is a lesser known trait in regards to psychological studies. The Greek translation of alexithymia is "no words for emotions" (Nemiah & Sifnos,

1970). Alexithymia is characterized by: a lack in ability to identify or express one's own emotions, an externally oriented thinking style, and limited imagination. Traits also include being 'emotion-blind' and primarily focused on bodily sensations rather than internal and emotional sensations (Krystal, 1979; Picardi et al., 2011; Reiffe et al., 2010). However, unlike individuals who exhibit psychopathic traits, they are deeply troubled by this intrapersonal difficulty, and alexithymia is often associated with depression, anxiety, and low life satisfaction (Mattila et al, 2007; Paez et al, 2013). People with higher levels of alexithymia are also known to have difficulty connecting with others and tend to exhibit aggressive behaviors (Moriarty et al., 2001; Teten et al., 2008). Individuals with traits of alexithymia in this age range are also likely to exhibit aggressive behavior as a reaction to the psychological distress that their limited ability, or inability, to emotionally regulate and identify emotions (McErlean & Lim, 2020; Everen et al., 2015).

Similarly, those exhibiting traits of borderline personality disorder also tend to exhibit traits of alexithymia and callous affect as well as being prone to aggressive behavior (Loas et al., 2012). Borderline traits have shown to have a relationship to aggression in females (Mancke et al., 2015; Dougherty et al., 1999). Borderline traits are defined by unstable mood, distorted sense of self, strong emotional reactions, reduced emotional regulatory abilities, and unstable relationships (Sayrs & Whiteside, 2006). The instability this personality disorder creates makes it more difficult for those exhibiting these traits to react in an emotionally appropriate way making individuals more likely to exhibit aggressive behaviors when it may not be necessary (Wagner et al., 2010).

In the current study, it was hypothesized that subjects who are experiencing high levels of emerging adulthood would be associated with higher levels of alexithymia, and would also be

associated with higher levels of aggression measured (i.e., proactive, reactive, direct, and indirect). It was also expected that subjects who are high in callous affect and borderline traits would also be associated with high levels of all forms of aggression. It was also expected that higher levels of alexithymia would be associated with higher scores of callous affective traits and borderline traits. It was also expected that those who are higher in aggression, callous affect, borderline traits, and alexithymia would be associated with lower levels of emotional regulation. To examine these hypotheses, participants reported on alexithymia, callous affect, aggression, borderline traits, emotional regulation, and emerging adulthood in order to assess the possible relationships between the variables. The current study aims to address the overlap in traits and assess the similarities and predictive value that these variables have when evaluating aggression.

Method

Participants

Participants were invited to participate in the current study, advertised online via SONA Systems Software. Participants included college aged students attending Coastal Carolina University (N = 74). Participants ranged in age from 18-26 years of age (Mean age = 19 years). The sample was 64.9% female and 35.1% male. The ethnicities of the participants were 74% white, 15% African American, 4.1% Asian, 1.4% Native American, and 4.1% mixed ethnicities.

Measures

Aggression

To measure aggression, participants completed two measures to measure the various aspects of aggression. Participants completed the Buss and Perry Aggression Questionnaire for Direct and Indirect Aggression (Bryant & Smith, 2001). The questionnaire focused on overt acts

of aggression, such as punching or hurting someone (e.g., “If somebody hits me, I hit back”) and verbal instances of aggression (e.g., “I have threatened people I know”). The instructions for this scale were modified slightly in order to keep a consistent scale across the measures. This measure consisted of 29 items that the participant had to rate on a Likert scale ranging from 1 to 5 (1 = “*Disagree Strongly*” to 5 = “*Agree Strongly*”). Participants were not given any prior information before completing this measure. Results were calculated by taking a mean of all of their scores for each subscale 5 indicating high levels of aggression and 1 indicating low levels of aggression.

Participants also took the Reactive-Proactive Aggression Questionnaire (Raine, et al., 2006) to measure levels of reactive and proactive aggression. This measure focused on the whether or not participants engaged in aggressive acts on their own accord, proactive aggression (e.g., “Vandalized something for fun”) or if it was in reaction to a situation that they felt some sort of injustice toward themselves, reactive aggression (e.g., “Become angry or mad when you don't get your way”). The instructions for this scale were modified slightly in order to keep a consistent scale across the measures. This measure consisted of 23 items that the participants rated on a Likert scale ranging from 1 to 5 (1 = “*Disagree Strongly*” to 5 = “*Agree Strongly*”). Participants were not given any prior information before completing this measure. Results were calculated by taking a mean of all of their scores for each subscale 5 indicating high levels of aggression and 1 indicating low levels of aggression.

Alexithymia

Participants were asked to complete The Perth Alexithymia Questionnaire (Preece, et al, 2018). This measure assessed the participants ability to assess and identify one’s emotions. Negative and positive emotions are measured in order to give a broader view of participants

abilities to accurately identify emotions and how they react to them (e.g., “When I'm feeling bad, I can't tell whether I'm sad, angry, or scared”; “When I'm feeling good, I can't tell whether I'm happy, excited, or amused”). The instructions for this scale were modified slightly in order to keep a consistent scale across the measures. Participants were asked to rate their answers on a Likert scale ranging from 1 to 5 (1 = “*Disagree Strongly*” to 5 = “*Agree Strongly*”). Participants were not given any prior information before completing this measure. Results were calculated by taking a mean of all of their scores for each subscale, 5 indicating high levels of alexithymia and 1 indicating low levels of alexithymia.

Callous Affect

Participants completed the 16-item Callous Affect subscale of the Self-Report Psychopathy Scale III (Williams, Paulhus, & Hare, 2007). This subscale measured participants inclination to be apathetic toward others and the coldness of their personalities (e.g., “People are too sensitive when I tell them the truth about themselves”; “I'm more tough-minded than other people”). Participants rated each item on a Likert scale ranging from 1 to 5 (1 = “*Disagree Strongly*” to 5 = “*Agree Strongly*”). Participants were not given any prior information before completing this measure. Results were calculated by taking a mean of all of their scores for each subscale, 5 indicating high levels of callous affect and 1 indicating low levels of callous affect.

Emerging Adulthood

Participants completed the Inventory of the dimensions of Emerging Adulthood (Reifman, Arnett, & Colwell, 2007). This inventory measured participants feelings toward their age group's developmental period (e.g., “Is this period of your life a ... time of responsibility for yourself?”). Participants respond to each item in a forced choice scale ranging from 1-3 (1 = “*Hardly ever*” to 3 = “*Often*”). Participants were not given any prior information before

completing this measure. Results were calculated by taking a mean of all of their scores for each subscale 3 indicating high levels of emerging adulthood and 1 indicating low levels of emerging adulthood.

Borderline Traits

Participants completed the Screening Instrument for Borderline Personality Disorder (Lohan, et al, 2020). This instrument measured participants inclination toward borderline personality traits (e.g., “Have you felt very angry a lot of the time? How about often acted in an angry or sarcastic manner?”) in order to distinguish if there was any relationship between borderline traits and the results. Question 2 was omitted due to the sensitive nature of the question. The instructions for this scale were modified slightly in order to keep a consistent scale across the measures. Participants responded to these items on a five-option Likert scale ranging from 1 = “*Disagree Strongly*” to 5 = “*Agree Strongly*.” Participants were not given any prior information before completing this measure. Results were calculated by taking a mean of all of their scores for each subscale 5 indicating high levels of borderline traits and 1 indicating low levels of borderline traits.

Emotional Regulation

Participants completed the 12-item Child Emotion Management Scale (Zeman, et al., 2001, 2002) in order to determine their ability to regulate their emotions (e.g., “I stay calm and keep my cool when I am feeling afraid”). The instructions for this scale were modified slightly in order to keep a consistent scale across the measures. Participants responded to these items on a five-option Likert scale ranging from 1 = “*Disagree Strongly*” to 5 = “*Agree Strongly*.” Participants were not given any prior information before completing this measure. Results were

calculated by taking a mean of all of their scores for each subscale 5 indicating low levels of emotional regulation and 1 indicating high levels of emotional regulation.

Procedure

A correlational design was used for this study. Data were collected from participants individually, online, via SONA Systems Software. Participants were presented with an informed consent form at the beginning of the study and were debriefed at the end about the study. The study took approximately 25 minutes to complete from start to finish. The study was conducted in a survey format and each of the scores were collected so that identifying information could not be traced back to the individual participants. For participating in this study each participant was awarded 0.5 SONA credits as incentive for extra credit in their classes.

Results

When participant scores were calculated it was found that on the direct aggression subscale, participants scored in the middle range ($M = 2.5$, $SD = .65$). On the indirect aggression subscale participants also scored in the middle range ($M = 2.3$, $SD = .68$). On the proactive aggression subscale, participants scored lower ($M = 1.4$, $SD = .52$). On the reactive aggression subscale, participants scored in the middle range ($M = 2.3$, $SD = .83$). On the Alexithymia scale participants scored in the middle range ($M = 2.6$, $SD = .91$). On the callous affect subscale participants scored in the middle range ($M = 2.4$, $SD = .60$). On the emerging adulthood measure participants scored high in this scale ($M = 2.5$, $SD = .28$). On the borderline traits scale participants scored in the middle range ($M = 2.8$, $SD = .90$). Lastly, on the emotional regulation measure participants scored in the middle to low range ($M = 3.6$, $SD = .63$) (see Table 1).

Table 1

Means and Standard Deviations for Study Variables

	Overall	
	M	SD
Alexithymia	2.6	.91
Borderline	2.8	.90
Callous Affect	2.4	.60
Emotional Regulation	3.6	.63
Emerging Adulthood	2.5	.28
Direct Aggression	2.5	.65
Indirect Aggression	2.3	.68
Proactive Aggression	1.4	.52
Reactive Aggression	2.3	.83

To determine if the personality traits and emerging adulthood were related to aggression, a series of correlations was conducted. Findings indicated that when participants scored higher in alexithymia, they also scored significantly higher in borderline traits ($r = .54, p < .001$) and callous affect ($r = .31, p = .007$). Alexithymia was also significantly correlated with all four types of aggression measured in the current study, indicating that those who experience traits of alexithymia are more involved in direct forms of aggression ($r = .40, p < .001$; i.e., hitting or yelling), indirect aggressive acts ($r = .30, p = .010$; i.e., spreading rumors) proactive aggression ($r = .29, p = .013$; i.e., starting aggressive behaviors with other people) and reactive aggression ($r = .35, p = .002$; i.e., reacting to perceived aggression toward them). These results are supportive of my hypotheses that higher levels of alexithymia would correlate with higher levels of aggression, callous affect, and borderline traits.

Callous affect significantly correlated with borderline traits ($r = .26, p = .023$), indicating that those who scored higher in callous affect also exhibited more borderline personality disorder

traits. Callous affect also significantly correlated with direct aggression ($r = .54, p < .001$), indirect aggression ($r = .53, p < .001$), proactive aggression ($r = .50, p < .001$), and reactive aggression ($r = .49, p < .001$), indicating that there is a positive relationship between callous affect and aggression. These results are supportive of my hypothesis that higher levels of callous affect and borderline traits would correlate with higher levels of aggression.

Interestingly, emerging adulthood only correlated with borderline traits ($r = .36, p = .001$), indicating that as participants who had scores high in emerging adulthood (participants who are less secure in who they are, feeling more ‘in-between’) also had significant scores in borderline traits. However, emerging adulthood did not significantly correlate with any of the other variables (See Table 2). These results do not support the hypothesis that higher levels of emerging adulthood would be correlated with higher levels of alexithymia, aggression and callous affect.

Table 2*Correlations Between Study Variables*

	1.	2.	3.	4.	5.	6.	7.	8.
1.Alexithymia	-							
2.Borderline	.54***	-						
3.Callous Affect	.31**	.26*	-					
4.Emerging Adulthood	.21	.36***	-.22	-				
5.Emotional Regulation	-.14	-.32*	-.17	.11	-			
6.Direct Aggression	.40***	.62***	.54***	.15	-.27*	-		
7.Indirect Aggression	.30**	.50***	.53***	.04	-.41***	.63***	-	
8.Proactive Aggression	.28*	.29*	.50***	-.09	-.39***	.45***	.56***	-
9.Reactive Aggression	.34**	.54***	.49***	.15	-.37***	.74***	.75***	.57***

Note. *** = $p < .001$. ** = $p < .01$. * = $p < .05$.

As expected, lower emotional regulation was significantly correlated with higher levels of direct aggression ($r = -.27, p < .05$), indirect aggression ($r = -.41, p < .001$), proactive aggression ($r = -.39, p < .001$), and reactive aggression ($r = -.37, p < .001$). Low emotional regulation was also significantly correlated with borderline traits ($r = -.31, p < .01$), indicating that those who have low emotional regulation are correlated with higher traits of borderline personality traits, which includes unstable mood. These results support the hypothesis that higher levels of aggression and borderline traits correlate with lower levels of emotional regulation, however emotional regulation was not significantly correlated with callous affect, alexithymia, or emerging adulthood which does not support the hypothesis.

Upon reviewing the results of the correlational analyses, a series of regression analyses was conducted to determine which variable or variables were driving the relationship with aggression. In each of these analyses, one form of aggression was entered as the outcome variable, and alexithymia, borderline personality traits, callous affect, emerging adulthood, and emotion regulation were entered as predictor variables. When predicting direct aggression, both borderline personality traits ($b = .46, p < .001$) and callous affect ($b = .43, p < .001$) predicted an increased likelihood of direct aggression. Alexithymia ($b = -.01, p = .957$), emerging adulthood ($b = .09, p = .367$), and emotion regulation ($b = -.06, p = .530$) did not add to the prediction of direct aggression when also considering borderline personality traits and callous affect.

When predicting indirect aggression, both borderline personality traits ($b = .31, p = .011$) and callous affect ($b = .44, p < .001$) predicted an increased likelihood of indirect aggression. Alexithymia ($b = -.05, p = .614$), emerging adulthood ($b = .06, p = .559$), and emotion regulation ($b = -.25, p = .012$) did not add to the prediction of indirect aggression when also considering borderline personality traits and callous affect.

When predicting proactive aggression, emotional regulation ($b = -.30, p = .006$) and callous affect ($b = .41, p < .001$) predicted an increased likelihood of proactive aggression. Alexithymia ($b = .10, p = .392$), emerging adulthood ($b = .01, p = .953$), and borderline traits ($b = .03, p = .851$) did not add to the prediction of proactive aggression when also considering emotional regulation and callous affect (see Table 3).

When predicting reactive aggression, borderline personality traits ($b = .32, p = .010$), emotional regulation ($b = -.22, p = .027$), and callous affect ($b = .40, p < .001$) predicted an increased likelihood of reactive aggression. Alexithymia ($b = -.12, p = .912$) and emerging adulthood ($b = .15, p = .170$) did not add to the prediction of reactive aggression when also considering emotional regulation and callous affect.

Table 3*Regression Analyses for Study Variables*

	Direct Aggression		Indirect Aggression		Proactive Aggression		Reactive Aggression	
	R^2	b	R^2	b	R^2	b	R^2	b
	.54***		.48***		.36***		.47***	
Alexithymia		-.01		-.05		.10		-.01
Borderline		.46***		.31*		.02		.31*
Callous Affect		.42***		.44***		.41***		.40***
Emotional Regulation		-.06		-.25		-.30**		-.22*
Emerging Adulthood		.08		.06		.01		.15

Note. + = $p < .10$. * = $p < .05$. ** = $p < .01$. *** = $p < .001$.

These results indicate that while borderline personality traits and emotional regulation are factors in predicting aggression, however when considering callous affect, it seems to be the main variable that is driving the relationship with aggression in this study.

Discussion

As hypothesized, alexithymia, callous affect, borderline traits, and low emotional regulation correlated with higher rates of reactive, proactive, direct and indirect forms of aggression. These findings are consistent with the literature, which indicates that these variables are relatively stable predictors of aggression (e.g., Frick, 2004; Hamaideh, 2017; Jenkins et al., 2014; Terranova & Sutz, 2022). Alexithymia, callous affect, and reactive aggression correlated slightly with emerging adulthood. However, it also correlated with indirect aggression and borderline traits which indicates that there may be some relationship between these variables. Alexithymia correlated with reactive, proactive and indirect aggression. This is consistent with the literature that those who exhibit traits of alexithymia, callous affect, and borderline traits also exhibited higher rates of aggressive behavior (e.g., Mancke et al., 2015; Dougherty et al., 1999). However, when evaluating emerging adulthood these results indicated no statistically significant correlations with these traits which was inconsistent with existing literature stating that being high in emerging adulthood is related to being more prone to aggression (Nelson et al., 2008). This leads to the notion that there may be some other factors than emerging adulthood that is contributing to this relationship in this age group.

Upon running the regression analyses, callous affect added to the prediction of all types of aggression, even when considering emerging adulthood, emotion regulation, alexithymia, and borderline personality traits. This is indicative that those who experience alexithymia are less likely to be overtly aggressive than they are to be passive aggressive. These results are consistent with the literature in concluding that the main predictive variable when evaluating aggression is callous affect. However, emotional regulation and borderline traits also added to the prediction of higher levels of indirect, direct, and reactive forms of aggression. With indirect and reactive

aggression significantly. Had there been more participants the relationship would have been significantly correlated with indirect aggression.

Limitations of this study include a limited participant pool. Due to the fact that the study was limited to only one university and the majority of the participants were White females, the sample is most likely skewed toward the female perspective of these traits. It would be interesting to examine if the results of this study could be replicated with a more diverse sample. Future research would be necessary to determine the relationship between alexithymia, callous affect, and aggression in different populations and demographics to determine if the results of this study are generalizable to the whole population. It would also be beneficial to examine further variables that could be influencing this age group's tendencies toward aggressive behavior such as social media usage or relationships to parental figures.

Even with these limitations, the current study has strengths. This study examined the relative contribution of variables previously not studied together to predict different types of aggressive behaviors. The results replicated the findings that callous affect is one of the primary risk factors for severe and persistent conduct problems and antisocial behaviors, including aggressive behaviors (Frick, 2004), even when considering borderline personality traits and alexithymia. Frick's work on conduct disorder has implicated that adding an indicator specific for callous affect within diagnostic criteria for conduct disorder could be a powerful tool when evaluating which adolescents could be more prone to aggressive and violent behaviors in adulthood.

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