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Emotional Support and Adult Depression in Survivors of Childhood Sexual Abuse

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Abstract

The goals of this study were to evaluate the effects of emotional support from friends and parents at two time points (adolescence and adulthood) on adult depression in a nationally representative sample of survivors of childhood sexual abuse (CSA), and examine whether the associations were moderated by the identity of the perpetrator (parent/caregiver vs. not). Data was taken from Waves I and IV of the National Longitudinal Study of Adolescent Health (Add Health). The study sample included 1,238 Add Health participants with a history of CSA and an equivalently sized comparison group of individuals with no history of CSA. Parental support was measured using four items from each wave that assessed the warmth of participants' relationships with their parents and their satisfaction with those relationships. Friend support in adolescence was measured using participants' perceptions of how much their friends cared about them and in adulthood using participants' self-reported number of close friends. Depression was measured using a 10-item subscale of the CES-D. Support from friends and parents in adulthood were significantly associated with lower odds of adult depression in CSA survivors with a history of non-parent/caregiver abuse. Among survivors of parent/caregiver abuse, emotional support was not significantly associated with adult depression regardless of when or by whom it was provided. Emotional support in adulthood from friends and parents is associated with reduced odds of adult depression in CSA survivors, but only in cases where the abuse was perpetrated by someone other than a parent or caregiver.

Keywords

childhood sexual abuse; emotional support; depression; parents; friends

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Childhood sexual abuse (CSA) is a well-established risk factor for adult depression (e.g., Cutajar et al., 2010; Fergusson, Boden, & Horwood, 2008; Kendler, Kuhn, & Prescott, 2004; Zuravin & Fontanella, 1999). Research shows that 30-40% of individuals who experienced sexual abuse in childhood report a lifetime history of depression, compared with 10-20% of individuals with no history of CSA (Molnar, Buka, & Kessler, 2001). Furthermore, individuals with a history of CSA tend to have an earlier onset of depressive symptoms, a more chronic course, and a greater risk for borderline personality characteristics and suicidal behavior (Andover, Zlotnick, & Miller, 2007; Gladstone et al., 2004; Zlotnick, Mattia, & Zimmerman, 2001). These findings suggest that depressed individuals with a history of CSA represent a subgroup of the depressed population with more severe illness characteristics and, potentially, different treatment needs. Improving our understanding of factors that protect against depression in CSA survivors could inform the development of interventions designed to prevent or reduce depression in this at-risk population. One factor shown to be associated with resilience in CSA survivors is the survivor's perceptions of the availability and quality of emotional support (Collishaw et al., 2007; Valentine & Feinauer, 1993).

Emotional Support and CSA

Thoits (1995) defines perceived emotional support as “beliefs that love and caring, sympathy and understanding, and/or esteem and value are available from significant others” (p. 64). Emotional support positively impacts mental well-being by bolstering an individual's feeling of self-worth and acceptance. The positive effect of emotional support is particularly relevant for CSA survivors, who can feel isolated and stigmatized as a result of the abuse (Browne & Finkelhor, 1986). Although many previous studies have examined the positive effects of social support in CSA survivors, none, to our knowledge, have looked specifically at its effects on risk for depression in adulthood in a nationally representative community sample. As a result, the effect of emotional support on adult depression in survivors of CSA remains unclear.

The Role of the Timing of Support – Does it Matter When?

The role of emotional support in protecting against mental health problems in adulthood has been conceptualized in several ways. Models such as the main effects model (which posits a directly beneficial effect of support on mental health) and the buffering model (which suggests that support moderates the association between stress and mental health) conceptualize emotional support as a resource that can be drawn upon to avoid or mitigate mental health problems (Cohen & Wills, 1985). From this perspective, support would be expected to protect against adult depression if it is available at the point in time when the individual is at risk for developing depression. Alternately, models such as attachment theory (Bowlby, 1980) conceptualize the role of support as an essential component in the development of healthy coping mechanisms and cognitive schemas starting in infancy and extending through adulthood. From this perspective, positive support experiences in childhood and adolescence are also important for adult mental health. These perspectives, although not mutually exclusive, have implications for the importance of the timing of the provision of emotional support: models like attachment theory highlight the importance of *foundational* support, namely support experienced during an individual's formative years,

while the main effects model and the buffering model highlight the importance of *available* support, namely support that is available to a person at the time they are at risk for becoming depressed.

Previous studies of emotional support in CSA survivors have typically focused on either available or foundational support, but not both at the same time. For example, Testa, Miller, Downs, and Panek (1992) found that individuals who received positive emotional support in childhood or adolescence immediately following the disclosure of sexual abuse exhibit greater psychological adjustment in adulthood, which supports the importance of foundational support. Hyman, Gold, and Cott (2003) assessed perceptions of support in adulthood among individuals with a history of CSA and found that emotional support was associated with fewer symptoms of Post-Traumatic Stress Disorder (PTSD), providing evidence for the importance of available support.

The Role of the Provider of Support – Does it Matter Who?

Previous research suggests that the effectiveness of emotional support as a protective factor against depression may depend on who is providing the support. Studies of adolescent girls suggest that during adolescence, emotional support from parents is more important than emotional support from friends for reducing the risk of depression later on in life (Stice, Ragan, & Randall, 2004). For CSA survivors, however, researchers have generally found peer support to be more relevant for preventing mental health problems in adulthood. Collishaw and colleagues (2007), for example, found that peer relationships in adolescence were associated with resilience to adult psychopathology for survivors of childhood maltreatment, and many of the resilient women interviewed by Valentine and Feinauer (1993) in their qualitative study of resilience in female CSA survivors identified extra-familial support from friends and romantic partners as one of the factors associated with resilience. In addition, Powers, Ressler, and Bradley (2009), who looked at emotional support and depression in adult survivors of childhood emotional abuse and neglect, found that support from friends, but not from family, was associated with fewer depressive symptoms in females. Collectively, these studies suggest that support from friends is more beneficial for CSA survivors than support from parents. This makes intuitive sense, given that a parent or caregiver is frequently the perpetrator of the abuse. But none of these studies, or any other studies to our knowledge, have compared the effects of support from friends versus parents among CSA survivors who experienced abuse at the hands of someone other than a parent or caregiver. If the perpetrator is not a parent or caregiver but rather a friend, boyfriend, stranger, or some other non-parental figure, parental support might be equally beneficial for CSA survivors as for individuals with no CSA history – a possibility that has implications for treatment or prevention of depression in adult CSA survivors.

Current study

The goals of the current study were to a) examine the association between emotional support from parents and friends at two distinct points in the lifespan (adolescence and adulthood) and adult depression in a nationally representative community sample of CSA survivors and

b) examine whether the association between emotional support and adult depression in CSA survivors is moderated by the identity of the perpetrator (parent/caregiver vs. not). Based on previous studies, we hypothesized that support from friends would be more protective against depression than support from parents in CSA survivors, particularly among individuals who were abused by a parent or caregiver.

Method

Data

This study used data from Add Health, an ongoing longitudinal school-based study of a nationally representative, probability sampled cohort of American teenagers (Resnick et al., 1997). Add Health collects self-reported individual data on adolescents' social life, home life, economic circumstances, psychological health, and physical health every few years. Wave I was administered in 1994 to over 20,000 7-12 graders. The most recent data collection wave, Wave IV, was completed in 2008, when the participants were between the ages of 24 and 34 years old. Details of the Add Health study can be found at the following web address: <http://www.cpc.unc.edu/projects/addhealth>.

The current study is a secondary data analysis of variables from Waves I and IV. It was reviewed and given exempt status by the Temple University IRB. Participants were included in the study sample if they a) were present for both the Wave I and Wave IV surveys ($n = 15,701$), b) were assigned a grand sample weight ($n = 14,800$), c) were not living alone or in an institution during the Wave I survey ($n = 14,522$), d) had at least one living parent at the time of the Wave IV survey ($n = 14,242$), and e) reported a history of CSA ($n = 1,238$). A comparison group of individuals with no history of CSA was selected by drawing a simple random sample of 1,238 individuals from among the participants who did not report a history of CSA but otherwise satisfied criteria for inclusion in the study sample.

Measures

CSA—CSA was assessed using data from Wave IV, which includes three questions regarding sexual abuse. The first question asked participants to indicate whether anyone had ever used nonphysical means (e.g., verbal pressure, threats of harm) to force them to engage in any type of sexual activity. The second question asked participants to indicate whether anyone had ever used physical means to force them to engage in any type of sexual activity (these questions both specifically exclude sexual abuse perpetrated by a parent or caregiver). The third question asked participants how often they were touched, forced to touch, or forced to engage in sexual activity by a parent or caregiver. Participants were considered CSA survivors if they answered affirmatively to one or more of these questions (yes/no for questions pertaining to non-parent/non-caregiver abuse and one or more times for parent/caregiver abuse) and indicated that their first abuse experience occurred before the age of 16.

Emotional support—Support from friends in adolescence was measured using the following item from Wave I: “How much do you feel that your friends care about you?” Answers were recorded on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*very*

much). Support from friends in adulthood was measured using the following question from Wave IV: “How many close friends do you have? (Close friends include people whom you feel at ease with, can talk to about private matters, and can call on for help.)” Possible responses included 1 = *no close friends*, 2 = *1 or 2 close friends*, 3 = *3 to 5 close friends*, 4 = *6 to 9 close friends*, and 5 = *10 or more close friends*.

Support from parents in adolescence and adulthood were measured using the following four items from Waves I and IV, which pertained to the parental figure living in the participant's household (e.g., biological parent, adoptive parent, step parent, foster parent): “How close do you feel to your mother?” “You are satisfied with the way your mother and you communicate with each other,” “how close do you feel to your father?” and “You are satisfied with the way your father and you communicate with each other.” Although additional emotional support items were present in the Wave I survey, we limited our measures to items that were also present in the Wave IV survey to ensure consistency between parental support measures. Participants responded to each question using a 5-point Likert scale with answers ranging from 1(*not at all*) to 5 (*very much*) or 1 (*strongly agree*) to 5 (*strongly disagree*), depending on how the item was worded. Responses were averaged to create composite parental support scores ranging from 1 to 5 both to make them more consistent with the measures of friend support and to avoid penalizing participants living in single-parent homes.

Finally, emotional support variables were dichotomized into high versus low categories. For adolescent parental support, adolescent friend support, and adult parental support, participants with a score of 3 or lower (*no support, very little support, some support*) were categorized as having low support, and participants with a score of 4 or 5 (*quite a bit of support, very much support*) were categorized as having high support. The location of the dichotomous split for these variables was chosen conceptually based on the wording of the answer choices, however, a median split would have yielded similar results (weighted median adolescent parental support = 4.0, weighted median adolescent friend support = 3.8 and weighted median adult parental support = 4.0). Adult friend support was dichotomized such that participants who indicated that they had no close friends or one or two close friends were classified as having low support from friends in adulthood, and participants who reported having three or more close friends were classified as having high support from friends in adulthood. The location of this split was also consistent with the median (weighted median adult friend support = 2.4).

Depression—Adult depression was measured in Wave IV using a 10-item subscale of the Center for Epidemiologic Studies Depression scale (CES-D10). The full version of the CES-D (Radloff, 1977) is a well-established and widely used tool for evaluating depression and has been demonstrated to have good psychometric properties in multiple populations (Al-Modallal, 2010; Dozeman et al., 2011; Radloff, 1991; Roberts, Lewinsohn, & Seeley, 1991; Ros et al., 2011). The items on the shortened version available in Wave IV of Add Health assess whether and how often participants experienced the following depressive symptoms within the past seven days: sadness, depression, irritability, inability to shake the blues, feelings of worthlessness, trouble concentrating, fatigue, feeling disliked, feeling unhappy, and not enjoying life. Possible answers included 0 = *never or rarely*, 1 = *sometimes*, 2 = *a*

lot of the time, and 3 = *most or all of the time*. This scale demonstrated good internal consistency within the sample of Add Health participants included in this study (Cronbach's $\alpha = .85$). Scores on the CES-D10 ranged from 0 to 30, and individuals who scored greater than or equal to 10 were considered to be depressed in accordance with previous research using comparable CES-D subscales (Andresen, Malmgren, Carter, & Patrick, 1994).

Covariates—We controlled for demographic characteristics including sex (male/female), race (White, Black, Other), age (birth year), and socioeconomic status (parental income and education from Wave I, participant income and education from Wave IV). These covariates were chosen because they have all been shown to be associated with depression in previous studies and have the potential to impact participants' perceptions of emotional support (Dohrenwend, Levav, Shrout, & Schwartz, 1992; Kessler et al., 2003; Riolo, Nguyen, Greden, & King, 2005; Weissman, Leaf, Holzer, Myers, & Tischler, 1984). In addition, we controlled for the presence of non-sexual abuse in childhood (physical and verbal/emotional), based on previous research showing that these other forms of child abuse are also associated with depression and that individuals who experience CSA tend to experience negative family environments in general (Peleikis, Mykletun, & Dahl, 2004; Powers et al., 2009; Zuravin & Fontanella, 1999). Childhood physical abuse was measured using participants' answers in Wave IV to the question, “Before your 18th birthday, how often did a parent or adult caregiver hit you with a fist, kick you, or throw you down on the floor, into a wall, or down stairs?” Childhood verbal/emotional abuse was measured using the following question from Wave IV: “Before your 18th birthday, how often did a parent or other adult caregiver say things that really hurt your feelings or made you feel like you were not wanted or loved?” Finally, we adjusted for adolescent depression (Wave I CES-D10 score ≥ 10) based on the finding that previous episodes of depression in adolescence are associated with an increased likelihood of future depressive episodes in adulthood (Lewinsohn, Rohde, Seeley, Klein, & Gotlib, 2000).

Data Analysis

Our first step was to examine descriptive differences between groups. We compared demographic characteristics between CSA survivors and individuals in the comparison group and between depressed and not depressed individuals using weighted chi-square and t-tests. We also compared the proportions of participants in the CSA group and the comparison group who met the criteria for adult depression, and who reported high versus low support on the four emotional support variables (parental support in adolescence, friend support in adolescence, parental support in adulthood, and friend support in adulthood.)

After examining descriptive differences, we modeled the associations between the four emotional support variables and adult depression separately in CSA survivors and in the comparison group using multiple logistic regression models. Adolescent and adult support variables were analyzed in separate models to avoid adjusting out potential mediating effects. Grand sample, strata, and cluster weight variables were included in the analyses to account for the complex sampling design of the Add Health study (Chantala, 2006). All models were adjusted for sex, race, age, parental income, education, participant income and education, non-sexual childhood maltreatment, and adolescent depression.

After examining the main effects of emotional support variables on adult depression, we evaluated the extent to which the identity of the perpetrator moderated this association by fitting logistic regression models with interaction terms for each of the four emotional support variables and perpetrator identity (parent/caregiver vs. not). We also conducted stratified multiple logistic regressions to look at the associations between emotional support variables and adult depression separately among individuals who reported abuse by a parent/caregiver and individuals who reported only non-parent/caregiver abuse.

Finally, we looked to see whether the relationships between any of the emotional support variables and adult depression were moderated by gender, based on previous research suggesting that the association between social support and depression may be different for males and females (Kendler, Myers, & Prescott, 2005). Analyses were conducted in SAS 9.3, and missing data was handled using multiple imputation.

Results

Descriptive Statistics

Demographic and other sample characteristics are shown in Table 1. Weighted chi-square tests showed that CSA survivors were significantly more likely than individuals in the comparison group to be female, have less education, have lower parental income and personal income, and report a history of non-sexual childhood maltreatment and adolescent depression. Depressed individuals, regardless of CSA status, were more likely to be female and non-White and to have parents with less education and lower income and less education and lower income themselves in Wave IV. They were also more likely to report non-sexual childhood maltreatment and to have had depression in adolescence.

Perpetrator Identity—Among CSA survivors, 51.3% ($n = 629$) reported that they had experienced sexual abuse at the hands of a parent or caregiver and 48.7% ($n = 596$) reported only non-parent/caregiver abuse.

Depression—Thirty five percent ($n = 436$) of CSA survivors met criteria for depression (36.5% of survivors of parent/caregiver abuse and 34.6% of survivors of non-parent/caregiver abuse), compared with 18% ($n = 221$) of individuals in the comparison group.

Emotional Support—The proportions of participants in the CSA and comparison groups who reported high support from friends and parents in adolescence and adulthood are shown in Table 2. Weighted chi-square tests showed that CSA survivors were significantly less likely to report high support from parents in adolescence, high support from parents in adulthood, and high support from friends in adulthood compared to individuals in the comparison group.

Effects of Emotional Support on Adult Depression

Parental support in adulthood and friend support in adulthood were both significantly associated with adult depression in CSA survivors (See Table 3). High support from friends in adulthood reduced the odds of adult depression by 31% ($p = .02$), and high support from parents in adulthood reduced the odds of adult depression by 43% ($p = .004$). In the

comparison group, support in adulthood from parents was significantly associated with lower odds of adult depression ($p = .004$), and the effect of support from friends approached statistical significance ($p = .059$). The association between parental support in adolescence and adult depression approached statistical significance in the comparison group ($p = .056$), but not in CSA survivors ($p = .81$). Differences in the relationships between emotional support variables and adult depression between the CSA and comparison groups were not statistically significant— p values for interaction terms between CSA and emotional support variables ranged from .21 to .55.

Moderation by Perpetrator Identity

The main effect of perpetrator identity (parent/caregiver vs. not) on adult depression among CSA survivors was not statistically significant ($\beta = .01$, $p = .94$). There was, however, a statistically significant interaction between parental support in adulthood and perpetrator identity ($p = .02$). As shown in Table 4, among survivors of non-parent/caregiver abuse, high support from parents in adulthood reduced the odds of depression by 67% ($p < .0001$), and high support from friends in adulthood reduced the odds of depression by 42% ($p = .02$). Among survivors of parent/caregiver abuse, none of the emotional support variables were significantly associated with adult depression.

Moderation by Gender

There were no significant interactions between emotional support and gender (p value range: .14 - .72).

Discussion

Adult survivors of childhood sexual abuse (CSA) are 2-3 times more likely to report a lifetime history of depression than adults with no history of CSA (Molnar et al., 2001). Although emotional support has been shown to have beneficial effects on mental health problems such as PTSD and general psychological adjustment in adult CSA survivors (Hyman et al., 2003; Testa et al., 1992), there are unanswered questions about the effects of emotional support on adult depression within this population. In an effort to advance our understanding of the role of emotional support in adult depression among survivors of CSA, the goals of this study were to a) evaluate the associations between emotional support from friends and parents in adolescence and adulthood and adult depression in a large, nationally representative community sample of CSA survivors and b) to assess whether these relationships are moderated by the identity of the perpetrator (parent/caregiver vs. not).

Based on extant research, we hypothesized that among CSA survivors (particularly survivors of parent/caregiver abuse), support from friends would be more protective against adult depression than support from parents. The data did not support this hypothesis. Instead, we found that although both friend support and parental support were significantly associated with lower odds of adult depression among survivors of non-parent/caregiver CSA, parental support had a larger effect than did friend support. Among survivors of parent/caregiver abuse, neither parent nor friend support was associated with adult depression.

Our results showed that irrespective of CSA status, only support provided in adulthood (i.e., available support) reduced the odds of adult depression. Neither friend support nor parental support in adolescence was significantly associated with adult depression in either CSA survivors or in our comparison group. The finding that available emotional support (i.e., support perceived to be available at the time that depression was assessed) was associated with lower odds of adult depression in the comparison group and survivors of non-parent/caregiver CSA is consistent with the main effects model (Cohen & Wills, 1985), which posits that social support has a direct, beneficial effect on mental health. The finding that no form of emotional support was protective against adult depression among survivors of parent/caregiver CSA is not consistent with the main effects model. That emotional support from parents was not protective in this group is not surprising—it makes intuitive sense that if the abuser was a parent or a caregiver, the survivor will have a difficult time trusting parent or caregiver figures in the future. The fact that support from friends was also not protective against adult depression in this group, however, is not particularly intuitive, and it does not fit with existing research in CSA survivors (Collishaw et al., 2007; Valentine & Feinauer, 1993). One possible explanation comes from betrayal trauma theory (Freyd, 1996). This theory suggests that individuals who were sexually abused by a parent or caregiver during childhood may be unable to accurately judge the extent to which others are trustworthy (Zurbriggen & Freyd, 2004). As adults, they might form friendships with people who continuously betray or violate their trust, thereby adding to, rather than protecting against, emotional problems. An alternate explanation comes from attachment theory (Bowlby, 1980). Attachment theory suggests that when a parent violates the trust of a child, either by abuse or neglect, the child learns that his or her environment cannot meet fundamental nurturing needs (Cicchetti & Toth, 2010). In adulthood, these individuals will expect that emotional support from close friends and family will be inconsistent or non-existent. Because they do not trust that their friends and family will be there for them, they attempt to meet their needs irrespective of the availability of emotional support. Our findings with regards to parental support for survivors of parent/caregiver CSA should be interpreted with caution, however, as we were unable to assess many potentially important elements of this relationship. For example, we were unable to determine the exact identity of the abuser, whether the parental support measured in this study was being provided primarily by a non-offending parent, whether the non-offending parent knew about the abuse or believed the child when he/she disclosed the abuse - all information that would be expected to impact the relationship between support and depression for survivors of parent/caregiver CSA.

Implications for Clinical Practice

The findings of this study illustrate that in cases of non-parent/caregiver CSA, the parents of CSA survivors continue to be an important source of support for their children well into adulthood. Although the idea of encouraging parental support is certainly endorsed in child welfare policies and clinical interventions for children (e.g. Trauma-Focused CBT; Cohen, Mannarino, Kliethermes, & Murray, 2012), and there is a growing body of research that recognizes the importance of interventions for non-offending caregivers (van Toledo & Seymour, 2013), we were unable to find policies or interventions that have an explicit focus on parental support for adults. Given the fact that 60-80% of sexual abuse survivors do not disclose their abuse or receive treatment until after the age of 18 (Alaggia, 2005), programs,

policies, and interventions should encourage the development or maintenance of parental emotional support for this subgroup of individuals. For example, individual psychotherapies, such as Interpersonal Psychotherapy, which has been shown to be effective in addressing depression in women with histories of CSA (Callahan, Price, & Hilsenroth, 2004; Cort et al., 2012) could be modified to include parents in treatment. Family therapies, such as Attachment-Based Family Therapy (Diamond, Diamond, & Levy, 2013), which has demonstrated efficacy reducing depression and suicide risk among adolescent survivors of sexual abuse (Diamond, Creed, Gilham, Gallp, & Hamilton, 2012), could be modified to treat adults and their parents. These are two examples of ways that existing empirically supported interventions could be used to develop or maintain parental support of adult survivors of CSA.

Limitations

The current study used a longitudinal, nationally representative sample, which increases the validity and generalizability of the results. As with any secondary data analysis, however, we were restricted to items already available in the dataset. Some of these items were limited in ways that should be kept in mind when interpreting the results. First, the items available to assess history of CSA did not specify what constitutes “sexual activity.” In addition, although we were able to look at the impact of parental abuse vs. abuse by a non-parent or caregiver, we were not able to get a more specific idea of the relationship between the victim and the perpetrator (e.g. whether the abuser was a family member other than a parent, whether the assault took place within the context of date rape) or to look at the effect of many characteristics of abuse, such as severity or duration, that have been shown to be associated with depression in CSA survivors (Hanson et al., 2001; Katerndahl, Burge, & Kellogg, 2005). Second, although we were able to create consistent, multi-item measures of parental support in adolescence and adulthood, only one item from Wave I and one item from Wave IV were available to assess support from friends, and these items differed in wording both from the measures of parental support and from each other. The measure of adult friend support is additionally problematic because it uses the number of close friends as a proxy for a measure of perceived emotional support. It is possible that CSA survivors, many of whom might have problems trusting people, are more comfortable having only one or two highly trustworthy close friends and may actively avoid participating in extensive social networks. Finally, the measure of adult depression used in this study, the CES-D10, only measured depressive symptoms experienced within the past seven days.

In addition to potential limitations with the way the construct of emotional support was measured, the design of the study, namely the fact that emotional support in adulthood and depression were measured at the same time, makes it impossible to speculate as to whether the associations between these variables are causal. An alternate, equally plausible explanation for these associations is that individuals who are depressed are less likely to perceive high support than individuals who are not depressed as a result of the depression rather than any true difference in support (Stice, Rohde, Gau, & Ochner, 2011). It is also possible that the associations are indeed causal, but in the opposite direction: depression may cause individuals to withdraw from friends or family, leading to lower emotional support (Katz, Conway, Hammen, Brennan, & Najman, 2011).

Conclusions

In conclusion, the current study found that among individuals with a history of CSA perpetrated by someone other than a parent or caregiver, support in adulthood from both friends and parents was associated with reduced odds of adult depression. Among survivors of parent/caregiver CSA, emotional support was not associated with adult depression regardless of when, or by whom, it was provided. Given the cross-sectional nature of our measures of depression and support in adulthood, future research is needed to establish the extent to which this relationship is causal. If it does appear to be causal (or even bi-directional), treatment or prevention efforts designed to benefit adult survivors of CSA perpetrated by someone other than a parent or caregiver should incorporate interventions that bolster emotional support from parents in order to help reduce the risk of depression in this vulnerable population.

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References

- Alaggia R. Disclosing the trauma of child sexual abuse: A gender analysis. *Journal of Loss and Trauma*. 2005; 10:453–470.10.1080/15325020500193895
- Al-Modallal H. Screening depressive symptoms in Jordanian women: Evaluation of the center for epidemiologic studies-depression scale (CES-D). *Issues in Mental Health Nursing*. 2010; 31:537–544.10.3109/01612841003703329 [PubMed: 20624023]
- Andover MS, Zlotnick C, Miller IW. Childhood physical and sexual abuse in depressed patients with single and multiple suicide attempts. *Suicide and Life Threatening Behavior*. 2007; 37:467. [PubMed: 17896886]
- Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: Evaluation of a short form of the CES-D. *American Journal of Preventive Medicine*. 1994; 10(2): 77–84. [PubMed: 8037935]
- Bowlby, J. *Attachment and loss*. New York, NY: Basic Books; 1980.
- Browne A, Finkelhor D. Impact of child sexual abuse: A review of the research. *Psychological Bulletin*. 1986; 99:66–77.10.1037/0033-2909.99.1.66 [PubMed: 3704036]
- Callahan KL, Price JL, Hilsenroth MJ. A review of interpersonal-psychodynamic group psychotherapy outcomes for adult survivors of childhood sexual abuse. *International Journal of Group Psychotherapy*. 2004; 54:491–519.10.1521/ijgp.54.4.491.42770 [PubMed: 15388403]
- Chantala, K. *Guidelines for analyzing add health data*. Chapel Hill: University of North Carolina Chapel Hill, Carolina Population Center; 2006.

- Cicchetti, D.; Toth, SL. Child maltreatment: The research imperative and the exportation of results to clinical contexts. In: Lester, BM.; Sparrow, JD., editors. *Nurturing Children and Families: Building on the Legacy of T Berry Brazelton*. Oxford, England: Wiley-Blackwell; 2010. p. 264-2741.
- Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. *Psychological Bulletin*. 1985; 98:310–357.10.1037/0033-2909.98.2.310 [PubMed: 3901065]
- Cohen JA, Mannarino AP, Kliethermes M, Murray LA. Trauma-focused CBT for youth with complex trauma. *Child Abuse & Neglect*. 2012; 36:528–541.10.1016/j.chiabu.2012.03.007 [PubMed: 22749612]
- Collishaw S, Pickles A, Messer J, Rutter M, Shearer C, Maughan B. Resilience to adult psychopathology following childhood maltreatment: Evidence from a community sample. *Child Abuse & Neglect*. 2007; 31:211–229. [PubMed: 17399786]
- Cort NA, Gamble SA, Smith PN, Chaudron LH, Lu N, He H, Talbot NL. Predictors of treatment outcomes among depressed women with childhood sexual abuse histories. *Depression and Anxiety*. 2012; 29:479–486.10.1002/da.21942 [PubMed: 22570264]
- Cutajar MC, Mullen PE, Ogloff JRP, Thomas SD, Wells DL, Spataro J. Psychopathology in a large cohort of sexually abused children followed up to 43 years. *Child Abuse & Neglect*. 2010; 34:813–822.10.1016/j.chiabu.2010.04.004 [PubMed: 20888636]
- Diamond GS, Creed T, Gilham J, Gallop R, Hamilton JL. Sexual trauma history does not moderate treatment outcome in attachment-based family therapy (ABFT) for adolescents with suicide ideation. *Journal of Family Psychology*. 2012; 26:595–605.10.1037/a0028414 [PubMed: 22709259]
- Diamond, GS.; Diamond, GM.; Levy, SA. *Attachment-based family therapy for depressed adolescents*. Washington, DC: American Psychological Association; 2013.
- Dohrenwend BP, Levav I, Shrout PE, Schwartz S. Socioeconomic status and psychiatric disorders: The causation-selection issue. *Science*. 1992; 255(5047):946–952.10.1126/science.1546291 [PubMed: 1546291]
- Dozeman E, van Schaik Digna JF, van Marwijk Harm WJ, Stek ML, van dH, Beekman ATF. The center for epidemiological studies depression scale (CES-D) is an adequate screening instrument for depressive and anxiety disorders in a very old population living in residential homes. *International Journal of Geriatric Psychiatry*. 2011; 26:239–246.10.1002/gps.2519 [PubMed: 20623777]
- Fergusson DM, Boden JM, Horwood LJ. Exposure to childhood sexual and physical abuse and adjustment in early adulthood. *Child Abuse & Neglect*. 2008; 32:607–619.10.1016/j.chiabu.2006.12.018 [PubMed: 18565580]
- Freyd, JJ. *Betrayal trauma: The logic of forgetting childhood abuse*. Cambridge, MA: Harvard University Press; 1996.
- Gladstone GL, Parker GB, Mitchell PB, Malhi GS, Wilhelm K, Austin M. Implications of childhood trauma for depressed women: An analysis of pathways from childhood sexual abuse to deliberate self-harm and revictimization. *The American Journal of Psychiatry*. 2004; 161:1417–1425.10.1176/appi.ajp.161.8.1417 [PubMed: 15285968]
- Hanson RF, Saunders B, Kilpatrick D, Resnick H, Crouch JA, Duncan R. Impact of childhood rape and aggravated assault on adult mental health. *American Journal of Orthopsychiatry*. 2001; 71:108–119.10.1037/0002-9432.71.1.108 [PubMed: 11271710]
- Hyman SM, Gold SN, Cott MA. Forms of social support that moderate PTSD in childhood sexual abuse survivors. *Journal of Family Violence*. 2003; 18:295–300.10.1023/A:1025117311660
- Katerndahl D, Burge S, Kellogg N. Predictors of development of adult psychopathology in female victims of childhood sexual abuse. *Journal of Nervous and Mental Disease*. 2005; 193:258–264.10.1097/01.nmd.0000158362.16452.2e [PubMed: 15805822]
- Katz SJ, Conway CC, Hammen CL, Brennan PA, Najman JM. Childhood social withdrawal, interpersonal impairment, and young adult depression: A mediational model. *Journal of Abnormal Child Psychology*. 2011; 39:1227–1238.10.1007/s10802-011-9537-z [PubMed: 21744059]
- Kendler KS, Kuhn JW, Prescott CA. Childhood sexual abuse, stressful life events and risk for major depression in women. *Psychological Medicine*. 2004; 34:1475–1482. [PubMed: 15724878]

- Kendler KS, Myers J, Prescott CA. Sex differences in the relationship between social support and risk for major depression: A longitudinal study of opposite-sex twin pairs. *The American Journal of Psychiatry*. 2005; 162:250–256. [PubMed: 15677587]
- Kessler RC, Berglund P, Demler O, Jin R, Koretz D, Merikangas KR, et al. Wang PS. The epidemiology of major depressive disorder: Results from the national comorbidity survey replication (NCS-R). *JAMA: The Journal of the American Medical Association*. 2003; 289:3095–3105.
- Lahey B, Dickinson LG. Antecedents of perceived support: Is perceived family environment generalized to new social relationships? *Cognitive Therapy and Research*. 1994; 18:39–53.10.1007/BF02359394
- Lewinsohn PM, Rohde P, Seeley JR, Klein DN, Gotlib IH. Natural course of adolescent major depressive disorder in a community sample: Predictors of recurrence in young adults. *The American Journal of Psychiatry*. 2000; 157:1584–1591. [PubMed: 11007711]
- Molnar BE, Buka SL, Kessler RC. Child sexual abuse and subsequent psychopathology: Results from the national comorbidity survey. *American Journal of Public Health*. 2001; 91:753–760. [PubMed: 11344883]
- Peleikis DE, Mykletun A, Dahl AA. The relative influence of childhood sexual abuse and other family background risk factors on adult adversities in female outpatients treated for anxiety disorders and depression. *Child Abuse & Neglect*. 2004; 28:61–76. [PubMed: 15019439]
- Powers A, Ressler KJ, Bradley RG. The protective role of friendship on the effects of childhood abuse and depression. *Depression and Anxiety*. 2009; 26:46–53. [PubMed: 18972449]
- Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*. 1977; 1:385–401.10.1177/014662167700100306
- Radloff LS. The use of the center for epidemiologic studies depression scale in adolescents and young adults. *Journal of Youth and Adolescence*. 1991; 20:149–166.10.1007/BF01537606 [PubMed: 24265004]
- Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, et al. Udry JR. Protecting adolescents from harm: Findings from the national longitudinal study on adolescent health. *JAMA: Journal of the American Medical Association*. 1997; 278:823–832.10.1001/jama.278.10.823
- Riolo SA, Nguyen TA, Greden JF, King CA. Prevalence of depression by race/ethnicity: Findings from the national health and nutrition examination survey III. *American Journal of Public Health*. 2005; 95:998–1000. [PubMed: 15914823]
- Roberts RE, Lewinsohn PM, Seeley JR. Screening for adolescent depression: A comparison of depression scales. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1991; 30:58–66.10.1097/00004583-199101000-00009 [PubMed: 2005065]
- Ros L, Latorre JM, Aguilar MJ, Serrano JP, Navarro B, Ricarte JJ. Factor structure and psychometric properties of the center for epidemiologic studies depression scale (CES-D) in older populations with and without cognitive impairment. *The International Journal of Aging & Human Development*. 2011; 72(2):83–110.10.2190/AG.72.2.a
- Stice E, Ragan J, Randall P. Prospective relations between social support and depression: Differential direction of effects for parent and peer support? *Journal of Abnormal Psychology*. 2004; 113:155–159.10.1037/0021-843X.113.1.155 [PubMed: 14992668]
- Stice E, Rohde P, Gau J, Ochner C. Relation of depression to perceived social support: Results from a randomized adolescent depression prevention trial. *Behaviour Research and Therapy*. 2011; 49:361–366.10.1016/j.brat.2011.02.009 [PubMed: 21439551]
- Testa M, Miller BA, Downs WR, Panek D. The moderating impact of social support following childhood sexual abuse. *Violence and Victims*. 1992; 7:173–186. [PubMed: 1419926]
- Thoits PA. Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior*. 1995:53–79. Spec No. [PubMed: 7560850]
- Valentine L, Feinauer LL. Resilience factors associated with female survivors of childhood sexual abuse. *American Journal of Family Therapy*. 1993; 21:216–224.10.1080/01926189308250920

- van Toledo A, Seymour F. Interventions for caregivers of children who disclose sexual abuse: A review. *Clinical Psychology Review*. 2013; 33:772–781.10.1016/j.cpr.2013.05.006 [PubMed: 23810845]
- Weissman MM, Leaf PJ, Holzer CE, Myers JK, Tischler GL. The epidemiology of depression. An update on sex differences in rates. *Journal of Affective Disorders*. 1984; 7(3-4):179–188. [PubMed: 6241202]
- Zlotnick C, Mattia J, Zimmerman M. Clinical features of survivors of sexual abuse with major depression. *Child Abuse & Neglect*. 2001; 25:357–367. [PubMed: 11414395]
- Zuravin SJ, Fontanella C. The relationship between child sexual abuse and major depression among low-income women: A function of growing up experiences? *Child Maltreatment*. 1999; 4:3–12.10.1177/1077559599004001001
- Zurbriggen, EL.; Freyd, JJ. The link between child sexual abuse and risky sexual behavior: The role of dissociative tendencies, information-processing effects, and consensual sex decision mechanisms. In: Koenig, LJ.; Doll, LS.; O'Leary, A.; Pequegnat, W., editors. *From childhood sexual abuse to adult sexual risk: Trauma, revictimization, and intervention*. Washington, DC: American Psychological Association; 2004. p. 135-157.

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Characteristic	Childhood Sexual Abuse						Comparison Group											
	Depression (n = 436)			No Depression (n = 801)			Total (n = 1,238)			Depression (n = 221)			No Depression (n = 1,016)			Total (n = 1238)		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
Adolescent depression ^{* †}	226	54.8	244	26.7	1	< 1	470	36.8	83	34.7	194	17.3	1	< 1				

Abbreviations: CSA = childhood sexual abuse, M = mean, SE = standard error. Percentage estimates adjusted using strata, cluster and grand sample weight variables.

* Weighted chi square tests significant at the $p < .05$ level for the difference between CSA survivors and comparison group.

† Weighted chi square tests significant at the $p < .05$ level for the difference between depressed and non-depressed participants.

^b Age was approximated based on birth year.

^c Number and frequency of participants who reported at least 1 instance of nonsexual abuse before age 18

Table 2
Proportions of Participants Who Reported High Support from Friends and Parents in Adolescence and Adulthood

		Childhood Sexual Abuse (n = 1,238)		Comparison Group (n = 1,238)		Weighted χ^2	p
Emotional Support:		n	%	n	%		
Adolescence	Friends	1,053	85.4	1,022	85.2	.01	.92
	Parents	967	78.9	1,072	88.0	22.5	<.001
Adulthood	Friends	804	66.1	924	75.9	13.0	<.001
	Parents	962	79.2	1,105	90.6	26.0	<.001

Note. Chi-square analyses and frequency estimates weighted using strata, cluster and grand sample weight variables from Add Health.

Effects of Emotional Support in Adolescence and Adulthood from Friends and Parents on Adult Depression in Survivors of Childhood Sexual Abuse and Comparison Group

Table 3

Emotional Support:	Childhood Sexual Abuse		Comparison Group	
	OR	[95% CI]	OR	[95% CI]
Adolescence	Friends	0.90 [0.55, 1.46]	0.75	[0.49, 1.16]
	Parents	0.95 [0.60, 1.48]	0.55	[0.29, 1.02]
Adulthood	Friends	0.69 [0.51, 0.94]	*	0.62 [0.38, 1.02]
	Parents	0.57 [0.39, 0.84]	**	0.43 [0.24, 0.76]

Note. OR = odds ratio, CI = confidence interval. Odds ratios represent the odds of adult depression among participants who reported high support relative to the odds of depression among participants who reported low support. Models adjusted for sex, age, race, parental income in Wave I, participant income in Wave IV, participant education in Wave IV, childhood physical abuse, childhood verbal abuse, and adolescent depression and the strata, cluster and grand sample weight variables from Add Health.

† p < .10,
* p < .05
** p < .01

Table 4
Effects of Emotional Support from Friends and Parents in Adolescence and Adulthood on Adult Depression in Survivors of Childhood Sexual Abuse, Stratified by Perpetrator Identity

		Parent/Caregiver		Non Parent/Caregiver	
Emotional Support:		OR	[95% CI]	OR	[95% CI]
Adolescence	Friends	0.90	[0.47, 1.73]	0.87	[0.42, 1.78]
	Parents	0.93	[0.49, 1.79]	0.88	[0.50, 1.53]
Adulthood	Friends	0.79	[0.49, 1.26]	0.58	[0.37, 0.91]
	Parents	0.87	[0.50, 1.51]	0.33	[0.19, 0.58]

Note. OR = odds ratio, CI = confidence interval. Odds ratios represent the odds of adult depression among participants who reported high support relative to the odds of depression among participants who reported low support. Models adjusted for sex, age, race, parental income in Wave I, participant income in Wave IV, participant education in Wave IV, childhood physical abuse, childhood verbal abuse, and adolescent depression and the strata, cluster and grand sample weight variables from Add Health.

* $p < .05$,
** $p < .01$