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When Childhood States Become Adult Traits: Trait Anxiety and Anger as Mediators Linking Childhood Maltreatment to Marital Outcomes in Midlife Adults

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Objective: Childhood maltreatment has been consistently linked to problematic marriages. The pathways, however, linking childhood maltreatment to marital problems over time remain understudied. The present study examined trait anger and trait anxiety as possible mediators linking childhood maltreatment to marital quality, support, and strain over a 9 year period. It was expected that both trait anger and trait anxiety would mediate each of the associations. **Method:** Data were from a secondary data analysis of Midlife Development in the United States. A sample of 596 adults (50.2% female) were included in the analysis. The Midlife Development in the United States study is a longitudinal data set and the present study used data from those who participated in the three waves of data collection over a 9 year period. Structural equation modeling and bias-corrected bootstrapping procedures were used to examine the indirect effects from childhood maltreatment to marital functioning via trait anxiety and trait anger. **Results:** Results of the structural equation modeling mediational model indicated that the bootstrapped indirect effects from childhood maltreatment to marital quality ($\beta = -.02$, 95% CI $-.054, -.005$) and marital support ($\beta = -.02$, 95% CI $-.054, -.007$) were significant through trait anxiety. Trait anxiety did not mediate the association between maltreatment to marital strain. Trait anger did not mediate any of the pathways. **Conclusions:** Trait anxiety was identified as possible mediator linking childhood maltreatment to marital support and quality. Addressing trait anxiety among midlife adults may be a point of clinical intervention to improve marriages over time.

Keywords: child maltreatment, trait anxiety, trait anger, marriage, longitudinal

Childhood maltreatment is a public health problem that can have lifelong repercussions. A meta-analysis examined the prevalence rates of childhood maltreatment in the United States and found that 24% of adults reported childhood physical abuse, 36.5% reported emotional abuse, 19.2% reported physical neglect, 14.5% reported emotional neglect, and 20.1% of women and 8% of men reported sexual abuse (Stoltenborgh et al., 2015). Adults who experienced maltreatment in childhood tend to report greater mental health problems as well as poorer interpersonal relationships with romantic partners, family members, and friends (Fitzgerald & Gallus, 2020). Research has noted that childhood maltreatment has a particularly detrimental effect on romantic relationships and marriages, impacting both the overall functioning of the relationship (Whisman, 2006) as well as specific dynamics and communication patterns (Whisman, 2014).

Research has begun to consider the pathways by which childhood maltreatment may influence adult romantic relationships and marriages. Several longitudinal studies have suggested that mental health problems may mediate the association between maltreatment and marital functioning, which is an umbrella term describing varying dimensions of adult intimate relationships such as conflict, sexuality, intimacy, and strain (DiLillo et al., 2009; Fitzgerald, 2021; Handley et al., 2019). These investigations, however, have been with predominantly younger adults with fewer studies focusing on midlife and older adults. This omission is important to address because marital functioning is a documented factor influencing the increasingly salient physical health problems common in midlife and older adults (Kiecolt-Glaser & Newton, 2001; Robles et al., 2014; Walen & Lachman, 2000). Additionally, existing research has focused on state level mental health problems and has largely neglected the role of trait-level mental health. Trait level anxiety and anger are defined by adult's general disposition to respond with anger or anxiety across situations that do not typically elicit those emotions (Spielberger 1983, 1996). Childhood maltreatment has been suggested to shape personality traits (e.g., Bolduc et al., 2018; J. G. Johnson et al., 1999) including trait anxiety and anger (Gorka et al., 2014; Win et al., 2021). Trait anxiety and anger may have significant implications for how adults behave and communicate with their romantic and marital partners (Caughlin et al., 2000) and may be a possible pathway from childhood maltreatment to communication patterns and the overall quality of the relationship. The present study longitudinally examined trait anger and trait anxiety as mediators linking childhood maltreatment to

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marital quality, supportive interactions, and strained interactions over a 9 year period.

Childhood Maltreatment and Couple Functioning

Childhood maltreatment is a form of interpersonal trauma often perpetrated by someone whom the child trusts or relies on. This betrayal sends the message that relationships are unsafe, a source of pain, and others cannot be trusted. Children who are maltreated more frequently are likely to develop more negative views of themselves and relationships (Riggs, 2010) and these internalized representations can go on to shape adult romantic relationships and marriages (Godbout et al., 2009). For example, childhood maltreatment has been linked to poorer quality relationships in clinical (Larsen et al., 2011), national (Whisman, 2006), community (Testa et al., 2005), college (Fitzgerald, 2022b), newlywed (DiLillo et al., 2009), and low-income samples (Fitzgerald et al., 2020), suggesting that childhood maltreatment is likely to influence intimate relationships in numerous populations. Not surprisingly, numerous problems may exist in these lower quality relationships including poorer competence (Labella et al., 2018), more negative and fewer positive interactions (Whisman, 2014), poorer communication (Banford Witting & Busby, 2019), more volatile conflict resolution styles (Knapp et al., 2017), greater conflict (Bigras et al., 2015), and less emotional support given and received (Fitzgerald & Morgan, 2023; Fitzgerald & Gallus, 2020).

Childhood Maltreatment and Trait Anxiety and Anger

Research has well-established that childhood maltreatment can influence adult's personality traits. Maltreatment has been associated with personality traits such as neuroticism, openness, conscientiousness, and extraversion (Hengartner et al., 2015) as well as personality disorders (J. G. Johnson et al., 1999). Childhood maltreatment may also lead to greater trait anxiety, which has been conceptualized as a personality trait characterized by anxious arousal (Spielberger, 1983), problems with attentional control (Bishop, 2009), cognitive distortions (Eysenck, 2000), and decreased ability to differentiate emotions (Matt et al., 2016). Developmental theorists suggest that early experiences contribute, in part, to structure of adult personality. Finkelhor and Browne (1985) proposed the traumagenics model, which suggests there are several dynamics that occur during interpersonal trauma that can potentially shape personality. The four dynamics include powerlessness, betrayal, stigmatization, and traumatic sexualization in the case of sexual abuse. The powerlessness and betrayal dynamics emphasize that children are often abused or neglected by those who they rely on for survival (e.g., caregivers). Thus, children are betrayed by those people who are supposed to love and nurture them. Thus, children are powerless to stop the maltreatment. Children commonly internalize feelings of shame and guilt (Finkelhor & Browne, 1985) and sexually abused children are exposed to developmentally inappropriate messages about sex and sexuality. In addition, the traumagenic dynamics associated with maltreatment may also undermine children's ability to develop a coherent sense of self (Shimura et al., 2017) and potentiate neurobiological changes implicated in trait anxiety (e.g., amygdala; van der Kolk, 2003). Indeed, empirical research has supported these theoretical notions. Numerous studies have documented that childhood maltreatment is associated with higher levels of trait

anxiety in adulthood (Cantón-Cortés et al., 2019; Reiser et al., 2014; Tracy et al., 2021; Uchida et al., 2018).

Children who were maltreated commonly experience higher levels of anger compared to those who were not maltreated (Fitzgerald, 2021). Trait anger is characterized by a longer duration of angry affect, greater intensity of anger, and more frequent experience of anger (Veenstra et al., 2018). Theoretically, social learning theory would suggest that children do not have an inherent drive to be angry or aggressive, rather anger and aggression are learned responses. Such responses are most often learned within the family, who tend to be the primary socializing agent of children (Bandura, 1978). Children who experience direct violence through maltreatment may learn that anger is an acceptable way to manage conflict and distress (Aloia & Pederson, 2021; Bandura, 1978). Additionally, given the dynamics of powerlessness and betrayal that occur in maltreatment (Finkelhor & Browne, 1985), children may hold anger and resentment toward the perpetrator as well as other family members who were aware of the maltreatment, but failed to intercede. Thus, experiencing childhood maltreatment may increase adult's disposition to be angry and aggressive through observation of angry and aggressive behavior as well as internalized anger stemming from harsh and rejecting caregiving (Aloia & Pederson, 2021). Both social learning theory and the traumagenic dynamics commonly suggest that children who were chronically exposed to violence (e.g., states) may develop a general tendency to respond with anger (e.g., trait; Aloia & Pederson, 2021). Indeed, numerous studies have found empirical support for the notion that childhood maltreatment is associated with trait anger in adulthood (Berthelot et al., 2014; Gardner et al., 2014) including data from the study of Midlife Development in the United States (MIDUS; Win et al., 2021).

Trait Anger and Anxiety and Adult Relationships

Trait anxiety and anger have been consistently associated with adult mental health problems (Win et al., 2021), but may also have relational consequences (Baron et al., 2007; Bayrami et al., 2011; Caughlin et al., 2000; Godbout et al., 2009). It has been suggested that trait anxiety may influence marital interactions and, by extension the overall quality of the marriage, through the adult's own anxiety driven behavior and more extreme reactions to their partners behavior (Caughlin et al., 2000; Knobloch et al., 2001). For example, a longitudinal study found that male and female partner's levels of trait anxiety were associated with not only their own levels of marital satisfaction, but also their partner's (Caughlin et al., 2000). On the other hand, research has focused on the role of trait anger primarily in the context of intimate partner violence (e.g., McClure & Parmenter, 2020). Although intimate partner violence is more common among adults who were maltreated in childhood (see Li et al., 2019, for meta-analysis), many adults do not go on to have violent relationships. Instead, trait anger may manifest higher levels of conflict, disagreement, and strain. Consequently, adults who have angrier dispositions may also experience fewer opportunities for support, connection, and intimacy (Beach, 2014). For example, Baron et al. (2007) argued that trait anger may facilitate a demand-withdrawal pattern where one partner makes a request for their partner to change, and the other partner avoids the request or becomes upset and angry. The avoidance and lack change then fosters a negative response from the partner demanding change,

thereby creating a negative cycle of interaction characterized by more negative emotions, more negative conflict engagement styles, and less resolution (Papp et al., 2009). Although research has noted that maltreatment in childhood influences adult personality and that personality traits influence marital functioning, few studies have considered trait level anxiety and anger as possible mediators linking childhood maltreatment to marital functioning over time.

The Present Study

To address the aforementioned gaps, the present study examined trait anxiety and trait anger as mediators linking childhood maltreatment severity to marital support, strain, and quality using three waves of data. It is hypothesized that childhood maltreatment severity will be associated with greater trait anxiety and trait anger. Second, it is expected that greater trait anxiety and anger will be associated with lower levels of marital support and quality and higher levels of marital strain. Prior levels of marital support, strain, and quality were controlled for to establish a longitudinal relationship. Additionally, age, sex, physical health, household income, and education were controlled for (Jose & Alfons, 2007; Walen & Lachman, 2000). Third, it is expected that elevated levels of trait anxiety and anger will mediate the relationship between child maltreatment and marital quality, support, and strain. While previous studies have controlled for gender (e.g., Handley et al., 2019), we conducted multiple group analyses to determine if the proposed associations were similar for men and women.

Method

Participants

Participants in the MIDUS study were English speaking, noninstitutionalized adults between the ages of 25 and 75 in the United States. The MIDUS study included participants from (a) a national random digit (RDD) dial sample ($n = 3,487$); (b) city oversamples ($n = 757$); (c) random selection of siblings of individuals from the RDD sample ($n = 950$); and (d) a national RDD sample of twin pairs ($n = 1,914$). The MIDUS study began data collection in 1995–1996 (MIDUS 1) and completed two subsequent waves of data collection in 2004–2005 (MIDUS 2), and 2013–2015 (MIDUS 3). The MIDUS 2 study also included a biomarker follow-up project, which included a subset of individuals who participated at MIDUS 1 and MIDUS 2.

To be included in the study, adults had to (a) participate in both MIDUS 2 and MIDUS 3, (b) been married to same marital partner at MIDUS 2 and MIDUS 3; and (c) participate in the MIDUS 2 biomarker project. A sample of 945 adults participated in the biomarker study (which required participation in MIDUS 2) who also participated in MIDUS 3 and of those 945 adults, 632 were married and 596 were married to the same partners. The 596 adults were the analytic sample for the present study. Prior research has been published regarding attrition within the MIDUS data (Fitzgerald et al., 2020; Song et al., 2021).

Adults in the present study reported a mean age of 54.39 ($SD = 10.79$) at MIDUS 2, 57.20 ($SD = 10.68$) at MIDUS 2 biomarker, and 63.49 ($SD = 10.83$) at MIDUS 3. The sample consisted of 49.8% men ($n = 297$) and 50.2% ($n = 299$) women and 93.8% ($n = 559$) were White. Among the participants, 22.9% of participants completed

high school or less, 52.6% reported at least some college, and the remaining 21.5% reported at least some graduate school; .5% respondents did not provide information on their educational achievement. The mean income of participants was \$19,314.

Procedure

The MIDUS data collection were gathered using two primary modalities. Participants completed a telephone interview as well as a mailed, Self-Administered Questionnaire. The telephone interview and Self-Administered Questionnaire were administered at all three waves. The MIDUS 2 also included a biomarker follow-up project administered between MIDUS 2 and MIDUS 3 and was completed between 0 and 62 months following MIDUS 2. The control variables were harvested from MIDUS 2, trait anxiety and trait anger measures were collected at the biomarker study, and the outcome variables were assessed at MIDUS 3. Participants provided informed consent prior to the data collection.

Measures

Childhood Maltreatment

Childhood maltreatment was measured using the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003). The CTQ is a 25-item scale assessing five types of childhood abuse and neglect prior to the age of 18. Subscales include emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Items are scored on a 5-point Likert scale, ranging from (1) *never* to (5) *very frequently*. The CTQ has been found to have good construct validity and criterion-related validity (Bernstein et al., 2003). Example item includes “People in my family said hurtful or insulting things to me.” The emotional neglect subscale and two items on the physical neglect subscale were positively worded and reverse coded. For the present study, the 25 items were added together to provide a severity index of childhood maltreatment where higher scores reflect more severe maltreatment. Total scores could range from 25 to 125. Maltreatment was collected at the MIDUS2 biomarker study. Cronbach’s $\alpha = .92$.

Trait Anxiety

Trait anxiety was measured using the Spielberger Trait Anxiety Inventory (; Spielberger, 1983). The Spielberger Trait Anxiety Inventory demonstrates acceptable reliability and validity (Spielberger, 1989) and consists of twenty items scored on 4 point Likert-type scale where 1 = *almost never*; 2 = *sometimes*; 3 = *often*; 4 = *almost always*. Among the items, seven were positively worded and reverse coded. The items were then summed together for an overall indicator of trait anxiety. Example item includes “I take disappointments so keenly that I can’t put them out of my mind.” Scores could range from 20 to 80. Trait anxiety was collected at the MIDUS 2 biomarker study. Cronbach’s $\alpha = .91$.

Trait Anger

The present study used the Spielberger Trait Anger Inventory (Spielberger, 1996) to measure trait anger. The scale has previously demonstrated good validity (Forgays et al., 1997) and consists of fifteen items rated on a 4 point Likert-type scale where 1 = *almost*

never; 2 = *sometimes*; 3 = *often*; 4 = *almost always*. The items were summed together for an overall indicator of trait anger. Example item includes “I am quick tempered.” Scores could range from 15 to 60. Trait anger was collected at the MIDUS 2 biomarker study. Cronbach’s $\alpha = .85$.

Marital Quality

Marital quality was assessed with one item, “How would you rate your marriage or close relationship these days?” The item was rated on a 0–10 scale where 0 = *worst possible marriage or relationship* and 10 = *the best possible marriage or relationship*. The use of measures assessing participant’s overall perceptions of marital quality are widely used and efficient measures of overall marital quality (e.g., Funk & Rogge, 2007). Marital quality was measured at MIDUS 2 (covariate) and MIDUS 3 (outcome variable).

Marital Support

Support was assessed with six items adopted from Schuster et al. (1990) and have undergone psychometric examination (Beam et al., 2018). Each item was assessed using a 4- point Likert-type scale ranging from (1) *a lot* to (4) *not at all*. Because items were originally coded such that higher scores reflected lower support, items were reverse coded so that higher score reflect higher support. Example items included “How much does your spouse or partner really care about you?” and “How much does he or she understand the way you feel about things?” Items were reverse coded and averaged together, with greater score indicating higher levels of support. Scores ranged from 1 to 4. Support was measured at MIDUS 2 (covariate) and MIDUS 3 (outcome variable). Cronbach’s $\alpha = .81$.

Marital Strain

Strain was assessed using six items and were similarly adopted from Schuster et al. (1990) and have been validated (Beam et al., 2018). Each item was rated using a four-item Likert-type scale ranging from (1) *often* to (4) *never*. Example items include “How often does your spouse or partner make too many demands on you?” and “How often does he or she make you feel tense?” Items were reverse coded and averaged together such that higher scores reflect greater perceptions of marital strain. Scores ranged from 1 to 4. Strain was measured at MIDUS 2 (covariate) and MIDUS 3 (outcome variable). Cronbach’s $\alpha = .84$.

Covariates (Measured at MIDUS 2)

Age

Age was entered as a continuous variable.

Physical Health

Participants’ subjective evaluation of their physical health was measured with one item: “In general, would you say your physical health is (1) excellent, very good, good, fair, or (5) poor?” The item was coded such that higher scores reflect better physical health.

Income

Income was measured using a continuous variable that included the total wages, social security, pension, and any other forms of income for the respondent.

Education

Participant’s level of education was entered as an ordinal variable ranging from 1 (*no school or some grade school*) to 12 (*PhD or other professional degree*).

Moderating Variable

Sex

The MIDUS assessed participant’s self-reported sex and participants could either choose male or female.

Data Analysis Plan

Bivariate statistics including means, correlations, and standard deviations were examined first using SPSS V 27. Second, we conducted a logistic regression to determine whether study variables were predictors of attrition and divorce between MIDUS 2 and MIDUS 3. Then, to examine the indirect associations between childhood maltreatment and marital support, strain, and quality over a 9 year period through trait anxiety and trait anger, structural equation modeling (SEM) in Mplus 8.0 was used. Commonly used fit statistics that evaluate the model-data fit include: (a) comparative fit index (CFI), (b) Tucker–Lewis Index (TLI), (c) root-mean-square error of approximation (RMSEA), (d) standardized root-mean-square residual (SRMR), and (e) the chi-square statistic. CFI and TLI values above .95 demonstrate excellent fit and values above .90 indicate acceptable fit; RMSEA and SRMR estimates below .06 demonstrate excellent fit and values below .08 demonstrate adequate fit. Additionally, a nonsignificant chi-square statistic indicates suitable model-data fit; however, the chi-square statistic is sensitive to sample size and can be significant in large samples despite a good fitting model (Hu & Bentler, 1999). A power analysis revealed (.80 power, anticipated effect size of .15, $\alpha = .05$, and 14 observed variables) that the sample size of 596 individuals exceeds the needed sample size recommendations for detecting mediation ($n = 411$), which is consistent with Fritz and Mackinnon (2007). Missing data in the present study was fairly low (did not exceed 7%) and was addressed using full information maximum likelihood estimation (Enders & Bandalos, 2001); there was no missing data for maltreatment, trait anxiety, trait anger, and 42 participants did not have data for marital support and strain and 40 participants did not report on marital quality at MIDUS 2. At MIDUS 3, only three people did not report on marital quality, and two individuals did not report on marital support and strain.

Results

Descriptive statistics, including correlations, means, and standard deviations were examined first. Briefly, each of the independent, mediating, and dependent variables were significantly associated with each other at the bivariate level (see Table 1). To calculate prevalence rates of maltreatment, cutoff scores outlined by Walker et al. (1999) were used. Among the participants, 19.1% reported

Table 1
Means, Standard Deviations, Correlations Among Independent, Mediating, and Outcome Variables

Variable	1	2	3	4	5	6	M (SD)
1. Maltreatment	—						34.76 (11.34)
2. Trait anxiety	.31***	—					32.41 (8.14)
3. Trait anger	.21***	.52***	—				23.43 (4.97)
4. Marital quality	-.11*	-.22***	-.16***	—			8.61 (1.52)
5. Marital support	-.18*	-.24***	-.12*	.78***	—		3.71 (0.45)
6. Marital strain	.14**	.28***	.21***	-.58***	-.61***	—	2.05 (0.56)

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

emotional abuse ($n = 114$), 19.1% also reported physical abuse ($n = 114$), 14.8% reported sexual abuse ($n = 88$), 12.9% reported emotional neglect ($n = 77$), and 21.5% ($n = 128$) reported physical neglect. Overall, 43% ($n = 256$) reported at least one form of maltreatment.

Next, a logistic regression was run to examine what independent variables (childhood maltreatment), mediating variables (trait anxiety, trait anger), and covariates resulted in either separation or divorce between MIDUS 2 and MIDUS 3. Only significant predictors are reported. Marital support (at MIDUS 2) and age were significant predictors of participants either separating or divorcing. Adults who perceived their spouse to be more supportive (odds ratio [OR] = .393, 95% CI [.165, .935]) and were older (OR = .928, 95% CI [.893, .965]) were less likely to separate or get divorced. Next, using the entire biomarker sample, we also examined whether the covariates, maltreatment, trait anxiety, and anger predicted attrition between the biomarker study and the MIDUS 3. We found that higher levels of trait anxiety ($B = -.053$, OR = .948, 95% CI [.912, .976]) and older adults ($B = -.063$, OR = .939, 95% CI [.921, .958]) were less likely to participate while those who were reported better physical health were more likely to participate ($B = .453$, OR = 1.572, 95% CI [1.232, 2.007]). The influence of maltreatment, trait anger, gender, education, and income were not significant.

Next, the SEM mediational model was examined. The model demonstrated good fit: CFI = 1, TLI = .99, RMSEA = 0.02, SRMR = .01, $\chi^2(7) = 8.71$, $p = .27$. The paths from childhood maltreatment to marital support, strain, and quality were each nonsignificant and removed from the model, indicating that maltreatment did not account for increases or decreases in each of the measured marital domains over time. Likewise, the paths from trait anger to each of the marital outcomes were each nonsignificant and removed. Finally, the path from trait anxiety to marital strain was also nonsignificant and removed. The chi-square difference tests, which examines whether

the removal of the path decreases model fit, were each nonsignificant ($p > .05$). Results of the mediational SEM model is depicted in Figure 1. It was found that higher levels of childhood maltreatment were associated with higher levels of both trait anxiety ($\beta = .18$, $p < .001$) and trait anger ($\beta = .12$, $p = .008$). Greater levels of trait anxiety were associated with lower levels of marital support ($\beta = -.14$, $p = .001$) and less positive evaluations of the quality of the marriage ($\beta = -.13$, $p = .006$).

The indirect (mediating) effects from childhood maltreatment to marital support and quality through trait anxiety were estimated next (see Table 2). The indirect effect from childhood maltreatment to marital support through greater trait anxiety was significant ($\beta = -.02$, 95% CI [-.054, -.007]) as was the indirect effect to marital quality ($\beta = -.02$, 95% CI [-.054, -.005]). Adults who reported a more severe history of child maltreatment also reported higher levels of trait anxiety, which then predicted lower levels of marital support and marital quality.

To examine the potential moderating effect of gender, a male and female model were examined separately and compared. To compare the models, each of the paths in the male and female model were constrained to be equal and if the chi-square difference test is significant then gender moderated the path, or values below 3.84. The pathways between trait anxiety, $\chi^2(1) = .647$, $p > .05$, trait anger, $\chi^2(1) = .21$, $p > .05$, and child maltreatment, $\chi^2(1) = 1.19$, $p > .05$, and marital quality were each nonsignificant indicating that gender did not influence any of the predictors of marital quality. Regarding marital support, childhood maltreatment, $\chi^2(1) = 3.36$, $p > .05$, trait anxiety, $\chi^2(1) = 2.73$, $p > .05$, and trait anger, $\chi^2(1) = 3.68$, $p > .05$, were not moderated by gender. Regarding marital strain, the relationship between childhood maltreatment, $\chi^2(1) = 1.03$, $p > .05$, trait anxiety, $\chi^2(1) = .01$, $p > .05$, and trait anger, $\chi^2(1) = .42$, $p > .05$. Last, gender did not moderate the association between childhood maltreatment and trait anger, $\chi^2(1) = .63$, $p > .05$, and anxiety, $\chi^2(1) = 0$, $p > .05$. Together, these results indicate that gender did not moderate any of the pathways; therefore, men and women were kept in a single mediation model.

Table 2
Bootstrapped Indirect Effects Linking Childhood Maltreatment to Marital Outcomes Through Trait Anxiety and Anger

Indirect effect	B	95% CI
Maltreatment → trait anxiety → marital support	-.02	[-.054-.007]
Maltreatment → trait anxiety → marital quality	-.02	[-.054, -.005]

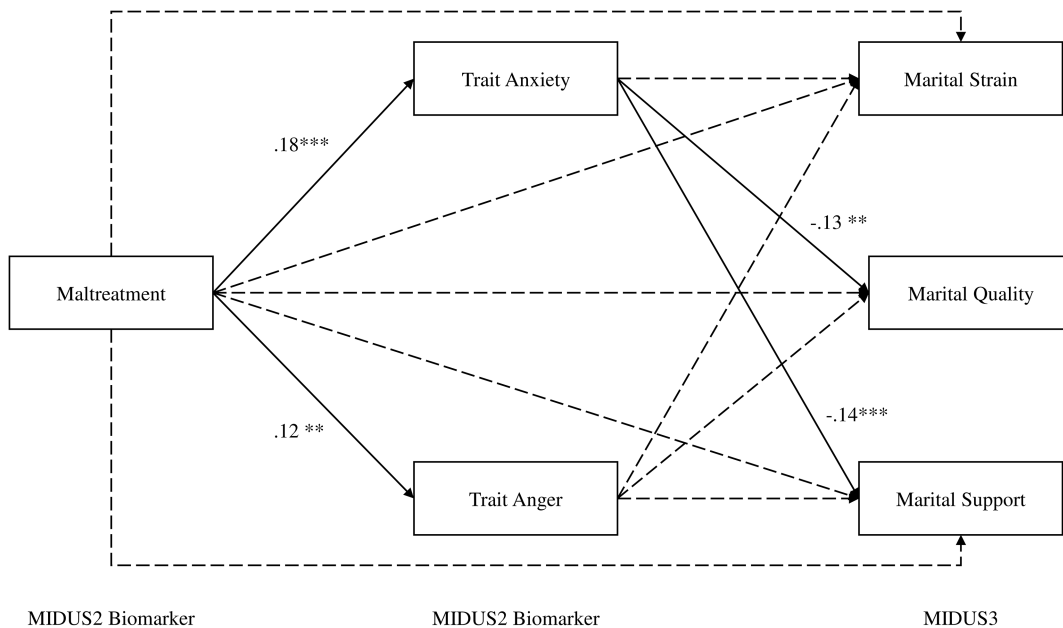
Note. 95% confidence intervals that include 0 between the upper and lower bound are nonsignificant. Significant effects are bolded. CI = confidence interval.

Discussion

The impact of childhood maltreatment often extends into adulthood and has been shown to influence the marital relationship. Despite the long-term impact of maltreatment on marital relationships, few studies have considered trait-level mental health problems as possible mediators. Additionally, many studies have conducted cross sectional mediational analysis with far fewer longitudinal studies. To address these gaps, the present study examined trait anxiety and trait anger as mediators linking childhood maltreatment

Figure 1

Results of Structural Equation Mediation Model Examining Trait Anxiety and Trait Anger as Pathways From Childhood Maltreatment to Marital Outcomes



Note. The path model demonstrates the associations between childhood maltreatment, trait anger and anxiety, and marital support, strain, and quality controlling for income, education, physical health, gender, and age. Coefficients presented are standardized coefficients. Dashed lines represent paths that were removed from the model. MIDUS 2 = Midlife Development in the United States (2004–2005); MIDUS 3 = Midlife Development in the United States (2013–2015). ** $p < .01$. *** $p < .001$.

to marital support, marital strain, and marital quality among a sample of continuously married midlife adults. Results of the study indicate that trait anxiety mediated the association between maltreatment and marital quality and support, but not strain. Trait anger was not a pathway for any of the marital variables.

Regarding trait anxiety, we found that more severe childhood maltreatment was associated with higher levels of trait anxiety in adulthood (Cantón-Cortés et al., 2019) which, in turn, was linked to reductions in marital support and marital quality over a 9 year period (Caughlin et al., 2000). Caughlin et al. (2000) suggested that adults higher on trait anxiety are like to experience communication problems because their anxiety not only governs the ways in which they interact and communicate with their partner, but also how their partner interacts with them. These problems in communication are likely rooted, in part, in childhood (Banford Witting & Busby, 2019). Children respond to maltreatment in a variety of different ways, one of which is to become hyper-vigilant, anxious, and worried. Initially, these are likely protective mechanisms designed to keep the child safe but they become dysfunctional in adulthood and negatively impact adult marital relationships (Godbout et al., 2009; S. Johnson & Brubacher, 2016; Tracy et al., 2021). Adults higher on trait anxiety may more difficult to soothe and may misinterpret their partner's behavior. Additionally, trait anxiety has been associated with attentional bias toward threat stimuli in social situations (Booth et al., 2017). Adults may be hyper-vigilant of their partner's behavior and may anxiously respond to their partners behavior or make more negative inferences about their partner's behavior (Fitzgerald, 2022a).

Additionally, trait anxiety may foster and maintain dysfunction patterns of communication that preclude supportive interactions from occurring (Booth et al., 2017) and this is common among survivors of maltreatment (Whisman, 2014). Trait anxiety, however, did not mediate the association between maltreatment and marital strain. In long-standing marriages, partners of those who were maltreated may become habituated their partner's dispositional anxiety and may avoid ways of interaction that promote strained and conflictual interactions (Goff et al., 2006). Given the somewhat surprising lack of association between trait anxiety and marital strain, these findings will require replication to make stronger conclusions.

On the other hand, trait anger was not associated with marital support, strain, or quality among our sample of continuously married adults. Prior research has well-established that trait anger is associated with violence (Berthelot et al., 2014; Gardner et al., 2014; Win et al., 2021), yet the present study suggests that trait anger does not influence perceptions of less volatile dimensions of adult marriages. This is inconsistent with a prior study conducted Baron et al. (2007) who found that trait anger was prospectively associated with marital adjustment and the relationship was partially mediated by conflict in a sample of predominantly newlywed couples (52% married less than 3 years). Likewise, Fitzgerald, 2021 used a sample of racially diverse young adults to examine anger as a mediator linking physical and sexual abuse to romantic conflict. Both prior studies have used younger samples who have been in a relationship or married for relatively small amounts of time. The developmental differences at the individual (e.g., young adult

vs. midlife adults) and relational levels (e.g., maturity of the relationship) along the methodological differences may account for the discrepant findings.

Another reason that trait anger may not have an impact on marital functioning is due to a selection effect. Research has shown that childhood maltreatment and trait anger are associated with intimate partner violence and chronic conflict, but it is more common among dating couples compared to married couples (Li et al., 2019). Adults who are prone to high levels of trait anger may be in relationships that end prior to getting married or quickly end in divorce. For example, relationships characterized by someone being quick to anger across situations may prevent supportive interactions and increase negative interactions (Baron et al., 2007) and it may be tolerable for shorter periods of time. Partner may think that anger responses may be related to external factors or evaluate the relationship to be worth “putting up with” angry responses, but the accumulated stress associated with coping with an angry partner may wear on the relationship. Gottman’s research has found that negative conflict strategies associated with trait anger are potent predictors of relationship dissolution (Carrère & Gottman, 1999). Thus, each of these factors may contribute to a lack of significant for long term, in fact marriages. We found that trait anger was, however, not a predictor of divorce between MIDUS 2 and MIDUS 3, providing some support for the selection effect occurring before marriage rather than trait anger leading to divorce among those already married. This interpretation will require additional examination.

Limitations

The results of the study should be interpreted in light of the study’s limitations. First, reports of childhood maltreatment were retrospective and may be subject to bias. Second, although the study is longitudinal in nature and controlled for prior levels of marital functioning, the study remains associational rather than causal. Third, although our measurement of childhood maltreatment included numerous aspects of abuse and neglect, other forms of interpersonal trauma were not accounted for. Likewise, our measure of marital quality consisted of only one item; short measures of marital quality are available (e.g., Funk & Rogge, 2007). Another limitation is that the sample was a predominantly White middle-class sample, limiting the generalizability of these findings to other racial and ethnic groups. Additionally, gender identity and biological sex could not be differentiated in the present study and therefore findings may not hold for all gender identities. The present study also used exclusively self-report measures and is consequently subjected to common method variance. Another limitation of the present study was that we measured both the independent variable (childhood maltreatment) and mediating variables (trait anger and anxiety) at the same wave. Last, the findings included assessments from only one member of the couple dyad which does not enable the complete context of the couple relationship to be addressed.

Future Research Directions

Future research should consider several avenues. First, the use of prospective research using a multi-informant design assessing childhood maltreatment (e.g., parent reports, self-reports, and official records) would address biases related to retrospective reports of maltreatment. A second direction that future research should consider

is the use of observational methods assessing marital interactions as well as daily diary studies that could better allow trait anxiety and anger to “play out” within the relationship. A more diverse methodology would strengthen conclusions drawn. Relatedly, assessing varying aspects of marital dynamics such as anger management skills and conflict resolution are worthwhile factors to consider. Additional research should consider addressing these other forms of maltreatment (e.g., exposure to intimate partner violence) and interpersonal victimization (e.g., community violence). A fourth future direction is to examine trait anger and anxiety over shorter durations of time. The effects of trait anxiety and anger may be more or less salient on marital functioning at different intervals of time. Future research should also consider the use of dyadic methodology to assess each partner’s perspective. Research needs to consider the proposed associations in more racially and socioeconomically diverse sample. Last, it is imperative that future research test the present study’s hypotheses in racially diverse populations.

Clinical Implications

Findings from the present study suggest that trait anxiety is a possible pathway linking childhood maltreatment to marital quality and support over a 9 year period. Clinicians may want to target how trait anxiety shapes marital interactions and assess for childhood maltreatment. More specifically, trauma-informed couple interventions tailored to address adult’s tendency to be anxious may be particularly effective in improving long-term marital outcomes. Emotion focused couple therapy is a trauma-informed, empirically supported couple therapy that may be particularly effective (Dalton et al., 2013).

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