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Gender, Attachment Patterns, and Mental Representations of Parents and Self as Predictors of Early Adolescents' Trauma Symptoms

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Gender, Attachment Patterns, and Mental Representations of Parents and Self as

Predictors of Early Adolescents' Trauma Symptoms

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Abstract

Gender, attachment patterns and mental representations of close relationships have not previously been used to predict trauma symptomatology in early adolescents. In this study, 109 eighth grade students ages 12-13 (44% female) were recruited from a private Manhattan middle school for academically advantaged, ethnically diverse students. The study took place over the course of four years, with each new group of participants providing data in September of their eighth grade year. Participants reported on trauma symptoms and the affective valence of their mental representations of self and parents, and school staff reported on participants' attachment patterns. While boys reported more positive affective valence of their parental and self mental representations and were reported to have less secure attachment, gender differences were not found regarding childhood trauma symptoms. There were significant negative correlations between preoccupied attachment and affective valence of parental and self mental representations as well as significant positive correlations between incoherent/disorganized and preoccupied attachment, respectively, and childhood trauma symptoms. Overall, incoherent/disorganized attachment predicted avoidance symptoms and hyperarousal, and preoccupied attachment predicted re-experiencing symptoms. Considering girls only, incoherent/disorganized attachment and affective valence of self mental representations were both predictive of childhood trauma symptoms, and preoccupied attachment predicted re-experiencing symptoms. These results indicate that therapists must take into account both attachment quality and mental representations for middle schoolers when treating childhood trauma symptoms. Considerations regarding gender, attachment, and mental representations when treating early adolescents experiencing trauma symptoms are discussed.

Gender, Attachment Patterns, and Mental Representations of Parents and Self as Predictors of

Early Adolescents' Trauma Symptoms

Childhood trauma is a serious issue that can have a major negative impact on subsequent

development for many youth during important stages of development. It is estimated that nearly

half of children experience a potentially traumatic event (Finkelhor, et al., 2013). These events

are referred to as Adverse Childhood Experiences (ACEs; Weems et al., 2021). ACEs do not

lead directly to the development of psychopathology, but rather, they indicate who is more at risk

for developing symptomatology related to these potentially traumatic experiences (Weems et al.,

2021). Common ACEs include, but are not limited to, household dysfunction, criminality,

poverty, emotional abuse, sexual abuse, and neglect that occurred during childhood (Hays-Gurdo

et al., 2021). According to Briggs et al. (2021), certain ACEs such as sexual abuse are more

likely to lead to the development of psychopathology, specifically posttraumatic stress disorder

(PTSD). PTSD is "a psychiatric disorder involving development of disturbing/distressing

symptoms after exposure to a traumatic event and is associated with considerable functional

impairment and comorbidity" (Foa et al., 2018, p. 2). These experiences have potentially

negative developmental aspects such as difficulties with attachment, behavioral control, and

cognition (Cook et al., 2017). Sixteen percent of children who experience a traumatic event

under 18 qualify for a diagnosis of Posttraumatic Stress Disorder (PTSD; Alisic et al., 2014).

While some have developed resilience programs for those exposed to potentially

traumatic events, the optimal strategy of preventing PTSD for those who have experienced

trauma has lacked consensus in the psychological community (Skeffington et al., 2016). It can

also sometimes be difficult to implement resilience programs for those who are not identified as

needing mental health intervention (Linares et al., 2017). While the majority of children

experience traumatic events and do not meet criteria for PTSD, early adolescents in particular have developmentally specific risks and symptomatology if trauma symptoms are not addressed. PTSD symptoms exacerbate the normal instability of their early adolescent impulsivity, manifested as "difficulties in regulation of affect and impulses, cognitive functioning, dissociation, somatization, relationships, and sense of self" as well as identity diffusion characteristic of this age (Levy, 2019, p. 1).

According to the National Center for PTSD (Hamblen & Barnett, 2014), early adolescents with PTSD are more likely than children or adults with PTSD to act out aggressively and impulsively. They are also more likely to incorporate recurring thoughts of trauma into their daily lives. These traumatic experiences also may have long-lasting psychological consequences if not appropriately treated in early adolescence. Adverse childhood experiences such as abuse, neglect, and parental loss are correlated with more psychotic symptoms and hospitalizations later in life compared to those who did not experience these types of traumatic events (Read et al., 2004; Varese et al., 2012). Research also indicates that PTSD contributes to adolescent cannabis use disorder (Cornelius et al., 2010) and has a high comorbidity with adolescent substance misuse in general (Zetlin, 1999). In addition, adolescent girls diagnosed with PTSD were more likely to have changed neural pathways affecting emotional processing than other girls (Cisler et al., 2013). All these factors can affect the well-being of early adolescents during their development, but one factor that has been shown to affect duration and severity of trauma symptoms is attachment pattern.

Attachment Patterns and Trauma

According to Bowlby (1973), early attachment relationships between the caregiver and infant can play a role in the child's socioemotional development and future

relationships. Bowlby argued that there are two types of attachment: secure and insecure. People with secure attachment tend to feel safe and confident that their needs will be met and tend to feel more confident in their relationships, which can lead to more positive socioemotional competence, cognitive functioning, physical health, and mental health (Ranson & Urichuk, 2008). Insecure attachment, which can be further classified as preoccupied, dismissing, and incoherent/disorganized attachment, is defined by distrust of the caregiver and the fear that a child's needs will not be met (Mayseless, 1996). People with insecure attachment report lower levels of socioemotional competence, cognitive functioning, physical health, and mental health compared to those with secure attachment (Ranson & Urichuk, 2008). Research has indicated that having an insecure or secure attachment in infancy can influence relationships and world perception even into adulthood (Waters et al., 2000).

These four attachment patterns vary based on how children form internal working models of their relationship to the primary caregivers in infancy (Westen et al., 2006). When separated from an attachment figure, those with secure attachment expect significant others to be available and sensitive to their needs if issues arise because of emotionally responsive primary caregivers. Those with preoccupied attachment tend to seek out attachment figures to have their needs met but tend to overwhelm others and fail to get soothed when they do, as those with preoccupied attachment tend to have parents who inconsistently meet their needs. Dismissing attachment is characterized by a relative indifference to attachment figures when they have emotional or physical needs because of primary caregivers who are rejecting. Incoherent/disorganized attachment, on the other hand, is marked by inconsistent and disorganized response patterns when reunited with an attachment figure and is typically experienced by children who have experienced abuse or neglect from their primary caregivers.

Research has previously examined trauma symptoms and attachment patterns in adult populations. O'Connor and Elkilt (2008) previously found that secure attachment was significantly associated with lower levels of PTSD symptoms. Other studies have supported the link between insecure attachment and more trauma symptoms. In combat veterans, those who endorsed avoidant or ambivalent attachment patterns were associated with more PTSD symptoms (Renaud, 2008). Overall, a meta-analysis of the literature found that adults with secure attachment reported lower levels of PTSD symptoms than those with insecure attachment and that, while dismissing attachment had a nonsignificant effect on PTSD, preoccupied and disorganized attachment patterns did have a medium effect size on PTSD symptoms (Woodhouse, Ayers, & Field, 2015).

Less is known, however, about the relationship between attachment and trauma symptoms in adolescence. One study found that in adolescence, while self-reported traumas were significantly related to dissociative symptoms, self-reported attachment quality is more strongly related to dissociative symptoms than to self-reported traumatic experiences (Nilsson, Holmqvist, & Jonson, 2011). Another study examining the relationship between attachment pattern and trauma symptoms in adolescents in three Nordic countries found that higher levels of trauma symptoms were associated with different attachment patterns, depending on which country the population was sampled from (Petersen & Elkit, 2013). There is research to suggest that there is a relationship between incoherent/disorganized attachment pattern and traumatic symptoms, but little is still known about other attachment patterns and their relationships with trauma symptoms (Gander et al., 2020; Joubert, Webster, & Hackett, 2012). The same could be said about attachment and mental representations.

Mental Representations, Attachment, and Trauma

According to Mitchell and Black (2016), during infancy and childhood, people attach to certain objects (such as their parents) that serve as prototypes for future relationships. The internalization of these objects and what they represent guide future interactions with others, both positively and negatively, based on how they relate to the internalized objects. This theory of development is referred to as object relations theory. Within object relations theory, mental representations are schemata that facilitate how children and adolescents perceive themselves and interpersonal relationships and interact with the people around them (Blatt, Auerbach, & Levy, 1997).

Expectations of others' responses toward them (as manifested in mental representations) logically determine whether trauma will be experienced more or less severely. Positive mental representations can protect a person from responding to and rebounding from trauma in a maladaptive or debilitating way. A review of the use of the Object Relations Inventory (ORI), a method used to collect mental representations, found that adults with more positive mental representations of themselves and others had more positive outcomes in clinical and general settings than those with more negative mental representations (Huprich et al., 2016). This finding is also consistent in early adolescents. Research has indicated that early adolescents with PTSD have poorer representations of self and impaired views of parental relationships than others who do not have PTSD (Shafran et al., 2016).

Addressing negative mental representations in the treatment of PTSD may result in better outcomes for early adolescents. Positive mental representations can have a positive effect on youth dealing with stressful situations. Those who have positive mental representations of an attachment figure recover faster from upsetting thoughts and memories (Selcuk et al., 2012). Regarding the self, people who have more positive self mental representations were able to self-

soothe and view others as able to provide comfort, while those with more negative self

mental representations were not able to self-soothe or view others as able to provide comfort

(McGowan, 2002). Also, patients who experienced increased differentiation-relatedness of

mental representations of parents and the therapist also experienced better clinical outcomes in

patients with severe psychopathology (Blatt & Auerbach, 2001).

Research has indicated that attachment and mental representations are connected

throughout the lifespan (Thompson, 2008). For example, those with secure attachment and

avoidant attachment had more positive mental representations of the self than those with anxious

attachment (Mikulincer, 1995). In addition, those with secure attachment also had more positive

parental mental representations than those with insecure attachment (Levy et al., 1998). These

relationships may be different, however, when considering gender differences and how they

relate to trauma symptoms.

Gender Differences in Trauma and PTSD

Currently in society, especially among children and adolescents, gender has become a

more fluid structure, with many early adolescents identifying as nonbinary or gender-fluid

(Diamond, 2020). While gender fluidity and trauma have not been well researched, binary

gender differences regarding trauma experiences and PTSD have been well documented in the

literature. For example, women are more likely to experience PTSD than men after a traumatic

event **(**Breslau et al., 1998) as well as partial PTSD symptoms (Dell'Osso et al., 2011). These

gender differences hold up for adolescent populations as well such that early adolescent girls are

more likely to experience PTSD symptoms than early adolescent boys (Alisic et al., 2014). One

explanation is the difference in schemata, as research indicates that women are more likely to

view the world as more dangerous than men after potentially traumatic experiences, which may

be a result of an increased sensitivity to biological stress responses (Olaf, 2017; & Granvold, 2005). Regarding early adolescents specifically, early adolescent girls also tend to internalize trauma, blame themselves for traumatic events, and feel more guilty about what happened to them compared to early adolescent boys (Levy, 2019). These differences also may be related to how PTSD is expressed differently by gender.

Differences in how males and females react to trauma and express PTSD symptoms have also been noted in the research. One study found that women are more likely to express symptoms of guilt, perhaps because they turn feelings toward themselves, while men are more likely to express symptoms of anger, perhaps to remove negative feelings (Galovski et al., 2013). In military veterans, men are also more likely to become emotionally numb than women when experiencing PTSD (Hall et al., 2012). After the 9/11 World Trade Center attacks, men were more likely to experience elevations in cortisol from re-experiencing symptoms, while women did not experience cortisol increases from re-experiencing symptoms (Dekel et al., 2013).

We also expect this difference to be prevalent at this early adolescent stage because of age-related differences in the maturity of gender. Puberty on average begins at age 11 for girls, while it begins at age 13 for boys (Rogol et al., 2002). A review by Garza and Jovanovic (2017) indicates that these biological differences during early adolescence might impact the development of PTSD. PTSD has been linked to female gonadal hormones and the menstruation cycle, which become prevalent in early adolescent girls during puberty. In addition, the authors mention that estrogen pathways might add to the risk for PTSD, which also begins to develop during early adolescence for girls. Gender differences in PTSD might be explained by the biological processes that begin during early adolescence, indicating that research is necessary at

this stage of development to identify differences and predictive factors for PTSD and trauma symptoms.

Overall, few research studies have examined the relative contributions of attachment patterns, mental representations, and gender to the prediction of childhood trauma symptoms in early adolescents. One study by Ortigo et al., (2013) examined how object relations mediates the relationships between attachment patterns, social cognition, and PTSD symptoms in an adult population. This study found that object relations mediate the relationship between attachment and PTSD symptoms.. This study, however, did not examine an adolescent population nor gender differences in depth.

The purposes of this study are 1) to examine gender, attachment patterns, and mental representations as predictors of trauma symptoms in early adolescents and 2) to determine whether gender might moderate these predictors. Data regarding early adolescent mental representations and their trauma symptoms in a nonclinical sample has not been studied. This study serves to examine the relationship between early adolescents' attachment patterns and mental representations of parents and self in a typical adolescent population. Research has not examined links between mental representations and attachment patterns, respectively, and trauma symptoms based on gender differences in early adolescents.

Based on the previous research, we hypothesized the following. First, we hypothesized that girls would have more negative affective valence of their mental representations—mother, father, and self – than boys. Also, girls would have greater childhood trauma scores than boys on total trauma, re-experiencing, avoidance, and hyperarousal. Second, we hypothesized that the affective valence of mental representations would be negatively correlated with childhood trauma scores. Third, we hypothesized that

insecure attachment patterns would be positively correlated with trauma symptoms. Fourth, we hypothesized that girls would show a different pattern of significant correlations between the affective valence of mental representations and attachment patterns, respectively, and childhood trauma scores than boys. Fifth, we hypothesized that both insecure attachment patterns and affective valence of parental and self mental representations will predict trauma symptoms and that the pattern of findings will differ between boys and girls.

Method

Participants

One-hundred nine students were recruited from a nonsectarian, private middle school, grades 6-8, for academically gifted, economically less advantaged adolescents from diverse backgrounds in New York City. Adolescents in the study were ages 12-13 (grade 8) and identified as Latin American (23.15%), Caribbean (17.59%), Asian (26.85%), African (16.67%), European (1.85%) and "American" (8.33%), while the rest reported either other or mixed ethnic backgrounds (5.56%) with 81.65% of participants immigrating to the United States. Forty-four percent ($n = 48$) of the children identified as female.

A total of 81.48% of participants were first-generation Americans who were children of immigrants to America, and 74.07% came from two-parent households with 25.93% coming from single-parent households. The study took place over the course of four years (2015-2016, 2016-2017, 2017-2018, 2018-2019). The first year included 25 students, the second year 24 students, the third year 42 students, and the fourth year 18 students.

Measures

Child PTSD Symptom Scale (CPSS)

The CPSS (Foa et al., 2001) is a 24-question self-report questionnaire designed to assess frequency of PTSD symptomatology in children and adolescents that takes approximately 10 minutes to complete. Part 1 consists of 17 questions answered on a 4-point Likert scale to denote how often these symptoms occurred, ranging from 0 ("not at all"), 1 ("once a week or less"), 2 ("2 to 4 times a week"), to 3 ("five or more times a week"). This section was also divided into three separate sections that examine specific symptomatology such as re-experiencing trauma (e.g., upsetting thoughts), avoidance (e.g., emotional distance), and hyperarousal (e.g., difficulty concentrating), all of which are defining symptoms of PTSD (American Psychiatric Association, 2013). Total scores were calculated by summing all scores (range: 0-51). Re-experiencing was calculated by summing questions 1-5 (range: 0-15); avoidance was calculated by summing questions 6-12 (range: 0-21); and hyperarousal was calculated by summing questions 13-17 (range: 0-15). Part 2 of this instrument was not utilized for this study. This instrument took approximately 10 minutes to complete

The measure is considered valid, as indicated by convergent validity with another PTSD measure for children, the Child PTSD Reaction Index (CPTSD-RI; $r = .80, p < .001$). Discriminant validity was also shown with child measures of depression and anxiety, which had significantly lower correlations than measures on the CPTSD-RI. The CPSS has also been shown to be a reliable measure. Coefficient alphas were .89 for the total score, .80 for re-experiencing, .73 for avoidance, and .70 for hyperarousal. The CPSS also showed test-retest reliability, indicating a kappa of .84 for the total score, .85 for re-experiencing, .63 for avoidance, and .76 for hyperarousal. The CPSS subscales (re-experiencing, avoidance, and

hyperarousal) were correctly classified in 95% of cases utilizing discriminant function

analysis (Foa et al., 2001).

Object Relations Inventory (ORI)

The ORI (Blatt et al.,1979) is an open-ended method used for the assessment of a

person's mental representations of self and significant figures. Participants are asked to describe

particular figures and write open-ended responses as they see fit. For this study, we asked

participants to describe their mother, father, and themselves. This procedure took approximately

five minutes to complete. Responses were then coded for the affective valence of these three

mental representations. The original purpose of the ORI was to collect information about a

person's understanding and representations of others and the self and did not include normative

data to serve as a benchmark for comparison (Huprich et al., 2016). In order to appropriately

code for affective valence of mental representations, a coding system specifically designed for

this task was used.

To determine the affective valence of written responses to the ORI, we used a modified

version of the Positive and Negative Affect Schedule, Short Form (PANAS-SF; Watson, Clark,

& Tellegen, 1988). The PANAS-SF includes 20 descriptions of how children have felt the past

week with 10 of the descriptors being positive (e.g., proud) and 10 of the descriptors being

negative (e.g., upset). Participants are asked how often they felt this way over the past week on a

scale of 1 ("very slightly or not at all") to 5 ("extremely"). The positive and negative descriptors

are then summed for a positive and negative affect score. The measure has been shown to be

reliable: the coefficient alpha was .89 for positive affect and .85 for negative affect. After a week

break, no significant differences were found between scores, indicating test-retest reliability.

Discriminant validity has also been shown, as positive and negative affect scores account for only 1% to 5% of the variance of each other's scores (Watson et al., 1988).

Although this measure is typically administered as a self-report measure, we used it as a template for coders to identify the positive and negative affects expressed in the ORI's written responses. Because participants were not asked how they felt on a weekly basis, each descriptive word or phrase was instead given a positive (+1) or negative (-1) score within each response based on valence of descriptors the word or phrase most resembled from the PANAS-SF. For example, the phrase "she is amazed of what I accomplished" is closest to the phrase "proud" and would receive a +1 rating, while the phrase "she gets angry at me often" is closest to the phrase "upset" and would receive a -1 rating. The affective valence of each mental representation was determined by subtracting the total negative affective valence score from the total positive affective valence score for each description within the ORI. For example, a written response with two positive ratings and one negative rating would receive a net affective valence score of +1 (+2-1). Coders were six psychology students blind to the study's hypotheses who coded independently of each other and established interrater reliability (intraclass correlation = .96). Coders were randomly assigned to score mental representations of the mother, father, and self on the ORI.

Adolescent Attachment Questionnaire (AAQ)

The Adolescent Attachment Questionnaire (AAQ; Westen et al., 2006) was utilized by the school staff to determine attachment pattern for the participants. The school staff answered 37 Likert-type items on a scale ranging from 1 (not true) to 7 (very true) regarding similarities of specific aspects of attachment patterns. Items that corresponded with the four attachment patterns (secure, preoccupied, dismissing, and incoherent/disorganized) were summed to create a

continuous variable for each attachment pattern, where higher reported scores indicated more similarity to the attachment pattern. Items related to the three insecure attachment patterns (preoccupied, dismissing, and incoherent/ disorganized) were also summed to create a variable for insecure attachment, where higher scores indicated higher overall levels of insecure attachment. In addition, a variable for total attachment was made by summing the total scores of items related to secure attachment and reverse-scored responses for items related to insecure attachment. For this variable, higher scores resulted in higher overall levels of secure attachment.

The measure is considered reliable and valid (West et al., 1998). When comparing the different patterns for test-retest reliability, Cronbach alpha coefficients ranged between .62 and .80. It is also considered valid. The AAQ based its items on the Adult Attachment Interview (AAI). The results indicated that attachment patterns determined using the AAI corresponded with attachment patterns using the AAQ. In addition, discriminant validity was determined as items related to secure, preoccupied, dismissing, and incoherent/disorganized attachment patterns were found to be significantly different using independent t-tests.

Procedure

The school principal notified students of this study as part of the school curriculum for those interested. Students voluntarily participated and were not screened for prior trauma. For those wanting to participate, the researchers obtained assent from the student regarding participation and the assessment instruments that would be collected in September. Students assented, and their guardians consented to participation. The principal also provided a letter permitting student participation in this research study. The Institutional Review Board of the first author's university approved this study. Demographic information was collected from school records on each child.

Each September the study was conducted, 12 to 13-year-old students in eighth grade decided if they wanted to participate in the study. The ORI and the CPSS were administered to participants in September to test the hypotheses. School staff completed the AAQ to determine participants' attachment patterns. Participants were ensured confidentiality. A study ID was assigned to each participant so they could complete the instruments without disclosing their names. Students received no compensation for participation.

Results

Gender Differences on Attachment Patterns, Affective Valence of Mental Representations, and Childhood Trauma Symptoms

Gender differences regarding attachment patterns and the affective valence of mental representations were found (see Table 1). In this sample, girls reported to have higher secure attachment scores than boys ($t[107] = -2.04$, $p = .049$). Compared to girls, boys reported more positive affective valence of maternal mental representations ($t[107] = 1.50$, $p = .007$), more positive affective valence of paternal mental representations ($t[107] = 1.61$, $p = .001$), and more positive affective valence of self mental representations ($t[107] = 1.23$, $p = .017$). No differences were found regarding childhood trauma symptoms (see Table 1).

Correlations Among Attachment Patterns, Affective Valence of Mental Representations, and Childhood Trauma Symptoms

Significant correlations among attachment patterns, affective valence of mental representations,, and childhood trauma symptoms for the total sample, boys, and girls are reported in Tables 2-4. All significant correlations were entered into a series of multiple regression analyses to determine which variables significantly predicted childhood trauma symptoms after controlling for all the other significant variables.

Predictors of Childhood Trauma Symptoms

The significant correlations from Tables 2-4 were entered as predictors of childhood trauma symptoms into 12 regression models. Models were used to examine predictors for total childhood trauma, re-experiencing trauma, avoidance symptoms, and hyperarousal, respectively, for the total sample, boys, and girls respectively (see Table 4).

For the total sample, significant regressions were found for total childhood trauma (F [3, 104] = 5.56, p <.001), re-experiencing trauma ($F,$[3, 105] = 5.17, p = 002), avoidance symptoms (F [4, 104] = 4.93, p = .001), and hyperarousal (F [4, 104] = 4.91, p = .001). For re-experiencing trauma, significant effects were found for preoccupied attachment (β = 2.29, p = .02). When examining avoidance symptoms, significant effects were found for incoherent/disorganized attachment (β = 2.03, p = .045). For hyperarousal, significant effects were found for incoherent/disorganized attachment (β = 2.22, p = .03) and affective valence of maternal mental representations (β = -2.33, p = .02).

For girls, significant regressions were found for childhood trauma (F [4, 43], = 7.81, p < .001)$,$ re-experiencing trauma (F [3, 44] = 4.63, p = .007), avoidance symptoms (F [4, 43] = 6.52, p < .001), and hyperarousal (F [4, 43] = 3.77, p = .01). When examining total childhood trauma symptoms, significant effects were found for incoherent/disorganized attachment (β = 2.18, p = .04) and for affective valence of self mental representations (β = -3.52, p = .001)   For re-experiencing trauma, significant effects were found for preoccupied attachment (β = 2.27, p = .03). When examining avoidance symptoms and hyperarousal, significant effects were found for affective valence of self mental representations (β = - 3.45, p = .001; β = -2.11, p = .04, respectively).

Discussion

The results indicated that there was partial support of the hypotheses. Differences existed between boys and girls regarding affective valence of mental representations, as girls exhibited more negative affective valence of paternal, maternal, and self mental representations than boys. This finding is supported by the literature, as adolescent girls tend to have lower self-esteem and more negative self mental representations than boys (McClure et al., 2010). Also, girls who have poorer parental relationships and mental representations also have lower self-esteem and more negative self mental representations (Colarossi & Eccles, 2000). No differences were reported between boys and girls for total trauma, re-experiencing, avoidance, and hyperarousal, contrary to our hypothesis.

These unexpected findings about trauma symptoms may be the result how much trauma symptoms impact day-to-day life. Although many differences exist between men and women regarding PTSD and trauma symptoms, similarities do exist between men and women such as when men and women report how much trauma symptoms disrupt everyday life (Chung & Breslau, 2008). We did not examine the impact of trauma symptoms on everyday life in this study, but they may have been similar for this sample. Moreover, these gender differences might not manifest themselves until later adolescence or early adulthood. In addition, different aspects of personality such as the degree of neuroticism (as defined by Lawrence & Fauerbach, 2003) may affect the severity of trauma symptoms, regardless of gender.

The results also indicated that girls in this sample were more likely to have secure attachment than boys while also having more negative affective valence of parental and self mental representations. This difference in attachment is supported by the literature as a review by Gorrese and Ruggieri (2012) indicates that girls have a more secure attachment to their peers than boys do. Although they did not examine gender differences in parental attachment, the

review also indicated that there were significant correlations between peer attachment and parental attachment, indicating that those who reported more secure peer attachment were also likely to report more secure parental attachment.

Despite girls generally having more secure levels of attachment than boys during adolescence, Dahl (1995) argued that adolescence for females is a time when the relationship with the mother goes through dramatic changes within the psyche. During these changes, girls are more likely to relinquish the importance of the mother, causing conflict and lower affective valence of mental representations despite more secure levels of attachment. In addition, girls during adolescence have been shown to "disavow the self" and show more negative self representations during this development phase (Stern, 1991), which would explain the lower affective valence of maternal mental representations compared to boys.

When examining the multiple regression models for the overall sample, while the four models were predictive of total childhood trauma, re-experiencing symptoms, avoidance symptoms, and hyperarousal, predictors varied. Although no predictors were found for total childhood trauma, incoherent/disorganized attachment predicted hyperarousal and avoidance symptoms, while affective valence of maternal mental representations also predicted avoidance symptoms. Preoccupied attachment predicted re-experiencing trauma. Incoherent/disorganized attachment is characterized by simultaneous fear of the attachment figure and desire for security from that person (Duschinsky, 2018). Incoherent/disorganized attachment tends to predispose individuals to more serious and varying types of mental illness, including trauma symptoms such as hyperarousal and avoidance symptoms (Cassidy & Mohr, 2001). Given that mothers are usually the primary caregivers during childhood (Bornstein, 2013), the affective valence of maternal mental representations may be more influential in predicting trauma symptoms than

other mental representations when regarding hyperarousal. Because those exhibiting

incoherent/disorganized attachment patterns often react inconsistently and with fear as a result of

their disorganized parenting, they have not been able to internalize adequate self-soothing.

Trauma often triggers hyperarousal in individuals with this attachment pattern. Preoccupied

attachment has been characterized as a hyperactivating attachment strategy, whereby

preoccupied individuals may need to exaggerate their needs to have them met (Fraley et al.,

2006). Re-experiencing trauma symptoms may draw people toward them so they are able to get

their emotional needs met.

While no significant predictors were found in boys, the affective valence of self mental

representations predicted childhood trauma symptoms in girls. The literature suggests that

negative views of the self are positively correlated with many negative mental health outcomes

such as stress, overeating, and depressive mood (Martyn-Nemeth et al., 2009). These results

suggest that similar mechanisms may exist for PTSD; early adolescent girls are more likely to

internalize trauma than adolescent boys (Galovski et al., 2013; Levy, 2019). Given that girls have

lower affective valence of self mental representations than boys (McClure et al., 2010), this

difference might account for the higher levels of PTSD symptoms in girls at this age (Alisic et

al., 2014).

In addition, incoherent/disorganized attachment predicted total childhood trauma

symptoms in girls. Preoccupied attachment also predicted re-experiencing symptoms in girls.

These patterns in females are similar to patterns found in women with depression. One study

found that preoccupied and incoherent/disorganized attachment patterns both were correlated

with depressive severity in females (Reis & Grenyer, 2004). Trauma and depression can be

linked by rumination symptoms, specifically in female populations (Hall et al., 2019). Given the

similarities in mechanisms between depressive and trauma symptoms, it is also logical to conjecture that preoccupied and incoherent/disorganized attachment would be related to both depressive and trauma symptoms.

Rumination may also explain why these factors were predictive in girls and not in boys. Research has also indicated that females are more likely to ruminate about stressful situations than males (Mezulis et al., 2002). Because girls are more likely than boys to internalize trauma symptoms and blame themselves for traumatic events (Levy, 2019), they are also more likely to ruminate about trauma symptoms than boys, which may lead to higher levels of reported trauma symptoms.

Overall, these finding have implications for the treatment of childhood trauma and PTSD. Clinicians working with early adolescent patients who have experienced trauma symptoms may benefit from exploring attachment patterns with their patients. When working with early adolescent girls specifically, clinicians should also address self mental representations in addition to attachment patterns. By focusing treatment in areas that may predict trauma symptoms, such as attachment patterns and mental representations, clinicians may be able to adapt a treatment plan that encompasses additional factors that can optimize outcomes for the treatment of childhood traumatic symptoms.

Despite these significant findings, the study has limitations, including small sample size and the correlational nature of the relations studied. More research is needed to confirm that these findings are generalizable to other early adolescent populations. In addition, the correlational nature of this study does not suggest cause-and-effect relationships between trauma symptoms and mental representations of important relationships or attachment patterns. For example, it is unclear whether trauma symptoms cause more negative mental representations of

these important relationships or vice versa, or whether other mediators or moderators are responsible for these significant findings. More research is needed to clarify the relationships between trauma symptoms and mental representations and attachment patters in early adolescents. In addition, this study sample is only one specific age during early adolescence, so the ability to generalize to other ages in early adolescence is limited.

Another limitation of this study was the lack of further descriptions beyond positive and negative affects of the mental representations. Although the adaptation of the PANAS-SF was psychometrically reliable in identifying positive and negative affective valence, the adaptation of an open-ended assessment (ORI) using a close-ended coding system (PANAS-SF) meant that some responses did not have an obvious descriptor from the PANAS-SF. For example, the response "my mom is a nurse" describes the mother as a nurse. "Nurse", however, does not have an obvious corresponding descriptor on the PANAS-SF. These types of responses were not coded for affective valence. Despite these weaknesses, we believe we were able to appropriately identify the affective valence of most responses using this methodology. Future research should examine the specificity of these responses and create more identifiable categories as to the ways in which these responses are positive and negative as well as further expand upon current findings. Coding responses for level of differentiation-relatedness (e.g., identifying compromise and confusion in the self; Blatt et al., 1992) and mentalization (e.g., reflective function; Fonagy et al., 1998) would be two potentially productive options.

In conclusion, incoherent/disorganized attachment, preoccupied attachment, and affective valence of maternal mental representations appear to predict childhood trauma symptoms. In addition, developmental pathways to trauma symptoms seem to differ between boys and girls, as incoherent/disorganized attachment, preoccupied attachment, and affective valence of self

mental representations predicted childhood trauma symptoms in girls, but not in boys. Better understanding of these relationships may lead to more effective treatment for future clients and more positive outcomes for those experiencing trauma symptoms.

Future research should determine how to enhance girls' self- esteem and confidence in their ability to defend and take care of themselves. Examination of these relationships in more depth could allow for modification of treatments to create different windows to target specific relationship and symptom patterns. Better understanding of these relationships may lead to more effective treatment for future clients and more positive outcomes for those experiencing trauma symptoms. Further research also needs to be conducted on predictors of childhood trauma symptoms in boys such as peer relationships and support systems. Our findings suggest a blueprint for the treatment of early adolescent girls' childhood trauma symptoms.

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Table 1

Gender Differences Among Attachment Patterns, Affective Valence of Mental Representations, and Childhood Trauma Symptoms

Variables	Boys		Girls		Statistics
	M	*SD*	*M*	*SD*	*t*
Attachment					
Secure	3.66	1.51	4.20	1.25	-2.00[*]
Dismissive	3.28	1.56	3.00	1.08	1.06
Preoccupied	2.72	1.19	3.04	1.18	-1.42
Disorganized	2.49	1.20	2.39	1.02	.47
Insecure	2.85	1.10	2.83	.86	.15
Total	-.92	1.14	-.73	.86	-.95
ORI Variables					
Mother	2.61	3.21	1.11	2.21	2.76[**]
Father	2.21	2.65	.61	1.98	3.51[**]
Self	2.11	3.00	.88	2.08	2.42[*]
CPSS Variables					
Total Trauma	26.91	8.96	29.64	10.19	-1.48
Re-Experiencing	8.00	2.90	8.76	3.43	-1.25
Avoidance	10.55	3.69	11.71	5.00	-1.39
Hyperarousal	8.37	3.32	9.17	3.19	-1.27

Note: $N = 109$. [*]$p < .05$. [**]$p < .01$.