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Emotional support as a mechanism linking childhood maltreatment and adult's depressive and social anxiety symptoms

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ABSTRACT

Background: Research has well-established that childhood maltreatment is associated with depressive and social anxiety symptoms in adults. Emotional support has been proposed as a mediator, yet research investigating the unique contributions of emotional support from friends, family members, and romantic partners in adulthood is sparse.
Objective: The current study tested emotional support from family, friends, and romantic partners as mechanisms linking childhood maltreatment to depressive and social anxiety symptoms in adults.
Participants and setting: Participants for the current study (N = 798) included adults in a committed romantic relationship and completed both the second wave of the National Survey of Midlife Development in the United States (MIDUS 2) as well as the MIDUS 2 biomarker follow-up project. Emotional support from family, friends, and romantic partners was measured at MIDUS 2 and mental health symptoms were reported at the MIDUS 2 biomarker follow up.
Results: Emotional support from friends was identified as a mechanism from maltreatment to social anxiety symptoms (ß = .04, 95 % CI [.019, .066]), emotional support from family members was a mechanism to depressive symptoms (ß = .09, 95 % CI [.045, .146]), and emotional support from romantic partners was a mechanism for both depressive (ß = .02, 95 % CI [.005, .048]) and social anxiety symptoms (ß = .03, 95 % CI [.008, .048]).
Conclusions: The current study documents that emotional support may be a mechanism linking childhood maltreatment to mental health symptoms. Emotional support from different sources appear to be of significant importance in understanding adult mental health. Clinical implications are discussed.

1. Introduction

Childhood maltreatment is common in the United States and is associated with psychosocial impairment across the lifespan. Childhood maltreatment includes physical, sexual, and emotional abuse as well as physical and emotional neglect. A recent meta-analysis found that among adults in the United States, roughly 36.5 % reported childhood emotional abuse, 24 % reported physical abuse, 19.2 % reported physical neglect, and 14.5 % reported emotional neglect, while 20.1 % of women and 8% of men reported childhood sexual abuse (Stoltenborgh, Bakermans-Kranenburg, Alink, & van IJzendoorn, 2015). Maltreatment often occurs within a dysfunctional systemic context characterized by caregiver substance use, mental health problems, and intimate partner violence

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(Stith et al., 2009), leaving children vulnerable to experiencing multiple forms of maltreatment (Finkelhor, Ormrod, & Turner, 2007). Greater experiences of maltreatment in childhood has been linked to more severe outcomes (see Scott-Storey, 2011 for review) including mental and relational health problems in adulthood (DiLillo, Lewis, & Loreto-Colgan, 2007; Edwards, Holden, Felitti, & Anda, 2003).

In particular, childhood maltreatment has been identified as a risk factor for both depression and social anxiety (Chapman et al., 2004; Gibb et al., 2001) which are two of the most common mental health problems in the United States (Kessler & Bromet, 2013; Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012). Social anxiety disorder is characterized by fear and avoidance of social or performance-based situations, whereas depression is characterized by feelings of hopelessness, low energy, irritability, and altered mood (Kessler & Bromet, 2013; Kessler et al., 2012). Symptoms of depression and social anxiety are commonly comorbid (Gibb, Coles, & Heimberg, 2005), and research suggests that symptoms of social anxiety, more so than any other anxiety disorders, are more severe when occurring alongside depression (Erwin, Heimberg, Juster, & Mindlin, 2002). Underlying negative cognitions may leave adult survivors of childhood maltreatment particularly at risk for developing depressive and social anxiety symptoms. Adults who experienced childhood maltreatment are commonly critical of themselves and others, believing they are not worthy of attention and affection, and that others cannot be trusted or relied on. Having been deprived of feeling accepted, adults who experienced maltreatment develop maladaptive thinking patterns and beliefs, and have low internal locus of control (Chapman et al., 2004; Cougle, Timpano, Sachs-Ericsson, Keough, & Riccardi, 2010; Finkelhor & Browne, 1985; Gibb et al., 2001; Günther, Dannlowski, Kersting, & Suslow, 2015).

While research has well established that childhood maltreatment has an etiological link to depressive and social anxiety symptoms, the relational pathways linking them are not as well understood (Cougle et al., 2010; Kisely et al., 2018; Nanni, Uher, & Danese, 2012; Nelson, Klumparendt, Doebler, & Ehring, 2017; Simon et al., 2009). Previous research has found numerous within-person mechanisms, or individual factors (i.e., personality), that may link childhood maltreatment to mental health outcomes. Such mechanisms include, personal control (Shaw, Krause, Chatters, Connell, & Ingersoll-Dayton, 2004), emotional regulation (Coates & Messman-Moore, 2014), shame, (Coates & Messman-Moore, 2014; Shahar, Doron, & Szepsenwol, 2015), and self-criticism (Shahar et al., 2015). However, the interpersonal nature of maltreatment as well as the role of adult relationships on mental health outcomes, point toward adult relationships as a compelling mechanism (Stevens et al., 2013). Adult relationships have been widely documented to contribute to better mental health and wellbeing through biological, psychological, and relational pathways (Chen & Feeley, 2014; Robles, Slatcher, Trombello, & McGinn, 2014; Thoits, 2011; Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

Emotional support is one specific relational pathway that may influence adult mental health. Emotional support is thought to calm psychological distress, increase self-esteem, and fosterintimacy (Thoits, 2011; Whiffen, Judd, & Aube, 1999). Research has found emotional support to be an integral part of adult relationships. Adults with emotionally supportive family members, friends, and romantic partner tend to report lower rates of loneliness (Chen & Feeley, 2014), fewer depressive symptoms (Brinker & Cheruvu, 2017), greater life satisfaction, more positive mood, less negative mood, and better overall health (Walen & Lachman, 2000). Noting the importance of adult interpersonal relationships, and emotional support specifically, the current study examined emotional support from family members, friends, and romantic partners as mechanisms linking childhood maltreatment to depressive and social anxiety symptoms.

1.1. Childhood maltreatment and adult's interpersonal relationships

Childhood maltreatment is most often perpetrated by family members (Sedlak et al., 2010). Despite a history of maltreatment, survivors commonly stay in contact with family members for various reasons. Wuest, Malcolm, and Merritt-Gray (2010) suggested that adults with a history of childhood maltreatment often maintain contact with family members for a variety of reasons including societal norms for having an ongoing relationship, emotional connection to the non-offending parent, and having an established role as a family caretaker or confidant. However, maintained familial relationships in adulthood may be characterized by emotional distance, lack of affection, and a continued source of degradation. In a population-based study, Savla et al. (2013) found childhood emotional and physical abuse were associated with lower levels of emotional closeness with family members. Recently, researchers have begun to investigate the implications of relationships with family members in adulthood. Kong, Moorman, Martire, and Almeida (2019) found more frequent childhood emotional and physical abuse were related to greater psychological wellbeing and lower life satisfaction through perceptions of emotional support from family members. In another study, Kong (2017) found childhood neglect was indirectly related to mental health problems through decreased emotional closeness and less frequent contact with the perpetrating parent in adulthood.

Childhood maltreatment has also been linked to problems in adult friendships, although the associations are largely mixed. Some researchers have found maltreatment negatively impacts friendships (Evans, Steel, & DiLillo, 2013; Muller, Gragtmans, & Baker, 2008; Runtz & Schallow, 1997) whereas other researchers found maltreatment to have no impact on adult friendships (Mullen, Martin, Anderson, Romans, & Herbison, 1994). Much of the current research has focused on young adults with less attention on friendships in midlife adults. Friendships in midlife may differ from those in young adulthood. In midlife, friendships become less salient in daily life as attention shifts to focus on romantic partners and children as well as caring for aging parents. Adult friendships may be more enduring relationships that evolved over time. In a study of midlife adults, Shaw and Krause (2002) found that violence in childhood, defined by physical and emotional abuse perpetrated by mothers and fathers, was associated with less emotional support from friends in midlife but support from friends did not mediate the relationship between childhood abuse and adult mental health. On the other hand, in a sample of adults who were sexually abused in childhood, Musliner and Singer (2014) found that having emotionally close relationship with friends was associated with a decreased risk for developing depressive symptoms in

adulthood.

In adulthood, romantic relationships tend to be the most important attachment relationship and have been consistently linked to adult mental health (Whisman & Baucom, 2012). Researchers have found that childhood maltreatment is associated with poorer functioning in relationships with romantic partners (Colman & Widom, 2004; DiLillo et al., 2009; Larsen, Sandberg, Harper, & Bean, 2011; Riggs, Cusimano, & Benson, 2011). Emotional support is one specific domain of romantic relationships that may be impacted by maltreatment in childhood. Whisman (2014) found that adults who were physically abused in childhood were perceived by their romantic partners to be less emotionally supportive. Further, it was also found that adults who were physically abused in childhood also perceived their romantic partners to be less emotionally supportive (Whisman, 2014). DiLillo et al. (2007) found that maltreatment severity was associated with lower levels of emotional intimacy in college students' romantic relationships. The implications, however, of emotional support in romantic partnerships on mental health among adults maltreated in childhood remains understudied. This is particularly troubling considering the central nature of romantic partnerships in adulthood (Whisman & Baucom, 2012).

1.2. Childhood maltreatment, emotional support, and mental health

The importance of emotional support from family (Chen & Feeley, 2014; Kong et al., 2019; Thomas, 2016;), friends (Chen & Feeley, 2014; Walen & Lachman, 2000), and romantic partners (Dehle, Larsen, & Landers, 2001; Stafford, McMunn, Zaninotto, & Nazroo, 2011; Thomas, 2016) on adult mental health is well understood. For example, in a study of midlife adults Walen and Lachman (2000) found that support from family, friends, and romantic partners were each uniquely associated with greater life satisfaction, greater positive affect, and less negative affect. Not surprisingly, adult friendships, familial relationships, and romantic partnerships have been suggested to be potential mechanisms linking maltreatment and mental health outcomes (Kendall-Tackett, 2002; Kong et al., 2019; Runtz & Schallow, 1997; Shaw & Krause, 2002; Sperry & Widom, 2013).

Several studies have investigated support as a mechanism linking childhood maltreatment to adult mental health outcomes. Sperry and Widom (2013) found that social support mediated the relationship between maltreatment in childhood and anxiety and depression; however, the measure of social support did not identify who provided the social support and conflated emotional support with other forms of support (i.e. tangible support). Runtz and Schallow (1997) found emotional support from friends and family members mediated the relationship between physical abuse and psychological distress in a sample of college students. Similarly, Kong et al. (2019) found support from family members and romantic partners to be a significant mechanism linking childhood physical and emotional abuse and life satisfaction, negative affect, and psychological wellbeing in adulthood. However, like Runtz and Schallow (1997), support from partners and family members were aggregated. Finally, Shaw and Krause (2002) found that while emotional support from friends did not mediate the relationship between physical abuse and depressive symptoms in a sample of midlife adults, emotional support from family members was associated with fewer depressive symptoms.

Although current research has identified emotional support as a potential link between childhood maltreatment and adult mental health, there are numerous limitations to the current knowledge base. One limitation is in relation to the various methods used to measure emotional support. Some studies aggregated different sources of support into a singular variable (Kong et al., 2019; Runtz & Schallow, 1997). This is potentially problematic because aggregating support across relationships discounts the varying importance of different adult relationships on mental health. Aggregating support across providers assumes each source of support has a homogenous effect on mental health outcomes. In other words, support from friends and romantic partners are assumed to have a similar effect on depression, when this has been shown not to be the case (Stafford et al., 2011). There is variation in the level of closeness, frequency of interaction, and depth of adult relationships. Some relationships, such as romantic partnerships, have a greater effect on adult mental health compared to other relationships (Antonucci & Akiyama, 1987). Supporting this notion, Thomas (2016) found that the associations bteween support from romantic partners, family members, children, and friends varied in relation to depressive symptoms in adults. Walen and Lachman (2000) found that although support from friends was associated with positive and negative affective symptoms, the strength of the associations for friend support were smaller than associations for romantic partners. Reconciling the approaches to measuring support would provide a more precise understanding whether overall support from adult social networks or specific adult relationships are more or less influential.

A second limitation is that research has examined specific members of adult social network in isolation, failing to account for the impact of other relationships in participants' social networks (Kong, 2017; Shaw & Krause, 2002). Although addressing specific types of relationships provides valuable information, consideration of only a few attachment relationships may inflate the statistical associations of measured relationships. Studies that differentially examine emotional support from romantic partners, family members, and friends as a mechanism linking maltreatment to mental health outcomes could not be located.

1.3. The present study

In light of reviewed literature and the limitations of the current knowledge base, the current study evaluates the relationship between childhood maltreatment and symptoms of depression and social anxiety in adulthood, testing emotional support from family, friends, and romantic partners as potential mechanisms. The current study utilized two waves of data from the Midlife Study of Development in the United States: the MIDUS 2 and the MIDUS 2 biomarker follow-up project. It is hypothesized that maltreatment would be positively associated with depressive and social anxiety symptoms and negatively associated with perceptions of emotional support from family, friends, and romantic partners. Additionally, it was hypothesized that emotional support from family, friends, and romantic partners would be negatively associated with depressive and social anxiety symptoms. Finally, it was expected that

childhood maltreatment would be indirectly related to depressive and social anxiety symptoms through emotional support from family, friends, and romantic partners.

2. Methods

Data for the current study were taken from the MIDUS data. The MIDUS study was first carried out in 1995–1996 (MIDUS 1). MIDUS 1 consisted of 7108 English-speaking adults using a telephone interview and a self-administered questionnaire (SAQ) via mail. A follow-up wave was collected approximately nine years later in 2004–2005 (MIDUS 2) using the same data collection methods and questionnaires of MIDUS 1. The MIDUS 2 also included a biomarker follow-up project, which included a subset of participants who completed both thetelephone interview and SAQ (n =1,054*)* at MIDUS 1 and MIDUS 2. Additionally, the biomarker project included a new subsample of racial minorities (n = 201), for a total sample of 1255 participants. The biomarker project provided additional self-administered scales that were collected between 0 and 62 months following MIDUS 2 (M = 25.45 months).

Variables for the current study were extracted from both the MIDUS 2 and the biomarker follow-up project. Emotional support from family, friends, and romantic partners were taken from MIDUS 2, while childhood maltreatment, and depressive and social anxiety symptoms were taken from the MIDUS 2 follow-up biomarker project. The MIDUS 1 offers childhood abuse variables across perpetrators, including mother, father, brothers, sisters, and others, but only addresses emotional and physical abuse and does not address sexual abuse, emotional neglect, or physical neglect. The biomarker follow-up project portion of MIDUS 2 assessed childhood maltreatment using the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003). The CTQ is a widely used and well validated measure of maltreatment demonstrating strong test-retest reliability (Bernstein et al., 2003). Noting the strengths of the CTQ, strong test-retest reliability, and that the measurement of emotional and physical abuse in the MIDUS 1 demonstrated weak internal consistency (Kong et al., 2019), the CTQ data collected during the MIDUS 2 biomarker follow-up study was considered a better approach to measuring childhood maltreatment.

The sample of the biomarker follow-up study was reduced to exclude adults who were single, divorced, or separated as there were deemed likely to have different perspectives on emotional support from romantic partners or not have an applicable partner to report on. This exclusion reduced the sample for the current study to 798 adults, who were either married or cohabitating with a partner at the time of the biomarker follow-up. Participant characteristics are displayed in Table 1. Participants tended to be fairly well educated, far more likely to be married than cohabitating, and tended to be in their 50 *s* and 60 s.

2.1. Measures

2.1.1. Childhood maltreatment

Histories of childhood maltreatment was assessed with the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003) collected as part of the MIDUS 2 biomarker follow-up. The CTQ is a 28-item scale assessing childhood physical, sexual, and emotional abuse and physical and emotional neglect prior to the age of 18. Items are scored on a five-point Likert scale, ranging from (1) *Never* to (5) *Very Frequently*. The CTQ has demonstrated construct and criterion-related validity (Bernstein et al., 2003). Example items include “I believe that I was sexually abused” and “People in my family hit me so hard that it left me with bruises or marks.” Childhood maltreatment was operationalized for this study using the total score, which is a summation of the emotional, physical, sexual abuse and physical and emotional neglect subscales together to capture the overall severity of childhood maltreatment. Higher

Table 1
Descriptive Characteristics of Participants (N = 798).

	M (*SD*)/*N* (%)	Range
Gender		
Female	392 (49.1 %)	
Males	406 (50.9 %)	
Age	57.52 (11.20)	35 – 86
Relationship Status		
Married	777 (97.6 %)	
Cohabitating	21 (2.4 %)	
Education		
No College	177 (23.9 %)	
Some College/College Degree	389 (52.4 %)	
Some Graduate School/Graduate Degree	176 (19.1 %)	
Maternal Depression in Childhood	117 (14.7 %)	
Paternal Depression in Childhood	53 (7.3 %)	
MIDUS 2 Depressive symptoms	.51 (1.56)	0 – 7
MIDUS 2 Anxiety Symptoms	.07 (.58)	0 – 9
MIDUS 2 Panic Symptoms	.53 (.94)	0 – 6
Time Lag Following MIDUS 2 (in months)	25.45 (14.38)	0 – 62

Note. Education percentages do not add up to 100 % due to missing data (4.6 %).

scores reflect greater severity of childhood maltreatment. Internal consistency was .93.

2.1.2. Emotional support from family

Emotional support from family members was measured using 10 items specific to the MIDUS study. Six of the items were from an emotional support scale and four items were from the emotional strain scale. Example items include "How much do they understand the way you feel about things?" and "How much can you open up to them if you need to talk about your worries?" Example strain items include "How often do they let you down when you are counting on them?" and "How often do they criticize you?" Emotional support items were rated on a four-point Likert type scale ranging from (1) *A Lot* to (4) *Not at All* and emotional strain items were rated on a similar four-point Likert type scale ranging from (1) *Often* to (4) *Never*. The six support items were reverse coded such that higher scores are indicative of greater emotional support. The emotional strain items were not recoded because the way strain items were initially coded is reflective of less emotional strain. The six reverse coded support items and four strain items were averaged together to calculate a mean score of emotional support from family. Internal Consistency was .82

2.1.3. Emotional support from friends

Emotional support from friends was measured using 8 items from MIDUS 2. Four items were from the emotional support scale and four items were from the emotional strain scale. Example support items include "How much can you open up to them if you need to talk about your worries?" and "How much do your friends really care about you?" Example strain items included "How often do your friends make too many demands on you?" and "How often do they get on your nerves?" Similar to measurement of emotional support and emotional strain from family, items assessing emotional support from friends were rated on a four-point Likert type scale ranging from (1) *A Lot* to (4) *Not at All* and emotional strain from friends items were rated on a four point Likert type scale ranging from (1) *Often* to (4) *Never*. The support scale was reverse coded such that greater scores are reflective of greater support. The four reverse scored support items and four strained items were averaged together for a mean score of emotional support from friends. Internal Consistency was .77.

2.1.4. Emotional support from romantic partner

Emotional support from a romantic partner was measured using 12 items specific to the MIDUS data, including six emotional support items and six emotional strain items. Example support items included "How much does your spouse or partner really care about you," "How much does he or she understand the way you feel about things." Example strain items included ""How often does he or she argue with you?" and "How often does he or she let you down when you are counting on him or her?" Emotional support items were rated on a four-point Likert type scale ranging from (1) *A Lot* to (4) *Not at All* and emotional strain items were rated on a similar four-point Likert type scale ranging from (1) *Often* to (4) *Never*. Support items were reverse coded so that higher scores reflected higher levels of support; strain items were not recoded as lower scores already demonstrate lower levels of strain. The 6 strain items and 6 reverse scored support items were averaged together for a mean indicator of emotional support from a romantic partner. Internal consistency was .91

2.1.5. Depressive symptoms

The Center for Epidemiologic Studies Depression (CES-D; Radloff, 1977) assessed depressive symptoms over the past week. The CES-D is a well validated measure for depression with good internal consistency and validity (Geisser, Roth, & Robinson, 1997) (Orme, Reis, & Herz, 1986) with validation using the MIDUS data (Cosco, Prina, Stubbs, & Wu, 2017). The CES-D is a 20-item scale rated on a four-point Likert type scale ranging from *Rarely or none of the time* (0) to *Most or all of the time* (3) with three reverse coded items. Example items include "I felt depressed" and "had crying spells." Items were summed together to obtain a severity score of depressive symptoms where higher scores endorse higher levels of depression. Internal consistency was .88.

2.1.6. Social anxiety

Social anxiety symptoms were assessed using the Liebowitz Social Anxiety Scale (LSAS; Fresco et al., 2001). The LSAS has shown strong internal consistently and strong convergent and discriminant validity (Fresco et al., 2001). The scale includes 9 items rated on a four-point Likert type scale. Items consisted of 9 different scenarios which could be anxiety provoking and those scenarios were rated on a severity scale *None* (1) to *Severe* (4). Example items included "Being the center of attention" and "Talking to people in authority." Scores of the 9 items were averaged to provide a severity score. Internal consistency was .86.

2.1.7. Covariates

Education, maternal depression, paternal depression, gender, age, wave 1 symptoms of depression, anxiety, and panic, as well as time lag between studies were used as covariates. Gender was measured using a dichotomous variable (*male / female*). Education was entered in as an ordinal variable ranging from 1 (*no schooling or some grade school*) to 12 (*PhD or other professional degree*). Sociodemographic characteristics were included as covariates because they have been previously linked to mental health problems (Kessler et al., 2012; Kessler & Bromet, 2013; Regier et al., 1993). Maternal and paternal depression during childhood were measured using dichotomous variables (*yes/no*) to account for environmental factors that may increase maltreatment in childhood (Stith et al., 2009) and are crude indicators for a possible genetic component to depression. Although the CES-D and Liebowitz Social Anxiety Scale were not administered at MIDUS 2, to control for mental health, prior symptoms of depression (i.e., loss of appetite), anxiety (i.e., restlessness because of worry), and panic (i.e., chest tightness and pain) were controlled for using dichotomous questions indicating presence or absence of the symptom. There were 7 symptoms of depression, 9 symptoms of anxiety, and 6 symptoms of

Table 2
Correlations, Means, and Standard Deviations Among Study Variables.

Variable	*M (SD)*	1	2	3	4	5
1. Maltreatment	37.06 (13.38)	–				
2. Emotional Support Friends	3.28 (.41)	−0.21**	–			
3. Emotional Support Family	3.30 (.46)	−0.40**	0.48**	–		
4. Emotional Support Spouse	3.25 (.50)	−0.22**	0.22**	0.35**	–	
5. Depressive Symptoms	7.43 (7.28)	0.35**	−0.24**	−0.38**	−0.24**	–
6. Social Anxiety Symptoms	1.81 (.54)	0.16**	−0.22**	−0.19**	−0.17**	0.37**

Note. ** p < .01.

panic administered and entered as continuous variables. Time lag between MIDUS 2 and the biomarker follow-up was also entered as a control variable given that adults participated in the biomarker study between 0 and 62 months following MIDUS 2 ($M = 25.50$, $SD = 14.39$).

3. Statistical analysis

The current study used a path analysis, a form of structural equation modeling (SEM), to test emotional support from family, friends, and romantic partners as mechanism linking childhood maltreatment to depressive and social anxiety symptoms. Descriptive statistics were generated in SPSS v 25.0 and the path analysis was run in Mplus 8.0. SEM compares the proposed theoretical model to the empirical model and evaluates the fit between the theoretical and empirical model. Model-data fit in SEM is measured by the comparative fit index (CFI), Tucker-Lewis index (TLI), Chi-square statistic, and root mean square error of approximation (RMSEA). CFI and TLI values greater .95, RMSEA values below .06, and a non-significant chi-square test indicate adequate model-data fit (Hu & Bentler, 1999). In Mplus, the indirect (mediating) effects were tested using 95 % bias-corrected bootstrap confidence intervals (CI) based on 5000 bootstrap samples.

4. Results

Correlations, means, and standard deviations for study variables are displayed in Table 2. Bivariate correlations indicate that all study variables were significantly associated with one another. Specifically, childhood maltreatment was associated with greater depressive and social anxiety symptoms and less emotional support from family, friends, and romantic partners. Emotional support from family, friends, and romantic partners were correlated with each other. Finally, emotional support from family, friends, and romantic partners were each associated with lower levels of depressive and social anxiety symptoms.

SEM was used to evaluate the potential mediating effects of emotional support from family, friends, and romantic partners. Several SEM models were tested to determine how to best measure emotional support. Although there is conceptual reason to discern the unique effects of emotional support from family members, friends, and romantic partners, it is also important to test alternative models to determine the best measurement strategy. Thus, emotional support was examined two ways. The first method was measuring a latent variable with support from family, friends, and romantic partners serving as indicators (see Runtz & Schallow, 1997). The second method examined support from family, friends, and romantic partners in a multiple mediator model. In the first model, because a latent variable with three indicators is saturated, defined by 0 degrees of freedom, model-data fit cannot be evaluated (i.e., CFI = 1, TLI = 1, RMSEA = 0). To evaluate the model fit, the full model including independent, mediating, dependent, and control variables were added. The fit for Model 1 was CFI = .96, TLI = .82, RMSEA = .05, SRMR = .02 χ^2 (24) = 73.34 $p < .001$, indicating some model-data misfit. Additionally, although the estimates were significant, the standardized loading for emotional support from friends (ß = .56, $p < .001$) and romantic partners (ß = .43, $p < .001$) were low relative to emotional support from family members (ß = .84, $p < .001$). These findings indicate that a singular latent variable reflecting emotional support from friends, family members, and romantic partner was not an optimal approach to measuring emotional support.

The original model was revised by examining the three sources of support in a multiple mediator model (See Fig. 1). The multiple mediator model examined the unique indirect effects of maltreatment on depressive and social anxiety symptoms through emotional support from family, friends, and romantic partners (Model 2); the model included covariances among each of the mediators (emotional support variables). Model 2 was also a saturated model, so to examine model-data fit, an empirical approach was used. The empirical approach first consisted of running the saturated model (Model 2) with all parameters (direct paths) freely estimated. Then, each insignificant path was released (path is not estimated) one by one. A chi-square difference test was then used to examine whether removal of the path affected model-data fit. In Model 3, the path from emotional support from family members to social anxiety symptoms (path k) was the only path released because the effect was non-significant (ß = −.05, $p = .28$) in Model 2. Model 3 demonstrated good model-data fit CFI = 1, TLI = .99, RMSEA = .01 and the chi-square difference test (χ^2 (1) = 1.16 $p = .28$) was non-significant, indicating the model-data fit was not significantly different between Model 2 and Model 3. In Model 4, the only effect released was the path from emotional support from friends to depressive symptoms (path j) because it was also not significant in Model 2 (ß = −.07, $p = .07$). The model fit was, CFI = 1, TLI = .79, RMSEA = .06, χ^2 (1) = 3.384 $p = .07$, indicating poor model-data fit. Although the chi-square difference test did not indicate a significant difference between the models, the TLI statistic is far below the cutoff of .90 (Hu & Bentler, 1999). In model 5, both effects from emotional support from friends to depressive symptoms

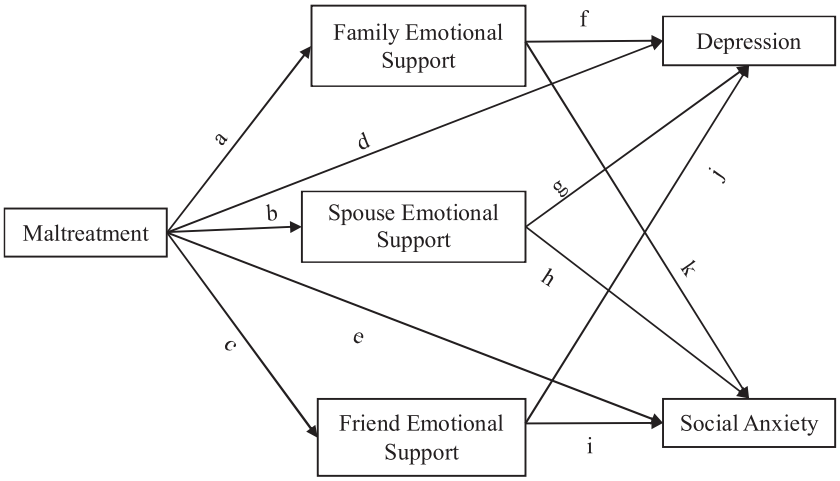

Fig. 1. Proposed Theoretical Structural Equation Mediational Model.
Note. Covariances among the mediators and among the outcomes are not shown for ease of presentation.

and emotional support from family members to social anxiety symptoms were released (paths k and j). Model 5 demonstrated some model-data misfit CFI = 1, TLI = .86, RMSEA = .04, χ^2 (2) = 5.15, p = .08. Not surprisingly, a similar issue that was present in model 4 arose in model 5; the TLI was still below what is considered adequate model fit. All other effects were significant and therefore, paths where not released. Based on the results of the different models, Model 3 was the most parsimonious model and used in subsequent analysis; final model fit was as follows: χ^2 (1) = 1.16 p = .28, CFI = 1, TLI = .99, RMSEA = .01.

Findings from the structural equation mediational model are displayed in Fig. 2. Results of the model indicate that childhood maltreatment was associated with lower levels of emotional support from friends (ß = −.21, p < .001), family members (ß = −.41, p < .001), and romantic partners (ß = −.23, p < .001). Childhood maltreatment was also directly associated with higher levels of both depressive (ß = .22, p < .05) and social anxiety symptoms (ß = .10, p < .05). Perceived familial emotional support (ß = −.18, p < .001) and romantic partner emotional support (ß = −.10, p < .01), were associated with lower levels of depressive symptoms; however, emotional support from friends(ß = −.07, p = .10) was not significant. Regarding social anxiety, emotional support from romantic partners (ß = −.11, p < .01) and friends (ß = −.18, p < .001) were associated with less severe social anxiety symptoms.

Indirect (mediating) effects from childhood maltreatment to depressive and social anxiety symptoms through perceptions of emotional support from family, friends, and romantic partners were tested next (see Table 3). The total indirect effect, or summation of the specific indirect effects, from childhood maltreatment to depressive symptoms was significant (ß = .13; 95 % CI [.090, .181]). Similarly, the total indirect effect from maltreatment to social anxiety symptoms was significant (ß = .11; 95 % CI [.061, .179]).

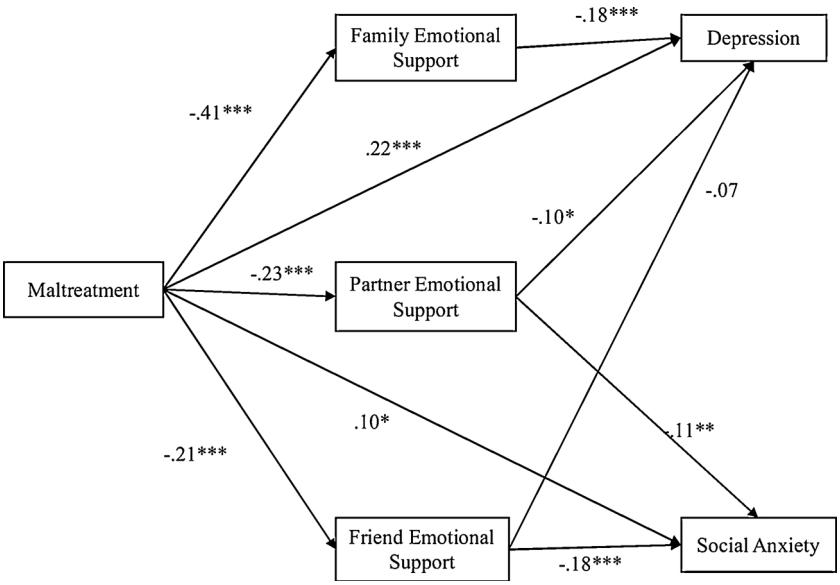

Fig. 2. Path Analysis Mediational Model Linking Maltreatment to Mental Health Outcomes Through Emotional Support.
Note: * p < .05, ** p < .01, *** p < .001. Covariances among the mediators and among the outcomes are not shown for ease of presentation.

Table 3
Direct and Indirect Effects Among Childhood Maltreatment, Emotional Support, and Mental Health Symptoms.

Effect	ß	Sig
Direct Effects		
Childhood Maltreatment - > Depressive Symptoms	**.222**	**< .001**
Childhood Maltreatment - > Social Anxiety Symptoms	**.095**	**< .05**
Childhood Maltreatment - > Family Support	**−.405**	**< .001**
Childhood Maltreatment - > Friend Support	**−.212**	**< .001**
Childhood Maltreatment - > Partner Support	**−.231**	**< .001**
Family Support - > Depressive Symptoms	**−.179**	**< .001**
Friend Support - > Depressive Symptoms	−.074	.097
Partner Support - > Depressive Symptoms	**−.097**	**< .01**
Friend Support - > Social Anxiety Symptoms	**−.179**	**< .001**
Partner Support - > Social Anxiety Symptoms	**−.107**	**< .01**
Indirect Effects		
Childhood Maltreatment - > Family Support- > Depressive Symptoms	**.092**	**[.045, .146]**
Childhood Maltreatment - > Friend Support - > Depressive Symptoms	.016	[-.002, .040]
Childhood Maltreatment - > Partner Support - > Depressive Symptoms	**.022**	**[.005, .048]**
Childhood Maltreatment - > Friend Support - > Social Anxiety Symptoms	**.038**	**[.019, .066]**
Childhood Maltreatment - > Partner Support - > Social Anxiety Symptoms	**.025**	**[.008, .048]**

Note. Significance for indirect effects is based on bootstrapped 95 % confidence intervals. Significant effects are bolded.

Specific indirect effects from maltreatment to depressive and social anxiety symptoms through emotional support from family, friends, and romantic partners were estimated. Childhood maltreatment was indirectly related to depressive symptoms through emotional support from family (ß = .09; 95 % CI [.045, .146]), and romantic partner (ß = .02; 95 % CI [.005, .048]), but not through emotional support from friends (ß = .02; 95 % CI [-.002, .040]). Regarding social anxiety symptoms, the indirect effects from emotional support from friends (ß = .04; 95 % CI [.019 .066]) and romantic partner (ß = .03; 95 % CI [.008, .048]) were significant; because the path from emotional support from family to social anxiety symptoms was not estimated, the indirect effect was not calculated. Overall, the model accounted for 20.9 % of the variance in depressive symptoms and 7.3 % of social anxiety symptoms.

5. Discussion

The purpose of the current study was to investigate emotional support from family, friends, and romantic partners as potential mechanisms linking childhood maltreatment to depressive and social anxiety symptoms in adulthood. Prior research identified emotional support as a possible mechanism linking childhood maltreatment to mental health outcomes (Kong et al., 2019; Runtz & Schallow, 1997; Shaw & Krause, 2002; Sperry & Widom, 2013), but less attention has been placed on the unique contributions of different relationships. One of the primary contributions of this study is identifying the differential effects of emotional support from family, friends, and romantic partners on mental health outcomes among adults who experienced childhood maltreatment. Using a large sample of adults and a longitudinal design, the current study found that childhood maltreatment was indirectly related to depressive symptoms through emotional support from family members and romantic partners, but not friends. Further, childhood maltreatment was indirectly related to social anxiety symptoms through emotional support from friends and romantic partners, but not family members.

One noticeable pattern was that, unlike emotional support from friends and family, greater emotional support from romantic partners was associated with lower levels of both depressive and social anxiety symptoms. These findings are consistent with previous research documenting the protective effect of romatnic relationships on adult mental health (Dehle et al., 2001; (Priest, 2013) Thoits, 2011; Whisman & Baucom, 2012). Romantic partnerships can offer psychosocial resources that can alleviate depressive and socially anxious symptoms. Thoits (2011) argued that having a high quality and emotionally supportive romantic relationship can protect against mental health problems through enhanced sense of belonging (i.e., acceptance and inclusion), self-esteem (i.e., worthiness), and social control (i.e., health promotive behaviors). Adults who were maltreated in childhood often have negative attachment representations of themselves and others leading to emotional isolation and poor health behavior (Godbout, Dutton, Lussier, & Sabourin, 2009). Benefits derived from emotionally supportive relationships, including belonging, self-esteem, and social control can provide a corrective experience and override negative representations with more positive representations, thereby reducing mental health problems.

Consistent with prior research, emotional support from family members and friends were significant mediators between childhood maltreatment and mental health symptomology (Kong, 2017; Kong et al., 2019; Runtz & Schallow, 1997). The effects for emotional support from family and friends, however, demonstrated an opposite pattern of effects. For depressive symptoms, emotional support from family members, but not emotional support from friends, was found to be a possible mechanism. The insignificant effect from emotional support from friends to depressive symptoms is consistent with prior research (Shaw & Krause, 2002; Stafford et al., 2011). One potential reason for the null finding is that the effects of emotional support from family members and romantic partners were also included in the model. Familial and romantic relationships tend to be more central in adult life (Antonucci &

Akiyama, 1987) and, as a result, have a greater influence on depressive symptomology in adulthood (Stafford et al., 2011). Contrastingly, friendships commonly have less frequent interaction, have a greater element of choice, and can be terminated if unsupportive. Stafford et al. (2011) found that emotional support from friends was not associated with depressive symptoms and suggested that because friends are more distal in the daily lives of adults, the beneficial effects of support (i.e., empathy, confiding) are experienced less often.

Conversely, emotional support from friends was documented as a potential mechanism for social anxiety symptoms where greater levels of support from friends was associated with lower levels of social anxiety symptoms. On the other hand, emotional support from family was not associated with social anxiety symptoms. Childhood maltreatment commonly occurs within the family system. Even when maltreatment occurs outside the family system, family members can be knowledgeable that the maltreatment occurred (Sedlak et al., 2010; Wuest et al., 2010). Maltreatment is implicitly or explicitly characterized by powerlessness, fear, terror, criticism, and rejection (Gibb et al., 2001; Kim, Talbot, & Cicchetti, 2009). It is common for those beliefs in childhood to remain impactful into adulthood and, as a result, adults may continue to fear negative evaluations or criticism from others, particularly their family members (Wuest et al., 2010). Prior research by Kong et al. (2017, 2019) found familial emotional support from the perpetrator of childhood abuse were mediators between emotional and physical abuse and mental health outcomes in midlife adults, suggesting that contemporary support from the perpetrator is a potential mechanism linking childhood abuse to mental health functioning in midlife adults. Although the sign of the effect from emotional support to social anxiety was negative, adults who were maltreated by family members may not experience lower levels of social anxiety symptoms because they still carry residual shame, guilt, and fear of evaluation from family members (Cougle et al., 2010; Gibb et al., 2001; Shahar et al., 2015; Wuest et al., 2010). Additionally, family members who were the perpetrators of maltreatment in childhood but then offer support in adulthood may create ambivalence in adult survivors that creates anxiety surrounding their contemporary relationship with the perpetrator.

5.1. Clinical implications

The results of the current study indicate that emotional support is a potential mechanism linking maltreatment to depressive and social anxiety symptoms. Although the current sample was not clinical in nature, these findings may be informative to clinicians. Clinicians working with individuals, couples, and families who are presenting with relational or mental health issues should screen for childhood maltreatment, specifically assessing for the severity of maltreatment. Clinicians may ask adults about their perceptions of emotional support from members of their social network; particular attention should be paid to familial support for adults presenting with depression and friends presenting with social anxiety. Clinicians who are treating adults with comorbid depression and social anxiety may want to pay particular attention to romantic relationships and advocate for couple therapy.

5.2. Limitations

Despite several strengths of our study, including a large sample of adult men and women, the use of longitudinal data, and differentiating sources of support, the study is not without limitations. First, the assessment of childhood maltreatment was retrospective in nature, which may result in adults not remembering or reporting maltreatment. Secondly, although we used a longitudinal design that included prior measures of depression, anxiety, and panic, the same measures of depressive and social anxiety symptoms were not measured at the first time point to detect cross lagged effects. Thirdly, the current study conceptualized childhood maltreatment as the overall experience of abuse and neglect, indicating the overall severity of maltreatment. Using an index of maltreatment severity assumes there is a homogeneous effect of each type of maltreatment on adult outcomes. It cannot be determined if there are specific forms of maltreatment that are more or less influential on emotional support and mental health outcomes. Another limitation of the current study is the ambiguous nature of the variables assessing emotional support family members and friends. It is possible that adult perceptions of emotional support may vary depending on the specific family member or friend participants focused on during the assessment. Alternatively, some participants may have mentally aggregated emotional support across entire group of family and friends, which may not accurately reflect emotional support from the specific people that may have more impact on one's mental health. Another limitation is that the identity of the perpetrator of childhood maltreatment is not available in the data. Although a large proportion of maltreatment is perpetrated by family members, it cannot be definitively determined from this study and discussion of emotional support from family should be interpreted accordingly. Another limitation is that the current study did not examine moderating variables, such as gender, race, or SES. Finally, there was little racial diversity in the current study so generalization of findings to minority populations is significantly limited.

5.3. Conclusions

In light of the limitations, this study adds to the literature by documenting the protective effects of emotional support on depressive and social anxiety symptoms in adults who experienced maltreatment in childhood. Results underscored that different sources of emotional support are linked to different mental health outcomes for adults. Additionally, the study found that romantic partners may play a particularly important role in adulthood as emotional support from partners was associated with lower levels of depressive and social anxiety symptoms.

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Appendix A. Supplementary data

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