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# HOW DOES CHILDHOOD MALTREATMENT RELATE TO EMOTION REGULATION AND ACADEMIC RESILIENCE AMONG COLLEGE STUDENTS

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## **Abstract**

Research reports that children who are exposed to maltreatment are more likely to experience adverse effects; however, also shows strengths in resiliency. Child maltreatment is defined as any act(s) by a parent(s) or caregiver(s), resulting in harm, threat of harm to a child, including physical, sexual, psychological, neglect, or failure of supervision. The focus of this study was to investigate how childhood maltreatment, emotion regulation and resilience interact with each other in an academic setting, using self-report measures. It was predicted that elevated levels of childhood maltreatment would be associated with academic resilience. It was hypothesized that emotion dysregulation would be correlated with both maltreatment and academic resilience and, thus, serve as a mediator in the pathway.

The study had a total of 124 students voluntarily participate by answering survey items from the Childhood Trauma, Difficulties in Emotion Regulation, and Academic Resilience Scale, during the Fall 2022 semester. Findings demonstrated significant correlations. Higher scores of maltreatment were predictive of lower scores of academic resilience on all scales. Maltreatment histories correlated positively with all aspects of emotion dysregulation. Among the relationships, difficulties commonly found with emotion dysregulation predicted controlling negative emotions in hypothetical academic failure situations. Emotion dysregulation fully mediated the pathways between a history of emotional abuse and academic resilience (both controlling negative emotions and perseverance). These results suggest strongly that students with a history of childhood maltreatment likely suffer from emotion dysregulation, which correlates to academic struggle and are in need of additional support systems to mitigate the disadvantage.

### **Acknowledgements**

I would like to sincerely thank, with gratitude, my thesis advisor, Dr. Marilyn Welsh, for going beyond in helping me with my research. She worked countless hours, and at abnormal working hours assisting me and is a wealth of information. Without her personal research and background knowledge, this project would have been diminished. I have been blessed to work with her and could not have been successful without her.

I would also like to thank the Upper Division Honors Program, for allowing me the opportunity to conduct hands-on, original research which broadened my knowledge and expertise. The classroom setting provides an excellent knowledge base of ideologies, but nothing can compete with the journey and knowledge accumulated in creating one's own research from start to finish. Additional thanks to writing consultant, Jamie Alexander for her feedback and thesis editing help. Jamie took her time editing this research paper, to ensure my data was presented clearly and easily understandable by readers of diverse backgrounds.

Also, I would like to thank my husband, Jason J. Lopez, for being patient with my many hours of research, and for the discussions surrounding my research. He saw the worst of the process with late nights of further research and editing. A work in process is a complicated process, but he encouraged me on! My work would be impossible without this man!

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## **Introduction**

Childhood maltreatment occurs more often than most imagine and creates obstacles for its victims into adulthood. Grabbe and Miller-Karas (2017) inform us that the Adverse Childhood Experiences (ACE) study reported that 10% of the 17,000 participants had been witness to domestic violence, 20% were victims of molestation, and 30% were victims of physical abuse as minors. Childhood maltreatment disrupts the child's core needs with lifetime implications to follow. The aftermath of childhood maltreatment carries consequences to all bodily systems and carries complicated effects such as mental health challenges, physical ailments, addiction, and earlier death (Grabbe & Miller-Karas, 2017). Likewise, the consequences to society are outlined by Fry, et al. (2012) as wide ranging from medical and child protective services, to court and law enforcement services.

Resilience is defined as positive outcomes regardless of risk exposure (Evans et al., 2010). Resilient individuals show the ability to go beyond returning to their pre-trauma state, but to gain a higher level of goal achieving functionality than before. The driver of resiliency has been debated by many fields. It has been argued that resilience is a component of biology, learned traits, and some refer to it as a type of perseverance or grit.

Analysis has revealed that the college transition is stressful for students. Students are faced with the likelihood of moving to unknown locations (likely away from family), creating new social networks, losing touch with established relationships, and learning how to navigate a high cost and high demand educational setting with higher expectations than they are used to. Importance lies in identifying how college students with a history of childhood maltreatment cope with the various stressors of college, which are predictably exacerbated by their past traumas. The World Health Organization (2022) defines childhood maltreatment as abuse and

neglect to children under 18 including abuses such as physical, emotional, sexual, negligence and commercial. Research finds that maltreated children are more likely to experience adverse effects of emotion dysregulation. In a study of 210 college first-year students, with 36% having experienced childhood maltreatment, Duncan (2000) found that college enrollment status four years later was drastically lower than for non-victim students, with second semester enrollment being the most reduced. Results like these are troubling, and predictions such as these must be met with solutions.

In this study, I examined associations between childhood maltreatment and academic resilience and whether emotion dysregulation mediates this relationship. I predicted that high levels of maltreatment history and low levels of emotion regulation will explain reduced resilience in academic contexts. By understanding these variables and how they work together, we may better understand the inner workings of resiliency overall. If we can understand resilience and what drives it, we may be able to intercede the effects of child maltreatment and implement programs to support maltreated college students.

With the goal of increasing student success, this research can be useful information for admissions advisors, counselors, and staff at the University level. Students with histories of child maltreatment could easily be identified and offered resources such as emotion regulation courses, or additional programs through the counseling center to aid in their success. The goal of this study was to investigate relations among three areas of underdeveloped research: (1) whether childhood maltreatment predicts academic resilience, (2) whether childhood maltreatment predicts emotion dysregulation, (3) whether emotion regulation predicts academic resilience. The present study was conducted on college students at the University of Northern Colorado, between the ages of 18-30, using self-reported measures. The study hypothesized that students

who experienced childhood maltreatment will demonstrate less emotional regulation and academic resilience than their peers. Instead of merely defining resilience and its existence, we can move from it being an ideology, to an understood and guiding practice, in terms of interventions for individuals who have experienced maltreatment and other types of traumas.

## **Literature Review**

### **Child Maltreatment**

Child maltreatment and its consequences can be seen in all societies, classes, cultures, and income levels (Fry, et al., 2012). According to the CDC (2020), Childhood Maltreatment is a result of potential or actual harm to the child's well-being, causing impact to their health, survival, development, or dignity. Research findings suggest that negative outcomes are more prevalent and severe when the abuse itself is more severe in nature. The consequences to society are outlined by Fry, et al. (2012) as wide ranging from medical and child protective services, to court and law enforcement services, all with exponentially high financial cost. A large sample of 3,778 individuals who had experienced various forms of maltreatment (i.e., physical abuse, emotional abuse, neglect and/or sexual abuse) was included in a 21-year study follow-up of the negative consequences of their maltreatment history. The study found that 22% of participants reported depressive disorders, 25% anxiety disorders, and 6% Post Traumatic Stress Disorder (Kisely, et al., 2018). While results may vary slightly when analyzing each individual maltreatment individually, it is common that each victim experiences more than one form of abuse.

A review of literature conducted by Fry et al. (2012) found that many studies available focused on mental health conditions arising from child maltreatment such as emotion

dysregulation, depression, anxiety, somatization, obsessive-compulsive disorder, interpersonal sensitivity, anxiety, hostility, phobias, paranoid, and psychoticism. The authors also note that among these results are strong links between child maltreatment history and suicidal ideation and attempts, risk of intimate partner victimization or perpetration once adulthood is reached, polyvictimization, eating disorders, antisocial and disruptive behaviors (Fry et al., 2012).

### **Emotion Regulation**

Individuals vary in the way they respond to emotion, which impacts social, relational, and professional outcomes in a range of situations. Emotions trigger a set of response tendencies determining whether one will respond to a situation—such as college—as a challenge or an opportunity. Emotional regulation is one’s ability to respond to one’s surroundings in ways that are socially acceptable and positively aligned with one’s goals. Authors Maughan and Cicchetti (2002) suggest emotional regulation is primarily developed within parent-child interactions, making caregiving environment disruptions a large contributing factor to emotional dysregulation. This learned regulation begins in infancy and continues throughout our lifespan. Furthermore, Kim and Cicchetti (2010) clarify that parenting behaviors in the child's first four years of life heavily impact the development of emotional regulation. Yet, emotional regulation changes over time, as does how one responds behaviorally (emotional malleability). Because of this, the issue of emotional regulation begins with childhood.

Over the lifespan, the hope is that lived experiences will develop emotional responses that are positive to circumstances, but this is not always the outcome. One can shift attention away from negative emotion either consciously or unconsciously, but types of emotion regulation strategies are variable across individuals.- James Gross (2002) asserts that emotion



regulation strategies differ in terms of when the primary impact occurs on the emotion-generative process, and that each strategy may have both beneficial and negative outcomes.

Additionally, evidence suggests that children who are maltreated and/or who witness inter-adult violence are vulnerable to emotional dysregulation as an outcome of disrupted emotional development (Maughan & Cicchetti, 2002).

### **Child Maltreatment and Emotion Dysregulation**

Mounting evidence has found associations between child maltreatment and brain function that is relevant to emotional regulation. Kim and Cicchetti (2010), assert that the development of emotional understanding and regulation cannot occur when there is a lack of sensitive interaction, impacting children's abilities to learn emotional regulation strategies. This oftentimes occurs when childhood environments are unpredictable or frightening. In some cases, parents and/or caregivers are unavailable or unable to provide nurturing, structural regulation to the child. Being witness to domestic violence, or victim to physical and mental abuse changes a child's reaction to future perceptions of fear. Furthermore, emotional arousal can cause difficulty with negative emotions, and this is commonly seen in maltreated children (Kim & Cicchetti, 2010). For example, Maughan and Cicchetti (2020), found that children with under-regulation of emotion control displayed indecisive, disorganized and lack of goal-oriented behavior. Specifically, the study reported dysregulated emotion patterns in 80% of maltreated children, in comparison to only 36% of non-maltreated children (Maughan & Cicchetti, 2020).

In one study of 421 children (215 maltreated and 206 non-maltreated), Kim and Cicchetti (2010) found that maltreated children exhibited less emotion regulation and more internalizing and externalizing behaviors. These children also were vulnerable to higher levels of

rejection due to aggressive and disruptive behaviors and lower levels of peer acceptance. This validated the study hypothesis that child maltreatment is related to poor emotion regulation and adjustment outcomes. In cases of maltreatment such as physical abuse, emotion regulation difficulties occurred (Jenness, et al., 2021). These findings are further understood with research conducted by Welsh, Peterson, and Jameson (2017) where critical milestone outcomes in terms of grade point average and self-reported adaptation were poorer in college students with childhood maltreatment histories.

## **Resilience**

Despite increased risks, empirical research indicates that some maltreated children seem to be less affected by this early stress, as seen in low rates of negative consequences such as alcohol and drug use, mental health complications, and the inability to maintain emotion regulation. Meng, et al. (2018) define resilience as an individual's ability to use protective factors to shield them from mental health complications after adversity. It is further explained by Evans et al. (2008) as being a quality that impacts interactions predicting better outcomes in situations of adversity. Furthermore, resilience has been studied from multi-level perspectives, in terms of an individual showing resilience in one area or level, but not others. Multi-level perspective outlines specific layers such as family, community, and intergenerational resilience.

Meng, et al. (2018) conducted a review of eighty-five studies aiming to find protective factors in resilience and when such factors were present in individuals who had experienced child maltreatment, the risk of mental health problems was greatly reduced. Protective factors are characteristics that aid in overall well-being. Often-times, these attributes are shown to reduce the negative implications of child maltreatment. Models identify different specific components,

but each has the goal of supporting and nurturing the child's physical, emotional, and social health and development. Protective factors are variables that aid in one's overall health and serve as an aid or support, such as social connections, nurturing, and supporting individuals.

Additionally, protective factors are different for each individual and are seen in many different settings. One study by Cesar, Dias and Cadime (2017) identified protective factors of school, home, community, peer environments, and found that four factors were significantly impactful mediators in resilience, with home being the most impactful. Similarly, another study Briganti and Linkowski (2019) used five protective factors of resilience: perception of self, planned future, social competence, structure, and social competence and found that social resources and family cohesion were of utmost importance.

Resilience in the family layer is comparable to individual resilience in their ability to overcome and be resistant to crisis and disruption. Shevell and Denov (2020) assert that when a family is operating productively as an interdependent family unit, resiliency factors include characteristics such as positive communication, routines, and shared family time (Mariscal, 2020). Supportive and nurturing resources are known to help cultivate resilience within the entire family unit, but within the individual as well, all leading to resilience.

The layer of community has the effect of increasing connectedness and belonging, sometimes in addition to the family, but in many cases in place of the family. Environmental factors can be used in place of or with family, such as positive relationships. Mariscal (2020) proposes that when trauma takes place inside the family layer, sometimes a child only has resources in the community like social and cultural networks to rely on and draw from. In cases of child trauma, many times the community level has been able to provide potentially resilient resources that have otherwise been unavailable to them. On a larger scale, communities

themselves benefit from being resilient, as it more rapidly restores their functioning in times of crisis.

Lastly, the outermost layer of the multidimensional model of resilience is intergenerational resilience and dictates that resiliency does not only impact the individual, but can be transferred through generations, communities, and globally (Shevell & Denov, 2020). An interesting facet of this layer is that it is multidirectional. The effects of trauma and/or resiliency can move in either direction down or up the family lineage. When a grandfather has experienced a traumatic event, leaving him disabled, poverty and depression can continue across family generations. This is frequently seen when underage children are forced to drop out of school to help support the family, which continues poverty throughout the family. In contrast, when his grandchild graduate's college and provides a healthier lifestyle for his grandfather, the resiliency moves up through future generations. In this case, the grandchild has been a resource to aid in his grandfather's poverty and depressive status. Oddly though, although there is an abundance of studies documenting intergenerational trauma moving down generational bloodlines, truly little information has been documented regarding resilience moving up generational bloodlines. This important movement can change families past and present.

### **Emotion Regulation and Academic Resiliency**

Academic resilience can be defined as overcoming setbacks, challenges and difficulties posing a threat to the student's educational development. Transitions to the world of academia can be incredibly stressful for young adults. The adjustment relies on previously developed skills, one of which is emotion regulation. One study identified adjustment difficulties as one of the main dropout reasons. (Tinto, 1996). Emotion dysregulation poses an extraordinary risk to

academic resilience as it increases the student's behavior of internalizing and externalizing problems. Student's increased desire to perform well can be internalized into deep feelings of inadequacy when assessment grading does not meet desired outcomes. Kim and Cicchetti (2010) argue that while well emotionally regulated student's possess ability to respond to these stressors in acceptable and goal orientated manors, students who experience emotion dysregulation exhibit excessive reactivity and emotion deficits that are inappropriate and ineffective.

Children who demonstrate resilience do not do so across the board. These students may show resilience in one area, such as social skills or ability to adhere to a strict schedule but demonstrate inadequacies in others, such as emotion regulation. This data prompted Jaffee and Gallop (2007) to further define resilience to include multiple domains of mental health resilience, academic achievement resilience and social competence resilience. More specifically, academic resilience can be relevant to negative outcomes such as self-handicapping and disengagement, opposed to academic buoyancy which relates to low-level negative outcomes such as anxiety and avoidance of failure (Martin 2013).

### **Childhood Maltreatment and Academic Resiliency**

Historically, resilience was examined at a micro-level of analysis as an individual trait. Recently, resilience has expanded and is seen to be driven by interactions with multiple social systems that can be put in place. According to Shevell and Denov (2020), resiliency and vulnerability can be seen beginning with the individual, where skills like coping and characteristics like ideological commitment and religious beliefs reside, then spreading out into a microsystem such as family connectedness, peer relations, school environment and church. From there it moves into a meso/exo-system consisting of social services, neighborhood

connectedness, media, and local policies. Lastly in the macro-system, the attitudes and ideologies of the culture impact the individual through religious institutions and cultural practices. -This large-scale analysis dictates a much larger pool of influences to vulnerability and resilience than commonly reviewed in other literature. Each layer is examined through the lens of an individualistic lifespan, but also across multiple generations, extending to family, community, national and global levels.

One can see how maltreatment, and its negative impacts on emotional regulation, could set up the young adult for difficulties with academic resilience in college. For instance, if one learns early on that children are to be silent and not bother those around them, as adult students they may hesitate to ask clarifying questions in an educational setting. Additionally, adults who were told early on that they are insignificant, unintelligent, and incapable of success may internalize those teachings when scoring low on an exam for instance, and drop out of courses, while students who did not experience childhood maltreatment would study harder or differently to change the outcome in the future.

### **Purpose of the Study**

The purpose of this study is to investigate an under-researched topic: the associations between childhood maltreatment, emotion dysregulation, and college success. The motive is to understand how childhood maltreatment, emotion dysregulation and resilience are related. A substantial percentage of college students report histories of childhood maltreatment. Literature accepts that childhood maltreatment leads to a variety of negative consequences, but how these variables relate or interact with each other is widely under-researched.- The findings of this study add to a growing literature on how individuals with histories of maltreatment are or are not

showing resilience in their college education, and why that is. The findings directly impact these individuals, but also University staff working to find solutions for student success rates.

It was predicted that college students who have experienced a history of childhood maltreatment will show more emotion dysregulation and less academic resilience. It was also predicted that higher scores on emotion dysregulation may mediate resilience, thus scoring lower than without high scores of emotion dysregulation. Mediation is a phenomenon that can occur where one variable is the link or mechanism in the pathway between two other variables. The implications of this study's findings related to maltreatment, emotional regulation, and academic resilience will be their relevance to the academic achievement of vulnerable college students.

## **Method**

### **Participants**

The survey was conducted in the fall of the 2022 school year among undergraduate students at the University of Northern Colorado in the United States. The study allowed for 150 participants, though we anticipated slightly lower participation due to the COVID19 pandemic. Participants were provided with the surveys abstract as follows:

*Anonymous self-report surveys of stressful experiences in your childhood, current adaptation in the form of mental health symptoms, emotion regulation, resilience, food insecurity, and patterns of delinquent behavior.*

Participation in the survey was voluntary, but students were compensated with 3 credits factoring into their Psychology 120 course grade. One hundred and twenty-four students

voluntarily participated in the survey and had a mean age of 19, with a standard deviation of 1.75. The sample consisted of 33 (26.6%) male participants, 85 (68.5%) female participants, and 6 (4.8%) who identified as other. Participants were given the option to disclose their race in the survey. Due to a technical issue, ethnicity data was unattainable for this survey, but it is likely the sample mirrored the ethnic distribution of the university. The university's ethnic diversity is historically composed of approximately 62% White, 24% LatinX/Hispanic, 5% Multi-racial, 5% African American, 2% Asian, with smaller populations of Native American, Hawaiian. Of the full sample, 82 (66.1%) were in their first year at the University. Lastly, 40 (32.3%) reported that they were first generation students, opposed to 84 (67.7%) who reported that they were not. Overall, these identifiers are consistent with the University of Northern Colorado's overall student population. Exclusionary criteria for participation qualification were:

1. Age under 18 years, or over 30 years
2. Born in a country other than the United States
3. Other than English as first language

## **Measures**

### **Childhood Trauma Questionnaire (CTQ)**

The CTQ (Bernstein & Fink, 1998) is a self-report measure of childhood and adolescent abuse and neglect experiences. The (CTQ) consists of 28 items and consists of five subscales. Three of the subscales assess for different forms of abuse such as emotional, physical, and sexual. Two of the subscales assess for both emotional and physical neglect. Participants are asked to report frequencies of occurrences on a 5-point scale as



follows: (1 = Never true, 2 = Rarely True, 3 = Sometimes True, 4 = Often True, 5 = Very Often True).

### **Difficulties in Emotion Regulation (DERS)**

The Difficulties in Emotion Regulation (DERS) Scale consists of 36 items and is a self-report measure to assess emotion regulation. Participants will be presented with questions belonging to six subscales of: nonacceptance of emotional responses, difficulty engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity.

### **Academic Resilience Scale (ARS-30)**

Academic resilience is the ability to succeed in an educational setting despite adversity, The Academic Resilience Scale (ARS-30) is a measure of 30 items which is designed not to explore academic resilience outcomes, but their processes (Cassidy, 2016). The (ARS-30) aligns with our study participants of current college students in educational contexts and can show the likelihood of success deriving from adaptive cognitive, and behavioral responses. The ARS presents a hypothetical academic failure scenario and asks participants to answer the survey items as to how they would respond in the hypothetical situation.

### **Procedures**

Participants were recruited through the Psychological Sciences Research Pool 120 participant pool. The participants participated via the SONA system and were provided with the description of the study as follows:

*“This study consists of a set of surveys that will be taken online. The surveys are self-report measures of stressful life experiences during your childhood and adolescence, your current mental health symptoms, aggression, eating behaviors, current interpersonal relationships, emotion regulation, and college adaptation. We anticipate that it will take about 1.5 hours to complete all of the surveys. You will receive 3 credits for participation.”*

Participants willing to participate in the survey, then entered the Qualtrics site. They were presented with an opening thanking them for signing up to participate in the survey, the name of the survey, an estimation of how long the survey was expected to take, and the number of surveys involved. We then suggested that they take the surveys in a quiet and confidential place and for a time they could complete all of them at once. They were also notified that some of the questions are sensitive and that they may skip any questions they wish not to answer. Participants were then asked to acknowledge that they meet the eligibility criteria for the study by confirming they were between the ages of 18-30 years old, were born in the United States, and that English is their first language. If the participant did not meet the eligibility criteria, the survey exited the participant.

A consent form describing the nature of the self-reporting surveys, their right of withdrawal at any time without penalty, right to skip any questions they do not wish to answer, etc. were provided. The participant was asked to answer the Consent to participate in the Online Data Collection Phase, Consent to allow us to follow their academic record while they remain at UNC, and Consent to be contacted for further testing through this lab. If the participant consented to participate in the Online Data Collection Phase, they were taken to the

Demographics page and asked for their gender, age, date of birth, first language, mother's highest level of education, first generation status, and their UNIV101 enrollment status.

## Results

### Associations between Childhood Maltreatment and Academic Resilience

Bivariate correlational analysis was conducted to examine the associations between scores on five types of maltreatment, the total CTQ scores, and three scales of academic resilience measure: perseverance, help-seeking, and controlling negative emotion. Higher scores indicated greater severity of maltreatment and greater resilience. As seen in Table 1, the correlations indicate a more severe history of emotional abuse and emotional neglect, and overall maltreatment severity are associated with less academic resilience on all three scales. The strongest relationship is between the history of emotional abuse and the ability to control negative emotional reactions in a hypothetical situation in which there is academic failure.

**Table 1. Correlations between CTQ scores of Maltreatment and ARS scores of Academic Resilience**

	ARS Perseverance	ARS Help Seeking	ARS Controlling Negative Emotions
<b>Emotional Abuse (EA)</b>	<b>-.245**</b>	-.138	<b>-.340**</b>
<b>Physical Abuse (PA)</b>	.001	-.035	.004
<b>Sexual Abuse (SA)</b>	-.028	-.068	-.127
<b>Emotional Neglect (EN)</b>	-.189	<b>-.194*</b>	.129
<b>Physical Neglect (PN)</b>	-.158	.117	<b>-.183*</b>
<b>CTQ Total (Maltreatment)</b>	-.198	-.168	<b>-.245**</b>

**\*\* Correlation is significant at the 0.01 level (2-tailed).**

**\*. Correlation is significant at the 0.05 level (2-tailed).**

*Note: CTQ Total = Childhood Trauma Questionnaire Total*

### **Associations between Childhood Maltreatment and Emotional Dysregulation**

Bi-variate correlational analyses were conducted to identify the associations between the history of five types of childhood maltreatment, as well as the overall severity, and various aspects of emotional dysregulation. Higher scores on the DERS reflected more difficulties with aspects of emotion dysregulation, including goal setting, impulse control, emotional awareness, strategies, emotional clarity, and overall dysregulation. Table 2 demonstrates that emotional abuse, emotional neglect, and total severity of maltreatment correlated positively with all the aspects of emotion dysregulation and the total score. A history of emotional abuse and difficulties with strategies, emotional clarity, and total emotion regulation had the strongest relationships.

**Table 2. Correlations between CTQ scores of Maltreatment and DERS scores of**

#### **Emotional Dysregulation**

	<b>DERS Goals</b>	<b>DERS Impulse</b>	<b>DERS Awareness</b>	<b>DERS Strategies</b>	<b>DERS Clarity</b>	<b>DERS Total</b>
<b>Emotional Abuse (EA)</b>	<b>.319**</b>	<b>.290**</b>	<b>.274**</b>	<b>.446**</b>	<b>.416**</b>	<b>.474**</b>
<b>Physical Abuse (PA)</b>	.143	.079	.115	.109	.067	.133
<b>Sexual Abuse (SA)</b>	.023	.105	.112	.077	.089	.103
<b>Emotional Neglect (EN)</b>	<b>.186*</b>	<b>.274**</b>	<b>.294**</b>	<b>.258**</b>	<b>.315**</b>	<b>.342**</b>
<b>Physical Neglect (PN)</b>	.034	.053	<b>.292**</b>	.063	<b>.194*</b>	.166
<b>CTQ Total</b>	<b>.234**</b>	<b>.261**</b>	<b>.317**</b>	<b>.320**</b>	<b>.345**</b>	<b>.391**</b>

**\*\*.** *Correlation is significant at the 0.01 level (2-tailed).*

**\***. *Correlation is significant at the 0.05 level (2-tailed).*

*Note: CTQ Total = Childhood Trauma Questionnaire Total*

### **Associations between Emotion Dysregulation and Academic Resilience**

Bi-variate correlational analysis was conducted to explore the associations between emotion dysregulation and academic resilience. In the ARS, higher scores indicated better resilience in a hypothetical situation. As seen in Table 3, all aspects of emotion dysregulation and the total dysregulation score negatively correlated with the three scales of academic resilience, such that more emotional dysregulation predicted less academic resilience. The strongest relationships were seen between difficulties with goal setting, strategies, and overall emotion regulation and the negative emotion scale of the ARS. Thus, emotion dysregulation predicted the deficits in controlling negative emotions in a hypothetical academic failure scenario.

**Table 3. Correlations between DERS scores of Emotion Dysregulation and ARS scores of Academic Dysregulation**

	<b>ARS Perseverance</b>	<b>ARS Help Seeking</b>	<b>ARS Controlling Negative Emotions</b>
<b>DERS Goals</b>	<b>-.298**</b>	<b>-.315**</b>	<b>-.475**</b>
<b>DERS Impulse</b>	<b>-.383**</b>	-.163	<b>-.376**</b>
<b>DERS Awareness</b>	<b>-.206*</b>	<b>-.289**</b>	<b>-.268**</b>
<b>DERS Strategies</b>	<b>-.406**</b>	<b>-.265**</b>	<b>-.537**</b>
<b>DERS Clarity</b>	<b>-.316**</b>	<b>-.222*</b>	<b>-.384**</b>
<b>DERS Total</b>	<b>-.426**</b>	<b>-.329**</b>	<b>-.550**</b>

**\*\*.** *Correlation is significant at the 0.01 level (2-tailed).*

\*. *Correlation is significant at the 0.05 level (2-tailed).*

### **Pathways between Childhood Maltreatment and Academic Resilience: Mediation by Emotion Dysregulation**

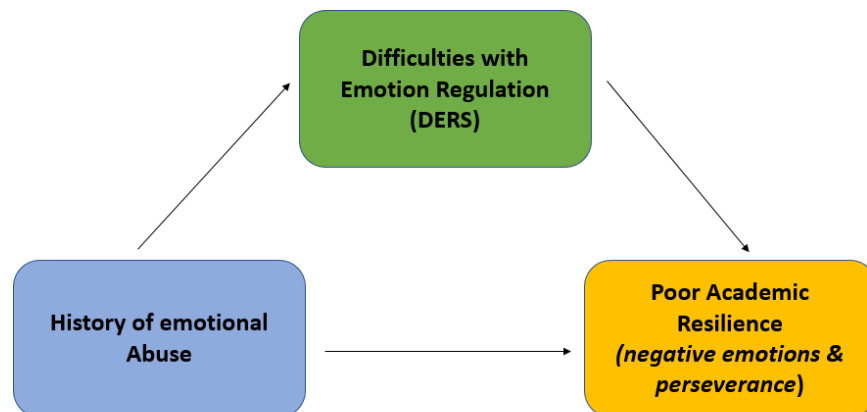
The relevant pathways between childhood maltreatment and academic resilience as measured by the ARS hypothetical academic failure scenario were identified. A history of emotional abuse in particular predicted deficits in the ability to control negative emotions in academic situations. The total DERS score also correlated with emotional abuse history and poor resilience on the ARS. Thus, the pathway between a history of emotional abuse and controlling one's negative emotions for academic resilience, and mediation by total emotion dysregulation, was examined using the Hayes Process program in the SPSS statistical platform.

The direct effect of emotional abuse on the negative emotion aspect of academic resilience was significant,  $t = -5.03$ ,  $p < .00001$ , with the Lower-Level Confidence Interval (LLCI) and the Upper-Level Confidence Interval (ULCI)  $-.666$  and  $-.290$ , respectively. However, when total emotion dysregulation was entered into the model as a mediator in the pathway, this effect was no longer significant. Thus, total DERS score fully mediated the association between emotional abuse and this aspect of academic resilience, and it had a significant indirect effect,  $-.295$ , with LLCI and ULCI  $-.420$  and  $-.176$ , respectively.

It was also of interest to examine an aspect of academic resilience that wasn't as closely related to emotion regulation. Therefore, the pathway between emotional abuse and perseverance in academic resilience was explored, and mediation by emotion dysregulation was tested. Consistent with what was found in the first analysis, the direct effect of emotional abuse on the perseverance aspect of academic resilience was significant,  $t = -3.76$ ,  $p < .0002$ , with LLCI and

ULCI  $-.646$  and  $-.201$ , respectively. However, when total emotion dysregulation was entered into the model as a mediator in the pathway, this effect was no longer significant. Thus, total DERS score fully mediated the association between emotional abuse and the perseverance component of academic resilience, and it was a significant indirect effect,  $-.282$ , with LLCI and ULCI  $-.446$  and  $-.134$ , respectively. The mediated pathways for both of these academic resilience outcomes can be seen in Figure 1.

**Figure 1.** Emotional abuse predicts poor academic resilience, mediated by difficulties with emotional regulation



## Discussion

This study investigated the associations between childhood maltreatment, emotion regulation and resilience in an academic setting. Previous research indicates that childhood maltreatment is prevalent and has consequences lasting into adulthood including emotion. The World Health Organization (2022) points out that associations between childhood maltreatment and cognitive and academic performance are recognized. Even so, to date, little research is available determining what variables exist between childhood maltreatment and academic

performance. This unknown territory prompted the design of this study in search of a greater knowledge surrounding these associations. Researchers hypothesized that a higher level of childhood maltreatment history would predict lower levels of academic resilience, that higher levels of childhood maltreatment would also predict higher levels of emotional dysregulation, and lastly that higher levels of emotion dysregulation would predict lower levels of resilience among university students.

The research results showed substantial correlations in all predicted areas. This study predicted that higher levels of childhood maltreatment history would predict higher levels of emotion dysregulation. As hypothesized, the current results are consistent with existing research by Maughan and Cicchetti (2022), as well as Jenness et al. (2021), that childhood maltreatment predicts emotional dysregulation. The Difficulties in Emotion Regulation Scale (DERS) asks items to address how an individual rates themselves emotionally. The DERS survey reported substantial positive correlations between childhood maltreatment and emotion dysregulation, and the two most prevalent predictors of dysregulation were emotional abuse and emotional neglect. It makes sense that emotional abuse and/or neglect interferes with appropriate emotional development in childhood that results in poor emotional regulation in adulthood.

It was also predicted that high levels of childhood maltreatment would predict lower levels of academic resilience. Previous research by Welsh, Peterson, and Jameson (2017) found that among students with histories of childhood maltreatment, grade point average and self-reported adaptation to the educational setting were lower. The study by Moore, Welsh, and Peterson (2021) also showed poor college adaptation predicted by maltreatment, mediated by aggression (a problem with emotion regulation). This survey agreed with previous research and found that higher levels of overall maltreatment were associated with less academic resilience.



Overwhelmingly, these results were seen across all three scales of the Childhood Trauma Questionnaire (CTQ). Correlations that were significant on the scale were between emotional abuse and perseverance, emotional abuse and controlling negative emotions, emotional neglect and help seeking, and physical neglect and controlling negative emotions.

Lastly, it was hypothesized that higher levels of emotion dysregulation would predict lower levels of resilience. This prediction was the most speculative as this association was under-reported phenomenon in previous research and literature. Meng et al. (2018) point out that resilience allows individuals to avoid complications after adversity and is further explained by Shevell and Denov (2020) as the ability to overcome and be resilient. Though resilience is highly studied by many fields and theories surrounding it are abundant, what its relations with emotion regulation might have remained undiscovered. Within the Difficulties in Emotion Regulation Scale (DERS), this research found that emotion dysregulation in all aspects negatively correlated with all three scales of academic resilience. DERS goals, impulsivity, awareness, strategies, and clarity all significantly correlated with perseverance, help seeking, and controlling negative emotions (apart from the relationship between impulsivity and help seeking). Essentially, individuals who struggled with emotion regulation also self-reported lower academic resilience.

The research concludes that childhood maltreatment predicts emotion dysregulation, which then predicts resilience. Substantial evidence shows that both childhood maltreatment and emotion dysregulation present a major barrier in student's academic success likelihood. These results indicate that students suffering from emotion dysregulation are impacted by barrier type behaviors, causing failure in higher education goals. Predictions of childhood maltreatment causing low resilience in college students academics are significantly demonstrated in the studies correlations across survey scales. This research identifies a need for intervention at the college

level to mitigate the challenges students in this group experience. Programs that teach emotion regulation techniques are likely to facilitate learning and positively impact coping skills. If the mediating emotion dysregulation issues can be resolved, it is predicted that resilience would increase among college students, particularly those with a maltreatment history. Resources such as the counseling center on campus are helpful and available to all students, however, those suffering with implications of maltreatment are unlikely to reach out for help, but instead internalize any failure they perceive. Where children without maltreatment and emotion dysregulation histories often seek better study skills after not scoring well on a test, those with these histories may internalize the low score with feelings of worthlessness, inadequacy, and failure. Students who identify as having a history of childhood maltreatment could be referred to resources to aid in their success, both in education and overall mental health.

### **Limitations and Directions for Future Research**

This study was conducted at one university in Northern Colorado, with a relatively small sample size and using specific measures of self-report. It is a possibility that this limitation could lead to underrepresentation of university populations. A larger sample, such as cluster samplings across all universities with a more diverse population may provide a greater external validity to our research. Self-report measures raise the question of validity because there is not a method to validate the information provided by participants. With that in mind, not all cases of child maltreatment are documented by the courts, police, or family support services. Adding an additional argument of which route of discovery of child maltreatment leads to the most accurate reporting.

The participants who were offered the survey were from the Psych 120 pool, which is composed of Psychology students. This limits our results to one population of students.

Psychology major students may share commonalities such as histories of maltreatment, sparking their interest in the helping fields. Additionally, the survey was mostly composed by female students, due to the demographics of the Psychology enrollment composition at the University. Lastly, another limitation of this study is that our research was conducted at the University of Northern Colorado, which is a predominantly a White Institution. This is especially impactful because although childhood maltreatment is impactful in all races and communities, not all factors are present in all social and cultural contexts. (World Health Organization 2022).

These limitations raise the issue of a higher-than-normal percentage of participants with a history of child maltreatment than the University has surveyed before. While previous limitations listed have likely been present in previous studies, a new variable of the COVID19 pandemic could have impacted this inflation. The pandemic has been known to cause emotional changes in individuals, which could have impacted the way participants answered their surveys.

Despite these limitations, this study provided clear and substantial results, dictating that childhood maltreatment has implications of emotion dysregulation, which in turn predicts lower academic resilience for students. These results give Universities a clear path of resolution for a high number of individuals with a history of childhood maltreatment. With help in areas of emotion dysregulation, barriers in academic achievement could be overcome. This is a monumental benefit to students as well as the University.

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