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## Childhood Trauma and Autonomy in College Students: Does Anxiety Mediate This Relationship?

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CHILDHOOD TRAUMA AND AUTONOMY IN COLLEGE STUDENTS:  
DOES ANXIETY MEDIATE THIS RELATIONSHIP?

BY

MICHAEL L.M. FARROW

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
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MASTER OF ARTS THESIS  
OF

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## **Abstract**

Childhood trauma is an event that can cause emotional, psychological, and psychosocial disruption. Research has found several strong associated outcomes including anxiety and disrupted autonomy development, particularly among college age students. The present study examined the relationship between childhood trauma and autonomy development and the role of anxiety in that relationship. Several other models were tested examining the possible gender effects and trauma subtypes. While childhood trauma was associated with both anxiety and diminished autonomy, there was no evidence supporting that anxiety was a mediator in this relationship. Discussed below are possible explanations as to why this relationship was not found as well as directions for future research.

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Childhood Trauma and autonomy in college age students: Does anxiety mediate this relationship?

Childhood trauma is an event that causes emotional, physical, and/or other psychological distress prior to adulthood (Barnett, Manly, & Cicchetti, 1991; Egeland, Sroufe, & Erickson, 1983). Forms of childhood trauma including emotional abuse, physical abuse, sexual abuse and neglect have received much research attention (e.g., Cicchetti & Rizley, 1981; Mendelson, Robins, & Johnson, 2002). Exposure to trauma has been linked to short-term and long-term negative psychological and psychosocial outcomes (Davis & Petretic-Jackson, 2000; Gibb, Chelminski, & Zimmerman, 2007; Hovens et al., 2010; Shainheit & O'Dougherty Wright, 2012), Children exposed to trauma may be affected in ways that are not apparent at the time of the trauma yet, may lead to impaired development (Battle et al., 2004; Berenbaum, Valera, & Kerns, 2003; Kolts, Robinson, & Tracy, 2004).

Childhood trauma has been linked to environments that may contribute to poor functioning. Childhood trauma occurs more frequently in families that have lower parent educational attainment, are impoverished, and have greater stress (Klest, 2012; Pears, Kim, & Fisher, 2008; Rosenthal, Wilson, & Futch, 2009). Adults who experienced childhood trauma have reported less parental supervision, inconsistent parental nurturing, and less stable parent-child relationships during childhood (Pears et al., 2008). Correlations between childhood trauma and family characteristics, such as lack of family cohesion, punitive parenting, and low relationship satisfaction have been found (Higgins & McCabe, 2000). Additionally, childhood trauma has also been found to occur in households with

parents who abuse substances (Donohue, Romero, & Hill, 2006; Harter & Taylor, 2000; Wright, Crawford, & Del Castillo, 2009). Research studies also indicate multiple traumas often occur simultaneously to individuals from the above disadvantaged environments (Higgins & McCabe, 2000).

Prevalence rates indicate childhood trauma is frequent though often underreported (Abele & Wojciszke, 2007; Goldsmith, Barlow, & Freyd, 2004). Copeland and colleagues (2007) suggest more than 50% of all children between the ages of 9-16 have been exposed to trauma. Other studies have documented 15% to 40% of children experience one of the above traumas (Boney-McCoy & Finkelhor, 1996; Schwab-Stone et al., 1995). Acierno and colleagues (1998) highlight that sexual assault occurs in 8% of children, 17% experience physical abuse, and approximately 40% witness violent acts. Interestingly, reported childhood trauma and exposure to childhood trauma rates conflict. Research studies have found males have an overall higher exposure rate to trauma compared to females (Breslau, 2009). However, females report higher incidents of childhood trauma, in particular childhood sexual abuse (Breslau, 2009; Read, Agar, Argyle, & Aderhold, 2003; Watkins & Bentovim, 1992). These lower reported rates of childhood trauma by males may be due to humiliation, fear of retaliation, or self blame and decreased psychosocial functioning (Alaggia & Millington, 2008; Wright et al., 2009).

Childhood trauma appears to contribute to poor psychological functioning. Adults as well as children who have experienced childhood trauma have expressed disruptions in psychological development and functioning (Zlotnick, Mattia, &

Zimmerman, 2001). Studies have found that adolescents tend to minimize traumatic events or, once reported, parents may not adequately address the event leaving the child to cope with the event alone (Hovens et al., 2012; Snyder et al., 2012). An estimated 20% of trauma victims express recurrent lifetime distress resulting from a traumatic event (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Recurrent stress appears to be most salient among females compared to their male counterparts (Breslau, 2009; Johns et al., 2012). Children exposed to trauma have reported feelings of guilt, shame and fear after experiencing trauma and been found to have a greater number of distorted cognitive schemas (Gibb et al., 2007; Snyder et al., 2012). Traumatized children are at higher risk of developing psychiatric disorders including anxiety, mood, and psychotic disorders (Battle et al., 2004; Berenbaum et al., 2003; Carr & Francis, 2009; Horner, 2012; Hovens et al., 2010; Klest, 2012; Schäfer & Fisher, 2011; Schäfer et al., 2010). Researchers have found that childhood trauma is most commonly associated with depression and anxiety, both during childhood and adulthood (Farley & Keaney, 1997; Min, Singer, Minnes, Kim, & Short, 2012). Furthermore, earlier exposure to childhood trauma has been related to a greater number of exposures to traumatic events throughout the lifespan as well as a greater number of mental health problems (Carr & Francis, 2009; J. G. F. M. Hovens et al., 2010; Sachs-Ericsson, Blazer, Plant, & Arnow, 2005). In addition, childhood trauma appears to be related to poor interpersonal relationships during adolescent and young adulthood, poor school performance, deviant behavior including criminal activity during adolescence, and more frequent somatic complaints (Alink & Egeland, 2013;

Carpenter & Chung, 2011; Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001; Schäfer et al., 2010; Smith, Park, Ireland, Elwyn, & Thornberry, 2012).

Problems associated with childhood trauma can make tasks during adolescence (e.g., college adjustment) difficult. College students are often faced with multiple challenges such as adjusting to new school demands, developing a sense of self-concept, developing self-esteem, establishing social relationships, and learning to better manage themselves with less guidance (Chemers, Hu, & Garcia, 2001). Furthermore, increased stressors from college adjustment have been found to intensify the effects of mood disorders and anxiety disorders (O'Donovan & Hughes, 2007).

### **Autonomy**

Autonomy is the psychological and psychosocial development of independence (Barber & Martin, 1999; Feldman, Rosenthal, Brown, & Canning, 1995; Sessa & Steinberg, 1991) and adjustment (Frank, Pirsch, & Wright, 1990; Hoffman, 1984; Lamborn & Groh, 2009; Lamborn & Steinberg, 1993; Li, Qiu, & Wang, 2009). College life presents an opportunity for young adults to become more autonomous. During college, students learn to adjust by applying previously learned ways of coping to new stressors (Conley, Travers, & Bryant, 2013). College students who are more autonomous appear to have greater self-esteem, higher grades, fewer attrition rates, and fewer psychological problems (Lamborn & Groh, 2009). Winston and colleagues (1999) argued autonomy can be developed in a variety of areas: social contexts, emotional development, educational/occupational contexts, and daily functioning. Winston and colleagues

(1999) identified several subtypes of autonomy: *Academic Autonomy*, *Interdependence*, *Emotional Autonomy*, and *Instrumental Autonomy*. *Academic Autonomy (AA)* refers to the ability to regulate oneself to attain personal goals and responsibilities, including coursework and maintaining a schedule. Examples of academic autonomy may include school engagement, academic performance, and school attrition (Black & Deci, 2000; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). *Interdependence (I)* refers to ability to reciprocate in one's community, such as community service, social interactions or helping others. *Emotional Autonomy (EA)* is the ability to be free from the need for continuous reassurance and approval from others. Lastly, *Instrumental Autonomy (IA)* refers to the ability to structure one's life and adjust to daily responsibilities without in-depth support.

College students' level of autonomy appears to differ between individuals who have and have not experienced childhood trauma. Kolts, Robinson, and Tracy (2004) in a study of 156 college age students, found that individuals who were exposed to trauma were less autonomous than individuals that had not experienced trauma. In a study of 321 college-aged women with trauma histories, Elliot and colleagues (2009) found childhood trauma to be correlated with greater difficulty adjusting to college. In the study, female college students that previously experienced trauma expressed greater difficulties with social adjustment and interactions, emotional adjustment, and academic adjustment (Elliott et al., 2009). Similarly other research studies have found correlations between childhood trauma and autonomy among college settings; for an example, both lower

academic achievement and fewer social interactions with peers have been related to childhood trauma (Hall & Webster, 2007; Shainheit & O'Dougherty Wright, 2012).

Gender may also influence the expression of autonomy among those who have experienced childhood trauma. Though few studies have examined gender differences and the expression of autonomy (Shainheit & O'Dougherty Wright, 2012). Gender differences and maladaptive behavior has been well reviewed (e.g., Kendall-Tackett, Williams, & Finkelhor, 1993; Putnam, 2003). Some studies suggest women who have experience childhood trauma tend to experience greater distress than men during adolescence and adulthood (Godinet, Li, & Berg, 2014; Haatainen et al., 2003; Shainheit & O'Dougherty Wright, 2012; Ullman & Filipas, 2005; Wilson & Widom, 2010). Godinet and colleagues (2014) longitudinal study of 1300 children found gender to moderate the relationship between childhood trauma and later life behaviors. Men who reported a history of childhood trauma had higher instances of drug abuse, arrests, and aggressive behaviors compared to women with a history of childhood trauma. However, the number behavioral problems for men decreased during adolescence (Godinet et al., 2014). Godinet and researchers (2014) also found women who experienced childhood trauma reported a higher number of mental health related issues when compared to men. Such mental health related issues, i.e. anxiety, became more pronounced during adolescence and were associated with disrupted social interactions (Godinet et al., 2014). Shainheit and O'Dougherty Wright (2012) in a study of 301 college students, found gender moderated the relationship between childhood trauma and



autonomy. For instance, when women reported lower levels of childhood trauma, as compared to men, they exhibited low levels of autonomy. However, when men reported higher instances of childhood trauma their levels of autonomy were lower than women (Shainheit & O'Dougherty Wright, 2012). Ullman and Filipas (2005) found similar associations between gender and psychosocial adjustment in a sample of 733 college students. In this study, women who experienced childhood trauma reported higher social disruptions than males (Ullman & Filipas, 2005). Thus, it appears there may be gender differences in social, emotional, and academic adjustment following childhood trauma.

#### Academic Autonomy

College students who experienced childhood trauma appear to be at a disadvantage academically and experience lower academic autonomy. Although there are no studies looking at the effects of childhood trauma on academic autonomy, there is research demonstrating a link between childhood trauma and lower academic achievement. Students who are more autonomous are better able to adjust to ambiguous instructions and have been shown to be more independent learners (Winston et al., 1999). Studies have found children exposed to trauma have been associated with lower school engagement and poor academic performance (Boyratz, Horne, Owens, & Armstrong, 2013; Crozier & Barth, 2005; Miller, Howell, & Graham-Bermann, 2012; Totura, Karver, & Gesten, 2014). Researchers have found correlations between childhood trauma and poor academic performance within grade school and high school populations (Banyard & Cantor, 2004; Crozier & Barth, 2005; Duncan, 2000). Crozier and Barth (2005) study of

5,504 children and adolescents found children exposed to trauma fell below in both cognitive ability and school achievements compared to their counterparts. Other studies have shown a correlation between childhood trauma and high school and college dropout (Duncan, 2000; Porche, Fortuna, Lin, & Alegria, 2011).

### Interdependence

Interdependence is the sense of responsibility to the community and others (Arnett & Taber, 1994) or interconnectedness with others (Evans, Forney, Guido, Patton, & Renn, 2009). Individuals that are more interdependent have been reported as being more aware of how their behaviors affect the community (Winston et al., 1999). Few studies have explored the relationship between community interactions and childhood trauma. Studies that investigated this relationship have found trauma to negatively affect community involvement (Johns et al., 2012; Obasaju, Palin, Jacobs, Anderson, & Kaslow, 2009). Johns and colleagues (2012), using a sample of 1,221 adults, found community cohesion was lowest among individuals with history of trauma exposure (Johns et al., 2012). Similarly, Obasaju and colleagues found childhood trauma was related to reduced community communication and support in a sample of 152 adults (Obasaju et al., 2009). Researchers have found childhood trauma to be related to reduced community responsibility, as well as maladaptive social behaviors such as crime, social withdrawal and poor interpersonal relationships (Frank, Schettini, & Lower, 2002; Hovens et al., 2012; Schäfer et al., 2010; Shi, 2013). Other studies have found childhood trauma to negatively impact one's ability to engage reciprocally in interpersonal relationships (Riggs, Cusimano, & Benson, 2011). In Riggs and

colleagues' study, 310 college students completed questionnaires about their dating partners and history of childhood trauma. Overall, exposure to childhood trauma was associated with a poor relationship adjustment, such as fear of abandonment or lack of trust (Riggs et al., 2011). Within romantic partnerships, childhood trauma was related to lack of interdependence and a decreased interaction with a partner (Riggs et al., 2011).

### Emotional Autonomy

Winston et al. (1999) describe adolescents that have higher emotional autonomy as confident decision makers. Students who have more emotional autonomy seek reassurance and approval from others less frequently (Allen, 1998; Brennan & Shaver, 1998; Winston et al., 1999). Research studies suggest childhood trauma negatively affects emotional autonomy. The link between childhood trauma and poor self confidence, feelings of guilt, and helplessness are frequently studied (e.g., Browne & Winkelman, 2007; Dorahy & Clearwater, 2012; Ullman, Peter-Hagene, & Relyea, 2014). Hall, Raymond, and Webster (2007) sought to study adjustment of adults who experienced childhood trauma. In a study of 354 college students, the researchers found that individuals who experienced childhood trauma, compared to individuals who had not, expressed both reduced sense of self and ability to cope with the demands and challenges of daily life (Hall & Webster, 2007). Researchers have found adolescents who have experienced childhood trauma often seek approval and reassurance from partners in relationships (Boyras et al., 2013; Riggs et al., 2011). Other researchers have found similar results from early ages, demonstrating that following criticism,

children with a history of trauma are more likely to engage in problematic behaviors such as hitting others, crying, or yelling (Holt, Finkelhor, & Kantor, 2007; Schäfer et al., 2010). Holt and colleagues' (2007) study investigated peer functioning and academic performance in 689 elementary students with history of trauma. Compared to students who had not experienced trauma, trauma-exposed adolescents were more likely to have negative self perceptions of themselves, be more critical of themselves, and blame themselves more often for the exposure to the childhood trauma (Holt et al., 2007). These studies suggest that individuals who experience childhood trauma may experience greater difficulties in managing emotional responses.

#### Instrumental Autonomy

Winston and colleagues (1999) argued individuals with greater instrumental autonomy are better able to structure their time efficiently without support. College students that experienced childhood trauma may have limited instrumental autonomy. In one study of 13 adults who were part of treatment for childhood trauma, qualitative data on health seeking behaviors was collected (Stige, Træen, & Rosenvinge, 2013). Stige and researchers (2013) found that, following childhood trauma, participants attempted to structure their lives but found the task overwhelming and problematic. Participants in the study who were more likely to self-manage were less likely to seek help, reported the task as daunting, and later sought treatment to learn better self-management skills (Stige et al., 2013). Karsten and colleagues' (2013) investigated impairment in 2,981 adults with diagnosis of anxiety and mood disorders. The researchers found a

relationship between childhood trauma and functional impairment (e.g. self-care, work performance, and household activities). While overall impairment improved over time, marked differences were apparent between individuals who were exposed to childhood trauma and controls (Karsten et al., 2013). As a group, individuals who were exposed to childhood trauma were more likely to endorse poor self-care, decreased work-related performances, and difficulties completing household activities (Karsten et al., 2013).

### **Anxiety**

Childhood trauma has also demonstrated to be related to anxiety (e.g., Chu, Williams, Harris, Bryant, & Gatt, 2013; Gibb et al., 2007; Hovens et al., 2010; Lang et al., 2008; Schäfer et al., 2010; Simon et al., 2009). Anxiety disorders have been reported in 51% of the individuals who experience childhood trauma; 40% of individuals who experience childhood trauma met criteria for anxiety in addition to another mental health disorders (Gibb et al., 2007).

Anxiety disorders have been found to be present in 16% of college students (Eisenberg, Gollust, Golberstein, & Hefner, 2007). A reported 5% of all college students quit school prematurely due to untreated anxiety disorders (Kessler, Foster, Saunders, & Stang, 1995). Studies suggest elevated anxiety may lead to poor autonomy and impaired college functioning (Andrews & Wilding, 2004; Park, Edmondson, & Lee, 2012). Webb et al.'s (2010) study of 78 undergraduates suggested anxiety was a factor leading to poor goal setting and maintenance. Other studies have found anxiety to be related to poor social functioning (Wei, Russell, & Zakalik, 2005). Similarly, Mounts and colleagues

(2006) study of college adjustment in 350 freshman college students found an association between anxiety and both poor college adjustment and peer relationships.

Childhood trauma has demonstrated a relationship with both anxiety and disruptions in autonomy. However, it might be that the relationship between childhood trauma and poor autonomy is mediated by anxiety. Totura and colleagues (2014) has found an example of this relationship in a study of 469 middle school students. The relationship between abuse and both academic social engagement was mediated by anxiety; poor overall functioning was predicted by anxiety (Totura et al., 2014). Van Veen's study (2013) using a sample of 2615 adults who experienced childhood to be related to anxiety. The study also found anxiety to be related to problems with daily functioning, such as maintaining relationships, managing one's self and occupational goals (Van Veen et al., 2013). Wright and colleagues (2009) study of 351 college freshman found anxiety to mediate the relationship between childhood trauma and poor interpersonal functioning. The above research findings highlight that significant levels of anxiety appear to be negatively associated with outcomes frequently required of college students.

The proposed study seeks to investigate the relationship between childhood trauma, anxiety, and autonomy in college students. More specifically, this study will examine the mediating effect of anxiety on the relationship between autonomy and childhood trauma. A variable serves as a mediator when it affects the relationship between an independent variable and outcome variable; changes in the

mediator affect the outcome variable; or if a relationship between an independent variable and outcome variable is no longer significant when the mediator variable is removed (Baron & Kenny, 1986). A moderator variable changes the strength of a causal relationship between the independent variable and outcome variable (Baron & Kenny, 1986). This study will extend the literature on outcomes of childhood trauma and potentially identify critical areas for intervention for individuals with histories of childhood trauma. Three research hypotheses are presented:

Hypothesis 1: Anxiety will mediate the relationship between childhood trauma and autonomy (Diagram 1).

Hypothesis 2: Degree of exposure to childhood trauma will moderate the relationship between anxiety and autonomy (Diagram 2); greater degree of exposure to trauma will result in greater anxiety and decreased autonomy thus strengthening the relationship between anxiety and autonomy.

Hypothesis 3: Gender will serve as a moderator in the mediated relationship between childhood trauma and autonomy; report of trauma from female will lead to poorer reported autonomy than males who report trauma. (Diagram 3)

## **Methods**

### **Participants**

This current study was a secondary data analysis using data from a study that examined the health implications of anxiety in college age students (Flannery-Schroeder, Robbins, Lamb, & Sieberg, 2005). Data were re-analyzed to address the present study's hypotheses. Participants (N=222) consisted of undergraduate

students enrolled in an introductory psychology course at the University of Rhode Island. A demographic breakdown of study participants can be found in Table 1. Sixty-three percent of the participants were female, 36% were males. Eight-nine percent of the participants self-identified as White, 4% as Black or African American, 2% as Asian, and 5% as “Other.” The average age of the sample was 19 years-old (range = age 18-36, SD= 1.51).

## **Measures**

**Student Development and Task Life Assessment (SDTLA).** The SDTLA, developed by Winston, Miller, and Cooper (1999), is an assessment measuring perceptions of life purpose, engagement in mature interpersonal relationships, and academic autonomy and healthy lifestyles in college-aged students. The SDTLA consists of three developmental tasks: 1) establishing and clarifying purpose, 2) developing autonomy, and 3) developing mature interpersonal relationship.

The Developing Autonomy Task (AUT) is made up of four subtasks: emotional autonomy (EA), interdependence (IND), academic autonomy (AA), and instrumental autonomy (IA). Developing Autonomy task and subtasks have demonstrated sufficient psychometric properties (Winston et al., 1999).

Cronbach’s coefficient  $\alpha$  of the Developing Autonomy task was reported 0.88; subtasks: EA= 0.88, IND=0.76, AA=0.77 IA= 0.62. Correlation coefficients for test retest after four weeks ranged between 0.74 and 0.81. The Developing Autonomy task and subtasks have demonstrated convergent validity with instruments that have shown to measure autonomy, the Georgia Autonomy Scale, Family Independence Scale and the Study Habits Scale (Winston et al., 1999).



Convergent correlation coefficients between the Developing Autonomy tasks and Georgia Autonomy Scale were as follows: AUT = 0.56, AA= 0.27, EA=0.51, IA=0.21, and IND= 0.31.

**Childhood Trauma Questionnaire (CTQ).** The CTQ, created by Bernstein and Fink (1998), assesses retrospective accounts of self-reported childhood trauma and consists of five subscales: Physical Abuse, Sexual Abuse, Emotional Abuse, Physical Neglect, and Emotional Neglect and Total trauma score. Total CTQ score takes into account the severity of multiple forms of abuse and neglect. The CTQ consists of 28 items, five items per subscale and an additional three-item minimization/denial scale measured on a 6-point Likert scale (*Never True to Very Often True*). The CTQ has demonstrated strong psychometric properties. Test-retest intraclass correlation coefficients ranged from .79 to .86 over a four-month period (Bernstein & Fink, 1998). Likewise, the CTQ has demonstrated convergent validity with both a clinician-rated interview of childhood abuse and therapists' ratings of abuse (Bernstein & Fink, 1998).

**Adult Manifest Anxiety Scale – College Student Version (AMAS-C;** Reynolds, Richmond, & Lowe, 2003). The AMAS-C measures somatic and cognitive symptoms of anxiety. The 49- item questionnaire consists of four anxiety subscales: Social Anxiety, Worry, Physiological Anxiety, and Test Anxiety. An overall anxiety score is computed as the sum of the four anxiety subscales and higher scores indicate higher anxiety. The authors report test retest reliability of .94, Cronbach's alphas range between .72-.95 (Reynolds et al., 2003). AMAS-C

overall anxiety score demonstrates convergent validity with the Multidimensional Anxiety Questionnaire (Reynolds et al., 2003).

### *Procedure*

Participants were offered extra credit for taking part in the study. Data were collected during the 2006 academic school year via surveys given during class. All procedures received approval from the university's Institutional Review Board.

### *Analyses*

Descriptive statistics were calculated according to recommendations from Mackinnon (2008) and examined outliers, means, standard deviations, frequencies, and correlations among variables. Correlations between participant demographic variables and primary predictors and outcomes were computed to determine any confounding variables or covariates (e.g., SES, race, age).

### *Missing Data*

Two hundred and twenty-two participants completed obligatory information for each measure's scale or subscale. There were few participants (n=10) with a moderate amount of missing data across different subscales. Listwise deletion was used in cases of missing data; therefore, data from the ten participants with missing data were not analyzed.

### *Data Transformation*

Regression analyses assume the data are linear, homogenous, and homoscedastic. Bootstrapping method is recommended for smaller samples because of robust violations of normality in sample distributions (MacKinnon, 2008; Preacher & Hayes, 2004). Bootstrapping allows for estimation of statistics

through repeated sampling of data, a recommended 1000 times, and do not follow normal distribution shape assumptions (MacKinnon, 2008; Shrout & Bolger, 2002). In the current study, indices of childhood trauma did not produce a normal distribution following multiple attempts of transformation including square root, logarithms, and other nonparametric tests, *Kolmogorov-Smirnov* and *Mann-Whitney U*. Thus, bootstrapped variables were used in further analyses to create a better asymmetric distribution to test for significance. Mediation and moderation analyses were run using Preacher and Hayes (2004) mediation macro; this statistical macro package was built to run various models of mediation in SPSS. Confidence intervals were examined to determine if mediation was significant by testing indirect effects and examining standard error to determine effects (MacKinnon, 2008).

## Results

The following statistical procedures were performed to investigate the study hypotheses:

Hypothesis 1: Anxiety will mediate the relationship between exposure to childhood trauma and level of autonomy.

Analytic plan: Three regression analyses were conducted to determine mediation effects (MacKinnon, 2008). The equations used to determine mediation are: (1)  $Y = i_1 + cX + e_1$ , (2)  $Y = i_2 + bX + c'X + e_2$  and (3)  $M = i_3 + aX + e_3$ . The first equation represents the total effect of the predictor on the criterion. Steps two and three measure the indirect effect of the predictor on the criterion through the mediator;

and the direct effect of the predictor on the criterion while controlling for the mediator (Fritz & MacKinnon, 2007).

*Step 1:* Determine that there is an effect between childhood trauma and autonomy within the sample.

*Analysis 1:* A regression analysis was conducted to determine the total effect using childhood trauma, *measured by the total score of the CTQ*, as the predictor and autonomy, *measured by the total score of the Developing Autonomy subscale from the SDTLA*, as the criterion.

*Step 2:* Determine that there is mediation between childhood trauma and autonomy.

*Analysis 2:* Regression analyses were conducted on the criterion, autonomy, using two predictor variables childhood trauma and anxiety (the mediator; *measured by the AMAS-C*).

*Step 3:* Determine if childhood trauma is correlated with anxiety.

*Analysis 3:* A regression analysis was conducted using childhood trauma as the predictor variable and anxiety as the criterion variable in the equation.

Hypothesis 2: Exposure to childhood trauma will moderate the relationship between anxiety and autonomy. Greater degree of exposure to trauma will result in greater anxiety and decreased autonomy thus strengthening the relationship between anxiety and autonomy.

Analytic plan: A moderated mediation analysis was conducted using regression analysis. The analytic plan was similar to that outlined in hypothesis 1. Three

mediation analyses were conducted, each analysis used one of three levels of trauma severity as the predictor variable. Trauma severity was low, moderate, and high, which were one standard deviation below the mean, at the mean, and one standard deviation above the mean, respectively.

Hypothesis 3: Gender will serve as a moderator in the mediated relationship between childhood trauma and autonomy; report of trauma from females will lead to poorer reported autonomy than males who report trauma.

Analytic plan: A similar analytic plan outlined in hypothesis 2, moderated mediation, was conducted. Mediation analyses were run for each gender, male and female, that served as a moderator variable in the interaction between childhood trauma autonomy.

### *Descriptive Statistics*

A summary of reported trauma by gender can be found in Table 2. A summary of means, standard deviations and observed ranges of childhood trauma scores can be found in Table 3. Means, standard deviations, and observed ranges for anxiety and autonomy are presented in Tables 4 and 5. Twenty-nine percent of participants reported they experienced at least low to moderate severity of childhood trauma. A breakdown of reported trauma severity can be found in Table 6. Overall males, compared to females, reported a greater number of traumatic childhood experiences (see Table 1) . Though not an a priori hypothesis, there were significant gender differences in trauma reported on subscales of physical abuse, sexual abuse, emotional neglect, and physical neglect. Overall, males ( $M$

=7.10, SD = 3.31) reported significantly greater severity of physical abuse than females ( $M=6.04$ ,  $SD= 2.42$ ),  $t(222)=2.74$ ,  $p<. 0.01$ . Males also reported ( $M= 6.50$ ,  $SD=3.05$ ) a greater severity of sexual abuse than females ( $M= 5.39$ ,  $SD 1.55$ ),  $t(222)=3.59$ ,  $p<. 0.01$ . Likewise, males ( $M= 10.76$ ,  $SD = 5.31$ ) reported more emotional neglect than females ( $M = 8.20$ ,  $SD=4.33$ ),  $t(222)=3.88$ ,  $p<. 0.05$ . Lastly, males ( $M = 7.91$ ,  $SD = 3.24$ ) reported higher physical neglect than females ( $M = 6.36$ ,  $SD = 2.29$ )  $t(222)=4.17$ ,  $p<. 0.01$ . Additionally, individuals that reported childhood trauma indicated significantly less autonomy ( $M=90.06$ ,  $SD=8.35$ ) and those that did not ( $M=93.43$ ,  $SD=6.99$ );  $t(219)=3.10$ ,  $p = .002$ .

*Model results by hypothesis:*

*Hypothesis 1. Anxiety will mediate the relationship between exposure to childhood trauma and level of autonomy.*

To establish a relationship for the three-step mediation, identified by MacKinnon et al. (2008), correlation coefficients (b) and confidence intervals were analyzed. The total effect, the relationship between childhood trauma and autonomy, was significant (*c path*  $b= -3.54$ ,  $se = 1.20$   $p < 0.01$ ). There was a significant effect of childhood trauma on self-reported anxiety (*a path*,  $b= 2.94$ ,  $se= 1.48$ ,  $p<.05$ ). The relationship between anxiety and autonomy was non-significant (*b path*  $b=0.06$ ,  $se = .051$ ,  $p=0.21$ ,  $r= 0.19$ ,  $LLCI= -0.1318$ ,  $ULCI= 0.7212$ ). Bootstrapped variables calculate a 95% confidence interval. If 0 is inclusive between the confidence intervals, this indicates the relationship is not significant (MacKinnon, 2008; Preacher & Hayes, 2004). The linear model supported a correlation between childhood trauma and autonomy; however, it did

not indicate anxiety mediated this relationship among males and females. See Figure 1.

*Hypothesis 2. Exposure to childhood trauma will moderate the relationship between anxiety and autonomy. Greater degree of exposure to trauma will result in greater anxiety and decreased autonomy thus strengthening the relationship between anxiety and autonomy.*

Correlation coefficients were analyzed for indirect and direct effects for Hypothesis 2. Below, each childhood trauma subtype was tested to see if level of trauma (moderator) better explained level of autonomy. The moderator variable (severity of childhood trauma) in this moderated mediation model was continuous; therefore, first the mediation model was tested and then amount for trauma subscale (low, moderate, and high) were tested in the model. None of the moderated mediation models were significant; however there were several significant interactions between the interaction variables and anxiety and trauma (see Figures 2-01 through 2-05 and Table 7 for interaction effects of each trauma subtype). Correlation coefficients, standard errors, and confidence intervals of each subscale and amount of abuse are presented in Table 8.

#### Emotional Abuse:

The interaction effect of childhood trauma and emotional abuse was not significant with anxiety ( $b=-.74$ ,  $p=.24$ ) or autonomy ( $b=-.04$ ,  $p=.92$ ), which indicates no moderated mediation. However, emotional abuse alone was positively correlated with anxiety ( $b=1.14$ ,  $p=.04$ ). See Figure 2-01 and Table 7 for interaction effects. Conversely, emotional abuse was inversely related to autonomy only at moderate

levels, 7.62 ( $b = -3.71$ ,  $se=1.71$ ,  $p < .05$ ), or high levels, 11.15 ( $b = -3.87$ ,  $se=1.91$ ,  $p < .05$ ). This relationship was not supported when emotional abuse was low, 5.00 ( $b = -3.60$ ,  $se = 2.25$ ,  $p = .11$ ). See Table 8.

#### Physical Abuse

There was a significant interaction between physical abuse and childhood trauma on anxiety ( $b = 2.38$ ,  $p = .02$ ) but not on autonomy ( $b = .29$ ,  $p = .65$ ) within this model; indicating no support for moderated mediation See Figure 2-02 and Table 7 for interaction effects. Level of physical abuse was not significant at the mean ( $M = 6.53$ ,  $se = 1.88$ ,  $p = 0.06$ ), below the mean ( $M = 5.00$ ,  $se = 1.67$ ,  $p = 0.07$ ) or above the mean ( $M = 9.43$ ,  $se = 2.57$ ,  $p = 0.38$ ). See Table 8.

#### Sexual Abuse

The interaction between sexual abuse and childhood trauma was not significantly correlated with anxiety ( $b = -5.93$ ,  $p = .42$ ) or autonomy ( $b = -3.69$ ,  $p = .60$ ). Indicating there was not support for moderated mediation see Figure 2-03 and Table 7. However, when sexual abuse was low ( $m = 5.00$ ,  $b = -2.80$ ,  $se = 1.41$ ,  $p < .05$ ), it was inversely correlated with autonomy. When the value was moderate ( $b = 5.93$ ,  $r = .6257$ ,  $se = 6.45$ ,  $p = .92$ ) and high ( $b = 8.42$ ,  $se = 23.57$ ,  $p < .68$ ), childhood trauma was not significantly related to autonomy. See Table 8.

#### Emotional Neglect

The interaction between childhood trauma and emotional neglect was not significantly related to either anxiety ( $b = .03$ ,  $p = .95$ ) or autonomy ( $b = -.41$ ,  $p = .19$ ). Indicating there was not support for moderated mediation, see Figure 2-04. However, emotional neglect was found to be inversely related to autonomy only



when neglect was high ( $M= 14.21$ ,  $b = -3.76$ ,  $p <.05$ ). The relationship between emotional neglect and autonomy was not significant when neglect was low ( $M=5.00$ ,  $b = 0.38$ ,  $p=.9$ ) and moderate ( $M=9.25$ ,  $b = -1.71$ ,  $p <.38$ ). See Table 8. See Figure 2-04 for interaction effects between Emotional neglect, anxiety, and autonomy.

### Physical Neglect

The interaction of physical neglect and childhood trauma was not significant with anxiety ( $p=1.01$ ,  $p=.20$ ) or autonomy ( $b=.58$ ,  $p=.24$ ), therefore no moderated mediation was found. See Figure 2-05 and Table 7 for interaction effects. Physical neglect was correlated to autonomy when physical neglect was high ( $M=9.95$ ,  $b = -3.98$ ,  $se = 1.92$ ,  $p <.04$ ). When low,  $M= 7.06$ , physical neglect and autonomy approached significance ( $b = -2.31$ ,  $se = 1.45$ ,  $p=.11$ ). Anxiety mediated pathways were not significant. See Table 8.

### *Hypothesis 3*

The interaction between childhood trauma and gender was not found to be a significant variable in this model (see Figure 3 and Table 9 for interaction effects). However in this study, childhood trauma was significantly related to autonomy in one of the two hypothesized groups. Among females, childhood trauma was associated with autonomy ( $b = -4.79$ ,  $se = 1.75$ ,  $p <.01$ ). This relationship was not found to be significant for males ( $b = -2.45$ ,  $se = 1.92$ ,  $p=.20$ ). Anxiety was not a significant mediator in this model (LLCI=  $-.8145$  UCLI= $.4919$ ). Overall, the moderated mediation path hypothesis was not supported among either females or

males (females: LLCI = -.1275 ULCI = 0.7892; males: LLCI = -.1766 ULCI 1.0706). See Table 10. Interaction effects for gender are presented in Figure 3.

## Discussion

Childhood trauma has been linked to numerous negative outcomes, such as lower as poor psychological and psychosocial development and increased risk for psychopathology, in particular anxiety and mood disorders. Though childhood trauma has been well researched, there are still many questions regarding how these experiences impact an individual during adolescent development. This study sought to better understand how traumatic experiences during childhood impact autonomy and the role of anxiety on autonomy following childhood trauma. This study also investigated gender differences in anxiety and autonomy following childhood trauma. Specifically, the current study examined mediation models that investigated the relationship between childhood trauma, anxiety and autonomy and two possible moderators (severity of trauma and gender).

As expected, a priori analyses found childhood trauma to be associated with increased anxiety and lower autonomy. Previous research has found similar relationships between childhood trauma and both anxiety (e.g., Cogle, Timpano, Sachs-Ericsson, Keough, & Riccardi, 2010; Gibb et al., 2007) and measures of adjustment (e.g., Manly, Kim, Rogosch, & Cicchetti, 2001). Though few studies have examined autonomy, studies have explored measures of independence, as measured by autonomy in the current study. These studies have found childhood trauma negatively impacts later life adjustment (Browne & Winkelman, 2007; Mendelson et al., 2002). While the current study found childhood trauma to be

related to the proposed mediator (i.e., anxiety) and outcome variable (i.e., autonomy), anxiety was not found to mediate the relationship between trauma and autonomy.

Childhood trauma was significantly related to anxiety and autonomy in Hypothesis 1. These findings were consistent with literature on childhood trauma, anxiety, and poor autonomy (e.g., Briere & Scott, 2014; Sachs-Ericsson et al., 2005). The relationship between anxiety and autonomy was not found in the current study. Many studies have found a link between autonomy and psychological disorders. Studies that have found this relationship reported comorbid anxiety and mood disorders to have the greatest impact on indices of autonomy (Delhaye et al., 2012; Dulin & Passmore, 2010; Kitzrow, 2003). Despite a higher prevalence of anxiety and more untreated cases than mood disorders among college students (Vrshek-Schallhorn et al., 2014), both have been cited as having similar associated outcomes in regard to impairment of autonomy (e.g., Elliott et al., 2009; Kolts et al., 2004). It is not clear if either anxiety or depression have a greater impact on autonomy. The current study sought to explore anxiety alone to see the impact on autonomy. Unfortunately, the findings did not support hypothesis 1 as anxiety did not mediate the relationship between childhood trauma and autonomy.

Hypothesis 2 found significant associations between autonomy and childhood trauma subtypes at certain amounts. Lower autonomy was correlated with individuals who experienced emotional abuse, emotional neglect, and physical neglect. The findings from this study add to the previously existing research on the

relationship between childhood trauma and autonomy. Previous studies have reported similar results to the current study, in that trauma was associated with lower indices of autonomy (Garno, Goldberg, Ramirez, & Ritzler, 2005; Kolts et al., 2004; Zlotnick et al., 2001). Surprisingly, sexual abuse and physical abuse were not associated with autonomy in the current sample. Because there is limited research in this area, the findings are not easily understood. Numerous studies have found correlations between childhood sexual trauma or physical abuse and autonomy by way of reported daily function or mental illness (Berenbaum et al., 2003; Gibb et al., 2007; Kolts et al., 2004; Shainheit & O'Dougherty Wright, 2012; Spataro, Moss, & Wells, 2001). Within the current sample, reported sexual abuse and physical abuse was evenly distributed across severity levels. Similarly distributed groups may not create large differences in effect size thus resulting in non-significance. The distribution of reported trauma cases, in addition to the low number, make any further analyses with physical abuse and sexual abuse difficult. More research is needed before drawing firm conclusions about the correlation between sexual abuse or physical abuse and autonomy.

Hypothesis 3 found severity of childhood trauma to be associated with less autonomy in women but not in men. Implications are difficult to interpret because of the unequal sample of males compared to females. Previous research on the relationship between gender and autonomy appears to be inconclusive. While some studies have found lower autonomy among males that experience childhood trauma (e.g., Read et al., 2003; Watkins & Bentovim, 1992), other studies have found reported trauma to be significantly related to autonomy only by female

report (Delhaye et al., 2012; Erickson, Egeland, & Pianta, 1989; Schäfer et al., 2010). Still others have found no gender differences in autonomy following trauma (Kuo, Goldin, Werner, Heimberg, & Gross, 2011; Wright et al., 2009). It appears at this point there is a greater need to further investigate gender effects on outcomes of childhood trauma. Additionally, reported sexual abuse was atypical in the current sample. Though report of sexual trauma was slightly higher than national samples (Green et al., 2010), males reported more sexual trauma than females. Regardless of the gender differences, childhood trauma had an overall effect on autonomy, and clinicians should take caution when screening for outcomes related to trauma in both genders as doing so will help tailor treatment to be more effective.

#### *Limitations of the current study*

The current study has several methodological limitations. A larger sample size would have been ideal for a mediation analysis. Having a larger sample size may have created normally distributed variables. Childhood trauma was positively skewed, and though bootstrapping was completed, a larger sample of individuals who experienced childhood trauma would likely produce a larger effect size. Hypotheses may have been supported if sample sizes were larger. The majority of the sample reported not experiencing childhood trauma and that may have impacted the overall mediation model. Even more so, pathways between level of abuse and autonomy that were borderline significant may have reached significance with larger normally distributed samples. In addition, bootstrapped samples are not generalizable to the population. Correlations found in this study

may be due to bootstrapping methods, and therefore different effects may be found in samples that do not use these methods.

Lack of prior research studies in this topic area was also a limitation. Few published studies have investigated the relationship between childhood trauma and autonomy. A large portion of published studies have researched areas of life adjustment opposed to autonomy. More published studies would have suggested different variables to investigate.

Cultural considerations also arise as a limitation of this study. There were a low number of diverse participants, racially and ethnically, within this sample. Culture may impact how childhood trauma or anxiety was reported among participants. Participants' reports may have been under- or over-reported due to their perspective on what is normative in regards to abuse or traumatic experiences. Cultural norms for males may differ compared to females in how one views or reports trauma. Likewise for anxiety, background and normative behavior may range based on these factors which may affect how participants reported symptoms of anxiety.

Finally, self-report of past childhood traumatic experiences were a limitation to this study. Retrospective reports of childhood trauma may be over- or underestimated. Specifically, participants who experienced trauma early in childhood may not recall these experiences and, as a result, misreport. Alternatively, more recent traumatic experiences may have had a larger impact on a participant's mental health and current behaviors. Because of these noted

limitations, the findings from this study should be taken with caution in regards to generalizing the results to clinical settings.

#### *Implications of the Findings*

Aside from the above noted limitations, the findings of this study may inform research and clinical practices for childhood trauma. This study builds on the existing literature evaluating outcomes associated with childhood trauma. As expected, self-reported anxiety was higher among individuals who experienced greater levels of childhood trauma compared to those who did not experience trauma. Lower autonomy was also associated with groups that reported childhood trauma.

The current study also has important clinical implications. Anxiety was not correlated with lower autonomy; however, both anxiety and lower autonomy were associated with childhood trauma. Therefore, individuals who experienced childhood trauma may experience both low autonomy and anxiety. A thorough assessment of both indices should be done with individuals who experience childhood trauma. Treatment should be tailored for both associated outcomes.

#### *Directions for future research*

The current study is the first known attempt to examine the relationship among childhood trauma, anxiety, and autonomy in college students. Future studies should continue to explore the relationship between autonomy and childhood trauma. While the current study found a relationship between the two, there are few studies that have investigated autonomy. Further investigations

should look to replicate the results to determine whether the results were specific to the current sample.

Future research should also look to investigate mediators that may be a part of this model. Previous research indicates mood disorders such as depression to be associated with childhood trauma and could impact factors related to autonomy (Browne & Winkelman, 2007; Li et al., 2009; Vrshek-Schallhorn et al., 2014). It may be that symptoms of depression commonly reported in those who experience childhood trauma (e.g., reduced interest in activities) may interfere with autonomy.

Additionally, the current study had a greater female to male ratio. Future studies should examine gender differences and expression of autonomy in groups that have experienced childhood trauma. The current research about gender effects on childhood trauma is not clear and further research is needed.

Future research should also explore how anxiety manifests in college students who experience childhood trauma. In the current study, autonomy was a significant factor associated with childhood trauma but not for anxiety. It may be that anxiety serves as a mediator to other variables, such as academic performance, college attrition, or substance abuse. Other studies have found relationships between anxiety and externalized behaviors in college among those that have experienced childhood trauma (Holt et al., 2007; Schäfer et al., 2010). Future studies may look at anxiety as a mediator between childhood trauma and adverse behaviors in college. While the current study was built upon factors associated



with childhood trauma, these suggestions for future research will continue to clarify outcomes associated with childhood trauma.

**TABLE 1: DEMOGRAPHICS**

	Did not report childhood trauma (N=155)		Reported Childhood Trauma (N=67)		Total (N=222)	
	%	N	%	N	%	N
<b>Gender</b>						
Male	30.3%	47	50.75%	34	36.5%	81
Female	69.7%	108	49.25%	33	63.5%	141
<b>Ethnicity</b>						
Asian			2.98%			
American	1.3%	2	3.0%	2	1.8%	4
Black/African American			8.96%			
Latino American	1.3%	2	4.77%	6	3.6%	8
White	94.2%	146	77.61%	52	89.2%	198
Other	0.6%	1	4.47%	3	1.8%	4
Unknown/Not Reported			5.97%			
	2.6%	4	5.97%	4	3.6%	8
<b>Age</b>	<b>Mean (sd)</b> 19.1 (1.7)		<b>Mean (sd)</b> 18.8 (.98)		<b>Mean (sd)</b> 19.03 (1.5)	

**TABLE 2: PERCENTAGE OF PARTICIPANTS BY GENDER AND  
TYPE OF CHILDHOOD TRAUMA REPORTED**

Trauma Subtype	Male % (N)	Female % (N)	Total % (N)
Emotional Abuse	9.6 (8)	10.2 (15)	9.9 (23)
Physical Abuse	6.8 (16)	9.5 (14)	12.9 (30)
Sexual Abuse	7.3 (17)	4.0 (6)	9.9 (23)
Emotional Neglect	9.9 (23)	11.5 (17)	12.2 (40)
Physical Neglect	10.7 (25)	9.5 (14)	16.8 (39)

**TABLE 3: OVERALL MEANS, STANDARD DEVIATION, AND RANGES OF CTQ TRAUMA SUBTYPES**

Trauma Subtype	Female M (SD)	Range	Male M (SD)	Range	Total M (SD)	Range
Emotional Abuse	7.34 (3.52)	5-21	7.88 (3.36)	5-22	7.53 (3.47)	5-22
Physical Abuse	6.04 (2.42)	5-18	7.21 (3.34)	5-19	6.46 (2.84)	5-19
Sexual Abuse	5.39 (1.55)	5-15	6.70 (3.31)	5-20	5.86 (2.41)	5-20
Emotional Neglect	8.18 (4.32)	5-24	11.17 (5.50)	5-22	9.26 (4.98)	5-24
Physical Neglect	6.35 (2.29)	5-15	8.13 (3.37)	5-15	7.00 (2.85)	5-15

\*Scores falling between 5-9 indicate low severity of abuse.

**TABLE 4: MEAN BAI SCORE BY PARTICIPANT GENDER AND REPORT OF CHILDHOOD TRAUMA**

Gender	Reported Childhood Trauma M (SD)	Did Not Report Childhood Trauma M (SD)
Males	18.85 (10.32)	14.31 (10.24)
Females	21.39 (8.88)	18.68 (9.77)

**TABLE 5: MEANS AND STANDARD DEVIATIONS OF AUTONOMY VARIABLES**

Gender	Did not report childhood trauma					Reported childhood trauma				
	Overall Autonomy M (SD)	Emotional Autonomy M (SD)	Instrumental Autonomy M (SD)	Academic Autonomy M (SD)	Interdependence M (SD)	Overall Autonomy M (SD)	Emotional Autonomy M (SD)	Instrumental Autonomy M (SD)	Academic Autonomy M (SD)	Interdependence M (SD)
Male 00	91.12(8.00)	93.76 (4.72)	19.76 (2.45)	27.61(3.52)	34.71 (4.61)	93.27 (8.07)	45.69 (4.78)	19.71 (2.63)	27.88 (4.39)	33.23 (5.15)
Female 90	88.94(8.90)	41.16 (5.89)	20.58 (2.50)	27.19 (4.23)	32.10 (6.20)	93.48 (6.55)	44.93 (4.45)	20.01 (2.04)	28.51 (3.00)	32.98 (5.17)
Total	90.06 (6.35)	42.50 (5.44)	20.16 (2.49)	27.41 (3.85)	33.40 (5.57)	93.42 (7.03)	45.16 (4.55)	19.92 (2.23)	28.32 (3.47)	33.06 (5.12)

**TABLE 6: MEANS AND REPORTED RATES OF ABUSE SUBTYPE**

Trauma Subtypes	Amount of Abuse	Mean	N	%
Emotional Neglect	Low	5.00	182	82%
	Moderate	9.25	18	8.1%
	High	14.21	22	8.9%
Physical Neglect	Low	5.00	183	82.4%
	Moderate	7.06	20	9%
	High	9.95	19	8.6%
Emotional Abuse	Low	5.00	199	89.6%
	Moderate	7.52	12	5.4%
	High	11.15	11	5%
Physical Abuse	Low	5.00	192	86.4%
	Moderate	6.53	15	6.8
	High	9.43	15	6.8
Sexual Abuse	Low	5.00	194	87.4%
	Moderate	5.93	18	8.1%
	High	8.42	10	4.5%

**TABLE 7: INTERACTION EFFECTS OF TRAUMA SUBTYPE AND CHILDHOOD TRAUMA ON AUTONOMY AND ANXIETY**

Type	$\beta$	SE B	T	P	Lower Limit (95%) Confidence Interval	Upper Limit (95%) Confidence Interval
<b>DV=Anxiety</b>						
Childhood Trauma	5.63	5.23	1.08	.28	-4.68	15.93
Emotional Abuse	1.14	.54	2.12	.04	-8.23	-1.34
Childhood Trauma* Emotional Abuse	-0.74	.63	-1.18	.24	-1.97	.49
Childhood Trauma	-10.52	6.26	-1.68	.09	-22.86	1.81
Physical Abuse	-2.14	.94	-2.28	.02	-4.00	-.29
Childhood trauma*Physical Abuse	2.38	.99	2.4	.02	.42	4.34
Childhood Trauma	32.83	37.23	.88	.38	-40.58	106.24
Sexual Abuse	5.98	7.4	.81	.42	-8.6	20.57
Childhood trauma*Sexual Abuse	-5.93	7.70	-.80	.42	-20.52	8.67
Childhood Trauma	3.11	4.60	.67	.50	-5.97	12.18
Emotional Neglect	-0.07	.37	-.20	.84	-.80	.65
Childhood trauma* Emotional Neglect	0.03	.44	.06	.95	-.85	.90
Childhood Trauma	-3.03	5.82	-.52	.60	-14.50	8.44
Physical Neglect	-0.97	.70	-1.38	.17	-2.35	.41
Childhood trauma*Physical Neglect	1.01	.788	1.3	.20	-.54	2.6
<b>DV=Autonomy</b>						
Childhood Trauma	-3.39	3.95	-.86	.39	-11.17	4.40
Emotional Abuse	0.05	.32	.17	.87	-.57	.68
Childhood Trauma* Emotional Abuse	-0.04	.41	-.11	.92	-.85	.77
Childhood Trauma	-4.98	4.38	-1.13	.28	-13.61	3.66
Physical Abuse	-0.32	.56	-.58	.57	-1.42	.78
Childhood trauma*Physical Abuse	0.29	.64	.45	.65	-.97	1.54
Childhood Trauma	-21.26	34.77	-.61	.54	-89.82	47.29
Sexual Abuse	-3.86	6.92	-.56	.58	-17.50	9.78
Childhood trauma*Sexual Abuse	-3.69	6.92	.53	.60	-9.95	17.34
Childhood Trauma	-2.09	3.88	.54	.59	-5.57	9.74
Emotional Neglect	0.06	.20	.30	.76	-.33	.45
Childhood trauma* Emotional Neglect	-0.41	.31	-1.32	.19	-1.02	.20
Childhood Trauma	1.75	3.89	.45	.65	-5.91	9.42



Physical Neglect	0.13	.39	.33	.74	-.64	.90
Childhood trauma*Physical Neglect	.58	.49	-1.17	.24	-1.54	.39

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**TABLE 8: RELATIONSHIP BETWEEN CHILDHOOD TRAUMA  
SUBTYPE AMOUNT OF ABUSE AND AUTONOMY**

CTQ Subscale	Amount of Abuse	Mean	Effect	P	t	SE	Lower Limit (95%) CI	Upper Limit (95%) CI
Emotional Neglect	Low	5.00	0.33	.90	.12	2.72	-5.03	5.69
	Moderate	9.25	-1.71	.38	-1.00	1.71	-5.09	1.66
	High	14.21*	-3.76	.04	-2.09	1.80	-7.31	-0.21
Mediation						.0383	-0.09	0.08
Physical Neglect	Low	5.00	-1.13	.54	-.61	1.85	-4.78	2.52
	Moderate	7.06	-2.31	.11	-1.60	1.45	-5.17	0.55
	High	9.95*	-3.98	.04	-2.08	1.92	-7.76	-0.20
Mediation						.0843	-0.06	0.28
Emotional Abuse	Low	5.00	-3.60	.11	-1.60	2.25	-8.04	.84
	Moderate	7.52*	-3.72	.03	-2.18	1.71	7.08	-.35
	High	11.15*	-3.87	.04	-2.02	1.91	-7.63	-1.10
Mediation						.07	-.21	.04
Physical Abuse	Low	5.00	-3.54	.06	-1.88	1.88	-7.25	.16
	Moderate	6.53	-3.10	.06	-1.85	1.67	-6.40	.19
	High	9.43	-2.27	.38	-.088	2.57	-7.34	2.80
Mediation						.1620	-.11	.53
Sexual Abuse	Low	5.00	-2.80	.05	-1.99	1.41	-5.59	-.02
	Moderate	5.93	.63	.92	.97	6.45	-12.10	13.34
	High	8.42	9.82	.68	.42	23.57	-36.65	56.29
Mediation						.60	-2.07	.31

**TABLE 9: INTERACTION EFFECTS OF TRAUMA SUBTYPE AND CHILDHOOD TRAUMA ON AUTONOMY**

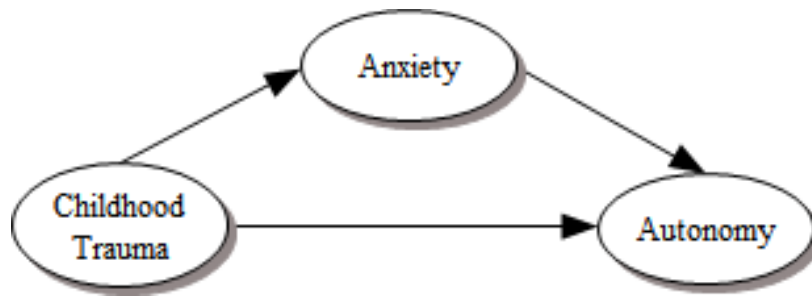
Type	$\beta$	SE B	T	Lower Limit (95%) Confidence Interval	Upper Limit (95%) Confidence Interval
<b>DV=Anxiety</b>					
Childhood Trauma	5.46	5.18	1.05	-4.77	15.68
Gender	4.20	1.83	2.29	.59	7.81
Childhood Trauma* Gender	-1.14	3.05	-.38	-7.16	4.87
<b>DV=Autonomy</b>					
Childhood Trauma	-0.12	4.15	-.03	-8.30	8.06
Gender	-0.66	1.43	-.05	-2.89	2.75
Childhood Trauma* Gender	-2.33	2.54	-.92	-7.35	2.68

**TABLE 10: INTERACTION EFFECT OF GENDER AND CHILDHOOD TRAUMA ON AUTONOMY**

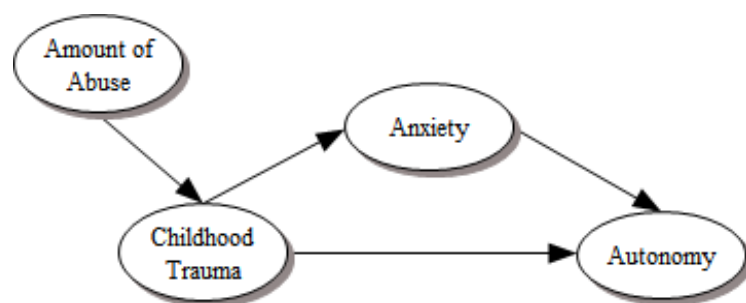
<b>Gender</b>	<b>Effect</b>	<b>SE</b>	<b>T</b>	<b>P</b>	<b>Lower Limit (95%) Confidence Interval</b>	<b>Upper Limit (95%) Confidence Interval</b>
Male	-2.45	1.92	-1.228	.20	-6.23	1.32
Female	-4.79	1.75	-2.74	.01	-8.23	-1.34

**Conceptual Diagrams:**

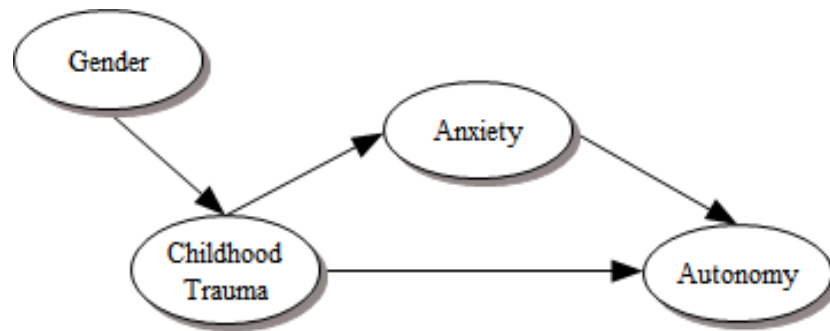
**DIAGRAM 1: ANXIETY AS A MEDIATOR OF CHILDHOOD TRAUMA ON AUTONOMY**



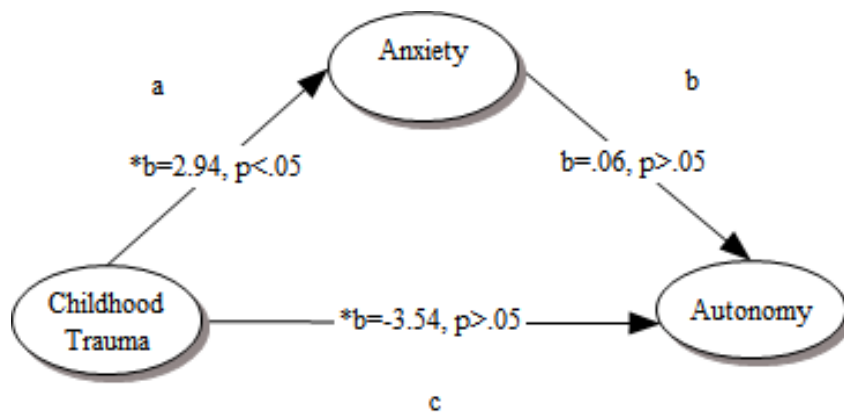
**DIAGRAM 2: MODERATED EFFECTS OF SEVERITY  
CHILDHOOD TRAUMA ON AUTONOMY**



**DIAGRAM 3: GENDER AS A MODERATOR OF THE  
RELATIONSHIP BETWEEN CHILDHOOD AND AUTONOMY**

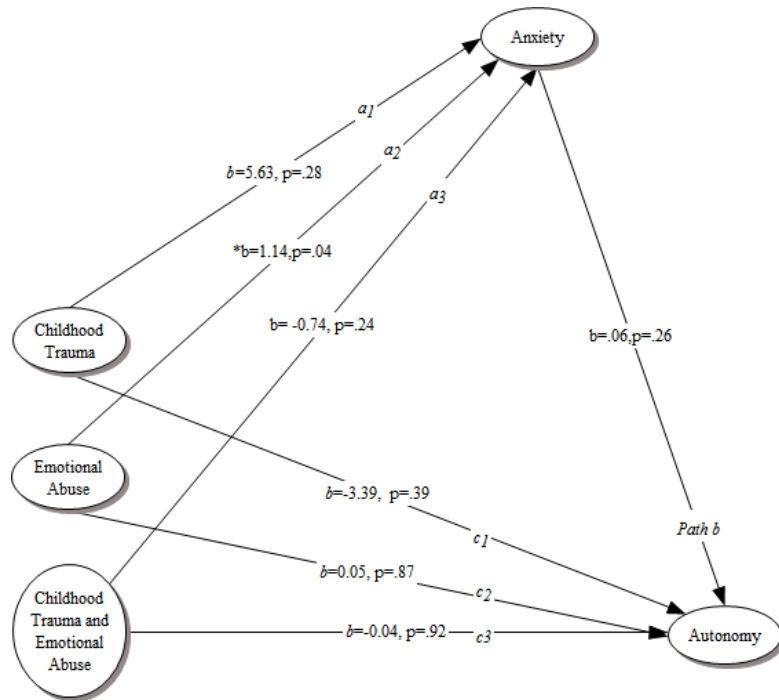


**FIGURE 1: EFFECTS OF CHILDHOOD TRAUMA ON  
AUTONOMY AND ANXIETY**

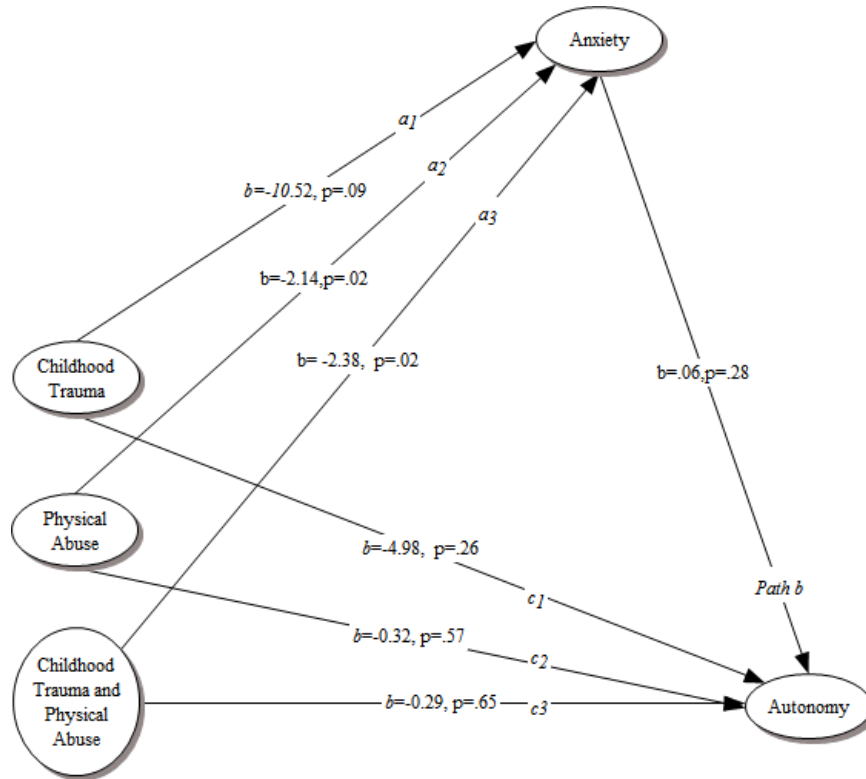




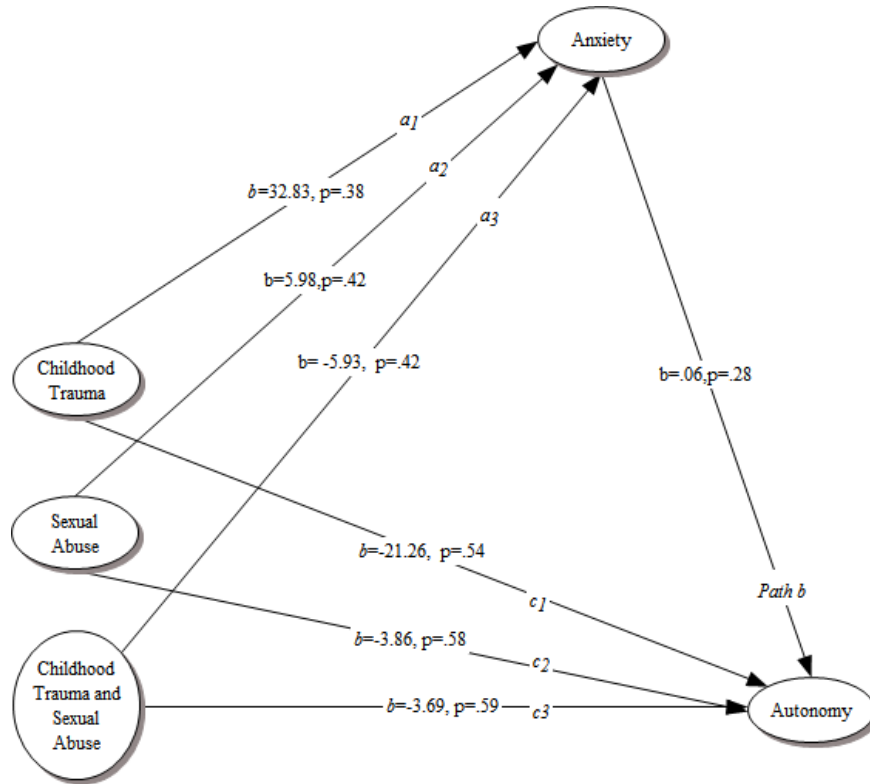
**FIGURE 2 - 01: MODERATED INTERACTION EFFECTS OF EMOTIONAL ABUSE SEVERITY ON AUTONOMY AND ANXIETY**



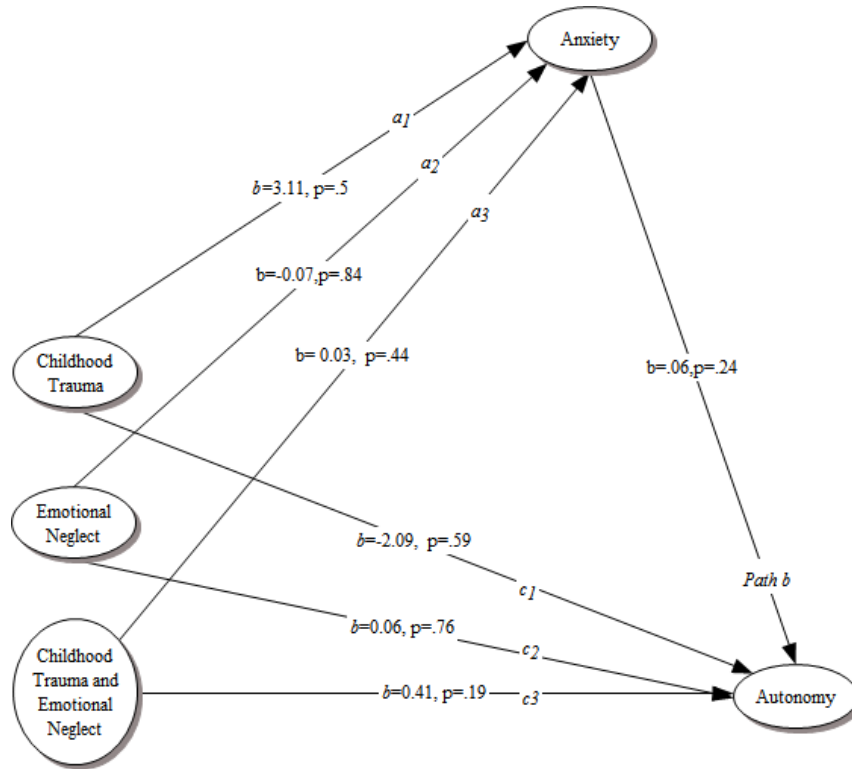
**FIGURE 2-02: MODERATED INTERACTIONS EFFECTS OF PHYSICAL ABUSE TO AUTONOMY AND ANXIETY**



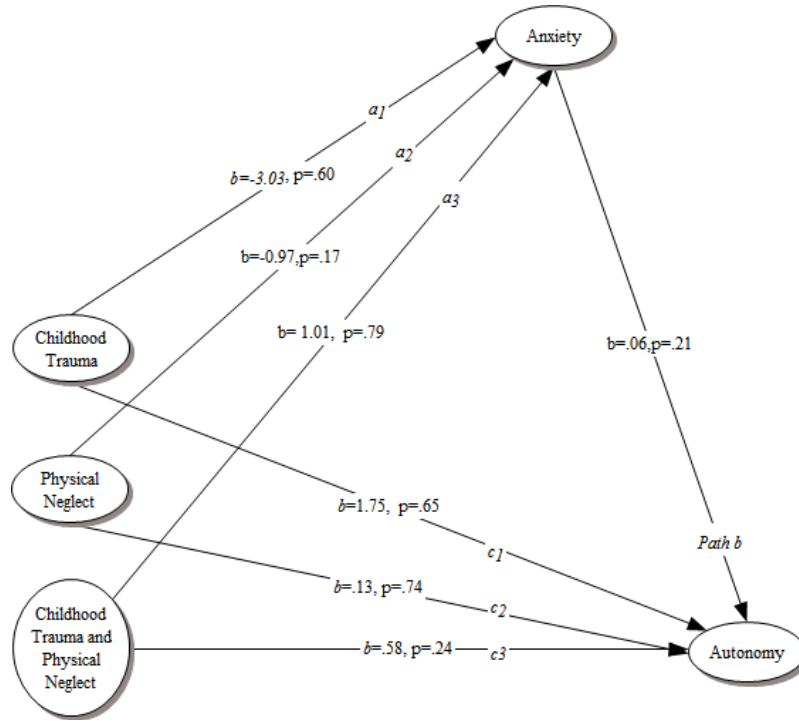
**FIGURE 2-03: MODERATED INTERACTION EFFECTS OF SEXUAL ABUSE TO AUTONOMY AND ANXIETY**



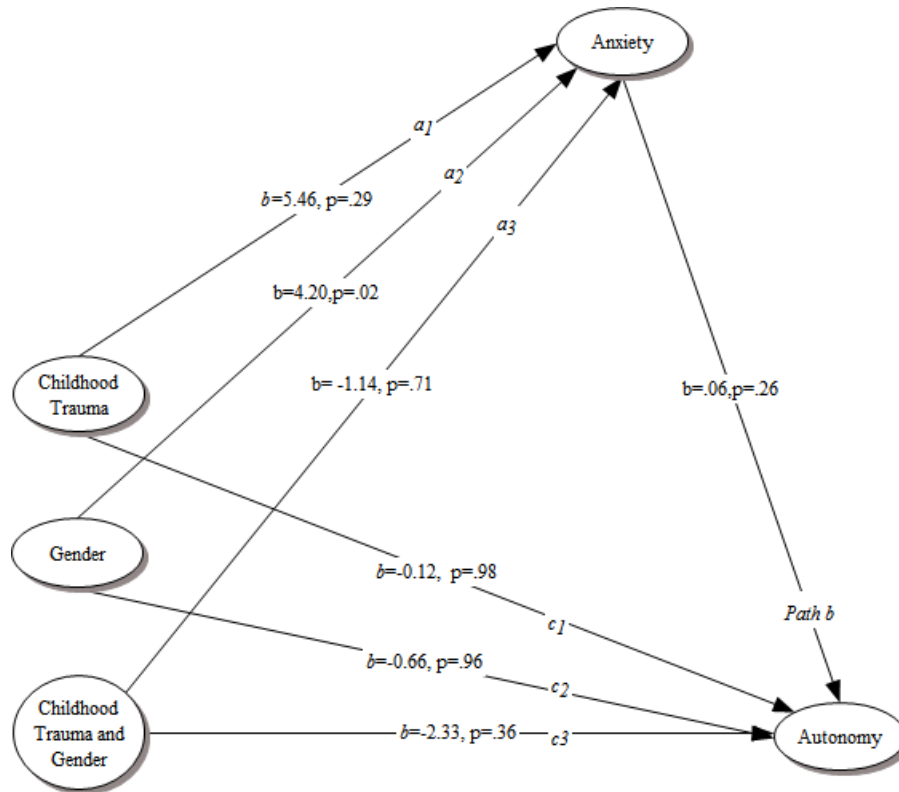
**FIGURE 2-04: MODERATED EFFECTS OF EMOTIONAL NEGLECT TO AUTONOMY AND ANXIETY**



**FIGURE 2-05: MODERATED INTERACTION EFFECTS OF PHYSICAL NEGLECT TO AUTONOMY AND ANXIETY**



**FIGURE 3: MODERATED INTERACTION EFFECTS OF GENDER AND CHILDHOOD TRAUMA ON AUTONOMY**



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