Siblings Coping with Parental Depression: Similarities and Differences

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Abstract

This study investigated similarities and differences in levels of internalizing and externalizing symptoms and strategies used to cope with stress in a sample of sibling pairs of 9-15 year-old children of depressed parents. The sample of 52 sibling pairs (104 children) was selected from the family cognitive-behavioral intervention described by Compas et al. (2015). Children were assessed on measures of primary control coping, secondary control coping, disengagement coping, and internalizing and externalizing symptoms based on parent and child self-reports. It was expected that siblings would not differ in their experience of internalizing and externalizing problems or in their use of coping strategies. The findings supported the hypotheses that siblings would not differ across these three measures. Researchers also found that the younger siblings’ scores were not dependent on their older siblings’ experience.

Introduction

Depression is a pervasive problem with a 12-month prevalence of 9% and a lifetime prevalence of over 16% in the United States adult population (Gonzalez, Berry, McKnight-Eily, Strine, Edwards, & Lu, 2010). Approximately 7.5 million of these adults affected by depression are raising on average two children under the age of 18, resulting in at least 15 million children growing up in households where they will be exposed to a minimum of one episode of parental depression (Compas et al., 2011; England & Simm, 2009). Studies have consistently shown that children living with a depressed parent are negatively affected. Specifically, offspring of depressed parents present with a higher frequency of disorders associated with internalizing and externalizing symptoms than children unaffected by parental depression (Goodman, Rouse, Connell, Broth, Hall, & Heyward, 2011).

*Internalizing and Externalizing Psychopathology in Children of Depressed Parents*

Internalizing symptoms are subjectively experienced by the individual and typically include emotions such as sadness and anxiety that can be accompanied by withdrawn behavior and somatic problems. These symptoms contribute to the development of internalizing disorders like Major Depressive Disorder (MDD) and a variety of anxiety disorders. Living with a depressed parent increases a child’s likelihood of becoming depressed by four times in comparison to offspring of non-depressed parents (England & Simm, 2009). The range from a two-fold to six-fold increase in risk for anxiety disorders in offspring of depressed parents indicates that the impact of parental depression on children’s anxiety must also be considered (Goodman et al., 2011). Since anxiety symptoms often appear before signs of depression emerge and predict the later development of depressive symptoms, anxiety symptoms may be a precursor to the later development of depression. Considering that depression and anxiety disorders are highly comorbid, it is not surprising that children of depressed parents are at a high risk for both (Colletti, Forehand, & Garai, 2009).

In addition to vulnerability for internalizing disorders, offspring of depressed parents are also at risk for developing externalizing symptoms and disorders. Externalizing symptoms affect others more than the individual, since they include aggressive, angry, and noncompliant behaviors that are disruptive to social functioning. These externalizing symptoms often lead to the development of externalizing disorders, such as conduct disorder and substance use disorders. Children of depressed parents are five times more likely to develop an alcohol dependence disorder than children raised by healthy parents (Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997).

The high prevalence rates of internalizing disorders, like MDD and anxiety disorders, and externalizing disorders, like substance use disorders, indicate that it may be debilitating to live with a parent affected by depression. There are several factors that contribute to the increased likelihood children of depressed parents will develop a disorder. The heritability rate of depression, neuro-regulatory dysfunction, exposure to a stressful and negative environment, and personal appraisals and cognitions all contribute to increased risk for internalizing and externalizing symptoms and disorders in children of depressed parents (Garber & Cole, 2010; Goodman & Gotlib, 1999).

While the aforementioned studies broadly assert an increased risk for both internalizing and externalizing problems in children living with depressed parents, Weissman, Warner, Wickramaratne, Moreau and Olfson (1997) confirmed the high-risk rates for children of depressed parents. Weissman and her colleagues (1997) conducted one of the most important longitudinal studies that analyzed differences between offspring raised by depressed parents and children of non-depressed parents on prevalence rates of internalizing and externalizing disorders. Consistent with previous and subsequent research, Weissman et al. (1997) found that children with depressed parents were far more likely to receive psychiatric diagnoses than children of non-depressed parents. Twenty percent of offspring without a depressed parent were diagnosed with any mood disorder over the course of the study, whereas 87% of children with a depressed parent were diagnosed with a mood disorder (Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997). Of that group, 64% developed MDD in comparison to 13% of MDD diagnoses in the offspring of non-depressed parents (Weissman et al., 1997). This large discrepancy in mood disorder diagnoses between children of depressed parents and children of non-depressed parents was also evident in the number of anxiety disorders diagnosed in Weissman et al.’s (1997) 10-year study. Eight percent of children with a non-depressed parent developed any anxiety disorder while approximately half of the offspring of depressed parents received anxiety disorder diagnoses (Weissman et al., 1997).

In that same study, Weissman et al. (1997) also examined the prevalence of the externalizing disorders with a specific focus on substance use disorders and conduct disorder. Similarly to the findings on internalizing disorders, children of depressed parents were far more likely to exhibit externalizing problems. Of the children raised by a depressed parent, 40% later developed a substance abuse disorder and 44% developed a conduct disorder, compared to 14% and 11%, respectively, in the comparison group (Weissman et al., 1997). It is important to note that the aforementioned percentages may be inflated due to the unbalanced number of participants in the offspring with depressed parents (*n* = 129) versus the group with non-depressed parents (*n* = 53) (Weissman et al., 1997). However, these percentages correspond with established statistics indicating that children of depressed parents are at a four-fold higher risk for depression, a two to six times increased risk for internalizing disorders, and are five times more likely to develop a substance use disorder (Compas et al., 2009; Dunbar, McKee, Rakow, Watson, Forehand, & Compas, 2012; Weissman et al., 1997). Weissman et al.’s (1997) study reported considerably elevated rates for externalizing and internalizing disorders in offspring of depressed parents and found that children of non-depressed parents do not share that increased risk.

*Sources of Risk for Psychopathology in Children of Depressed Parents*

Considering the fact that children of depressed parents are living in environments characterized by disruptions and stressors for children that are the result of parental sadness, withdrawal, irritability, and marital discord, it is not surprising that these children experience elevated rates of psychopathology (e.g., Fear et al., 2009; Jaser, Fear, Reeslund, Champion, Reising, & Compas, 2008; Langrock, Compas, Keller, Merchant, & Copeland, 2002). Thus, the way this subgroup of children copes with their difficult circumstances is important to investigate to better understand the strategies they use and the putative association between coping and internalizing and externalizing problems. Coping is defined as “conscious and volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (Compas, Jaser, Dunn, & Rodriguez, 2012). Individuals are motivated to improve their current emotional state, and coping strategies are chosen based on their perceived ability to achieve that goal and lower stress levels (Compas et al., 2009). Coping strategies direct and mobilize behavior and emotions when they are effective, but they can impair an individual emotionally and behaviorally when these strategies are unsuccessful (Compas et al., 2012).

Individuals’ appraisal of whether the stressor can be controlled is an important factor that shapes the way that individuals attempt to cope with stress (Compas et al., 2012). This appraisal process occurs on both an automatic and a conscious level resulting in the individual acting automatically without consciously considering his or her coping response or purposefully choosing a particular coping strategy (Compas et al., 2009). Once people assess their ability to influence the stressor, they can then use a coping strategy that will be effective in their particular situation. When there is a match between the actual or perceived controllability of stressors and coping strategies that correspond to that level of controllability, people experience fewer emotional and behavioral problems. Similarly, if the controllability of the stressor and the coping strategies do not match, it can worsen behavioral and emotional functioning in a given situation (Compas et al., 2012).

To conceptualize the importance of controllability, a coping model was created that consists of three coping styles that vary in their degree of control. The first category, primary control coping, involves efforts to directly change the stressor or one’s emotional response (Compas et al., 2012). Primary control coping is consistent with a high level of perceived control and the belief that direct action will be effective in handling a stressor. A good match between the controllability of the stressor and a primary control coping strategy can successfully decrease the stress response. Strategies such as problem solving, emotional expression, and emotional regulation are all considered primary control coping techniques (Compas et al., 2012).

Whereas primary control coping focuses on the stressor, secondary control coping centers on changing aspects of the individual in order to accommodate oneself to the stressor. Secondary control coping is most effective when the stressor is uncontrollable or unpredictable. Since children have little or no control over stressors related to parental depression, studies have shown that using secondary control coping to handle a parent’s major depressive episode results in fewer internalizing and externalizing problems (e.g., Jaser et al., 2008). Choosing to accept the situation, viewing the stressor in a different and more manageable way, thinking positively but realistically about the circumstances, and appropriate distraction all qualify as secondary control coping methods (Compas et al., 2012).

Disengagement coping differs from primary and secondary control coping as disengagement involves actively distancing oneself emotionally, cognitively, and behaviorally away from the stressor. Denial, avoidance, and wishful thinking are considered the typical forms of disengagement coping (Compas et al., 2012). Disengagement coping is unique, because it suggests the individual has abandoned any sense of control and has thus moved into a state of helplessness (Compas et al., 2012). In general, research has shown that using disengagement coping strategies to manage parental depression leads to negative results (Langrock et al., 2002).

Primary, secondary, and disengagement coping are related to internalizing and externalizing symptoms in at least two ways. The coping styles can be considered a moderator of the effects of stress, or a protective factor, that helps prevent an individual from developing internalizing and externalizing disorders (Compas, Champion, & Reeslund, 2005). However, primary, secondary, and disengagement coping can also operate as a mediator of the effects of stress, which contributes to the development of internalizing and externalizing problems. Viewing these coping strategies as either a moderator or a mediator of symptoms can explain the presence or absence of internalizing or externalizing symptoms (Compas et al., 2005).

Additionally, coping styles that act as moderators change the relationship between the stressors of parental depression and resulting psychological symptoms. For example, secondary control coping could be considered a moderator since it weakens the established bond between children’s exposure to maternal depression and an increase in child psychopathology (e.g., Connor-Smith & Compas, 2002). It is also important to note that mediators can help explain a particular result. For instance, it is apparent that some disengagement coping behaviors could be considered mediators since they help explain the negative relationship between parental depression and children’s psychosocial functioning (e.g., Jaser et al., 2008). Thus, it is crucial to examine the coping styles utilized by children of depressed parents, since these coping styles have been shown to directly affect the negative consequences of living with a depressed parent (Compas et al., 2005).

*Coping in Children of Depressed Parents*

A study conducted by Langrock, Compas, Keller, Merchant, and Copeland (2002) explored how coping styles impacted the psychological adjustment of these at-risk children. As expected, the data showed that children who utilized secondary control coping strategies like acceptance exhibited fewer depressive and anxiety symptoms. Additionally, the children who used secondary control coping to manage stressors related to parental depression displayed fewer instances of aggressive behavior. Fear et al. (2009) also found that using secondary control coping predicted lower anxiety and depressive symptoms and fewer displays of aggressive behavior. Consistent with these findings, Jaser, Fear, Reeslund, Champion, Reising, and Compas (2008) found that secondary control coping responses were related to significantly lower depressive symptoms, other affective problems, and oppositional defiant problems in at-risk teens. Jaser and her colleagues (2008), Langrock et al. (2002), and Fear et al. (2009) all found that secondary control coping lessened the negative impact of parental depression on adolescents’ affective and behavioral symptoms (Jaser et al., 2008).

Langrock et al. (2002) also examined how primary control coping and disengagement coping were related to psychopathology in children affected by parental depression. Since primary control coping works best when dealing with a controllable stressor, primary control coping was not significantly related to a decrease in internalizing and externalizing symptoms in children of depressed parents. Similarly to primary control coping, utilizing disengagement coping strategies did not reduce the number of internalizing and externalizing problems exhibited by children of depressed parents. Together, these results further support the contention that secondary control coping is best suited for uncontrollable stressors, such as parental depression (Langrock et al., 2002).

*Examining Sibling Similarities and Differences*

Most of the existing research examining sibling similarities and differences has focused on IQ, personality traits, genetics, and shared activities and abilities to name a few. While these aforementioned topics do not directly relate to how siblings cope with parental depression, research in this area provides the scientific community with a better understanding of the ways in which siblings are both similar and different. For example, Watzlawik (2009) found that siblings are similar on measures of their shared abilities and activities as well as their overall interests. Watzlawik (2009) also found that siblings were significantly different from each other in regards to their physical appearance, character traits, and athletic ability.

Similarly to Watzlawik (2009), Whiteman, McHale, and Crouter (2007) analyzed whether siblings were similar or different in their sports abilities, art interests, risky behaviors such as frequent alcohol use, and peer competence. Whiteman et al. (2007) found that younger siblings were similar to their older siblings; however, that result was moderated by the older siblings’ preferences and habits. Overall, the researchers found that the degree of similarity between siblings was positively related to the level of intimacy between siblings and the amount of time spent together. Similarities among siblings were most evident when the younger siblings reported feeling influenced by their older siblings (Whiteman, McHale, & Crouter, 2007).

Another important realm of sibling research examines the “de-identification” process some siblings undergo to exaggerate differences on things that are central to their self-concept. A description of a de-identification process emerged from the behavioral-genetics theory and states that the more similar siblings are the more they will try to differentiate themselves (Feinberg & Hetherington, 2000). Research shows that family members also make an effort to differentiate siblings. On measures of social responsibility, self-worth, cognitive agency, antisocial behavior, and depressive symptoms, Feinberg and Hetherington (2000) found that siblings were more similar if they were farther apart in age. Additionally, Feinberg and Hetherington (2000) found that siblings who reported warmth in their relationship were more similar than those who did not endorse warmth. The siblings who were closer in age were less similar as they likely made an explicit effort to differentiate themselves (Feinberg & Hetherington, 2000).

Gamble, Card, and Yu (2010) also examined sibling differences and similarities on measures of self-representation such as social competence, global self worth, scholastic competence, and social competence. Overall, Gamble and her colleagues (2010) found that siblings are similar across the measures. Sibling warmth, degree of sibling modeling, and presence of sibling conflict predicted sibling similarities or differences. The presence of sibling warmth and sibling modeling both predicted sibling similarities. Sibling modeling refers to the degree to which the older sibling models certain behaviors for the younger sibling and encourages the younger sibling to engage in similar activities. Unsurprisingly, the presence of sibling conflict was negatively related to sibling similarities on measures of self-representations. Gamble et al. (2010) also noted that social learning and social reinforcement account for the direct effects siblings have on one another, whereas social connectedness as measured by warmth and support moderate the environmental effects that account for sibling similarities.

 Taken together, these four studies support the contention that siblings are similar on a wide range of measures. The evidence showed that warmth, intimacy, and a large age gap predicted sibling similarities. These researchers also found that sibling conflict and closeness in age accounted for sibling differences. While these studies were not directly related to the ways in which siblings cope with maternal depression, they provide a context that helps explain why siblings may be different or similar (Gamble, Card, & Yu, 2010; Feinberg & Hetherington, 2000; Watzlawik, 2009; Whiteman et al., 2007).

*Within-Family Effects of Parental Depression: Comparisons Among Siblings*

Research has tested the impact of parental depression on one child in the family while failing to examine how all the children in the family are affected by parental depression. Brody (1998) broadly investigated how sibling relationships are altered when parental depression is present. He found that the stress of being raised by a depressed parent decreases the children’s ability to manage emotions and handle difficult situations, which in turn creates a less supportive sibling relationship that is rife with conflict (Brody, 1998). This finding that parental depression negatively impacts sibling relationships supports the idea that siblings within the same family may be uniquely affected by growing up with a depressed parent.

However, there is very little research investigating the similarities and differences between siblings and only children raised by a depressed parent. To date, only one study has specifically examined how siblings cope with maternal depression. Klimes-Dougan and Bolger (1998) compared the coping styles of children of depressed parents to the coping strategies used by siblings raised by parents without a history of depression. Using the children’s self-reports on their coping styles and semi-structured interviews, the researchers collected data examining the different coping styles siblings utilized. Klimes-Dougan and Bolger (1998) created a new coping-style scale, the Maternal Affectivity Coping Scale (MACS), to determine the children’s response to maternal depression. The MACS consists of five subscales of coping – problem solving, social support, distancing, internalizing, and externalizing (Klimes-Dougan & Bolger, 1998). Klimes-Dougan and Bolger (1998) conducted analyses to determine how maternal depression, sex of adolescent, and sibling group (either younger sibling cohort or older sibling group) affected the MACS subscale scores.

It is important to differentiate the aforementioned internalizing and externalizing symptoms and Klimes-Dougan and Bolger’s (1998) internalizing and externalizing coping measures. We defined internalizing and externalizing symptoms as problems that are subjectively felt and also socially disruptive, which emerge in response to negative and stressful life events. In contrast, Klimes-Dougan and Bolger (1998) defined internalizing coping as excessive worry. Klimes-Dougan and Bolger (1998) considered expressed anger, hitting, and throwing as evidence of externalizing coping.

The results revealed no main effect for maternal depression, which indicates the children of well parents did not significantly differ on their MACS subscale scores from their counterparts who had a family history of depression (Klimes-Dougan & Bolger, 1998). However, the researchers found that maternal depressive symptoms did impact the children’s coping styles within the sample of children raised by a parent with a mood disorder. When mothers were more likely to express anger and aggression directed at those around them, their children would often employ supportive strategies (Klimes-Dougan & Bolger, 1998). Additionally, Klimes-Dougan and Bolger (1998) found a negative correlation between mothers’ current depressive symptoms and the siblings groups’ MACS scores. For the younger children, severe maternal depressive symptoms were related to an increase in problem solving and externalizing coping strategies in the children (Klimes-Dougan & Bolger, 1998). The severity of maternal depression did not impact the older cohort’s coping scores.

Klimes-Dougan and Bolger (1998) also examined which coping styles siblings used the most and how sibling sex and birth order affected the children’s coping response. Overall, they found that children of depressed parents were most likely to employ problem solving, followed by social support, distancing, internalizing, and externalizing coping strategies (Klimes-Dougan & Bolger, 1998). They found that siblings coped similarly on the problem solving, social support, and externalizing MACS scales. They also considered the possibility that birth order may cause siblings to cope more similarly; however, the data indicated that the coping style of the older siblings did not influence the coping choices of the younger siblings (Klimes-Dougan & Bolger, 1998). Klimes-Dougan and Bolger (1998) investigated whether same sex siblings were more likely to score similarly on those subscales and found that siblings of the same sex did not cope more similarly than opposite sex siblings. However, females did use more social support and internalizing coping strategies than their male counterparts (Klimes-Dougan & Bolger, 1998). Additionally, there was an overall effect for sibling group revealing that the older cohort used externalizing coping more than their younger siblings (Klimes-Dougan & Bolger, 1998).

While the Klimes-Dougan and Bolger (1998) study provides valuable insight into the differences in coping styles among siblings, there are several limitations that may have negatively impacted their interpretations. One main issue lies in the way Klimes-Dougan and Bolger (1998) defined the MACS subscales. More specifically, the way the researchers operationally defined internalizing and externalizing coping strategies obscured the distinction between coping styles and internalizing and externalizing symptoms. Klimes-Dougan and Bolger (1998) defined internalizing coping as worrying and externalizing coping as hitting something; however, worrying and acting out are symptoms that emerge as a result of living with a depressed parent. Anxiety is considered an internalizing symptomrather than a coping style. Throwing or hitting things would qualify as externalizing symptoms and more accurately describes the maladaptive behavior exhibited in conduct disorder. Since coping styles and measures of psychological symptoms were not kept distinct, the researchers’ ability to accurately judge the children’s coping styles and adjustment may have been impaired. The current study attempts to clarify Klimes-Dougan and Bolger’s (1998) findings by defining coping according to the control coping model (Compas et al., 2012) in order to address the confound between coping and symptoms.

The current study is couched in research examining sibling differences on numerous variables like risky behavior, externalizing and internalizing symptoms, sibling differentiation, and extracurricular activities as well as research examining how siblings cope with maternal depression. The primary purpose of the current study is to determine how siblings adjust and cope with maternal depression. We hypothesized that siblings would not differ in their experience internalizing and externalizing symptoms. Our secondary hypothesis predicted that siblings would not differ in their use of coping strategies to manage the stress of living with a depressed mother.

Method

*Participants*

Researchers chose participants from a pool of 180 parents with a current or past history of MDD or dysthymic disorder during the lifetime of their children and 242 children of these parents from the areas in and around Nashville, Tennessee and Burlington, Vermont (Compas et al., 2015). Researchers included the families who had two children and randomly selected two children from the families that had more than two children for a total of 52 sibling pairs, or 104 total participants (Compas et al., 2009; Compas et al., 2011). Forty-nine percent of parents were in a current episode of major depression at the time of the baseline assessment (Compas et al., 2011).

Parents’ level of education included less than high school (7.2%), completion of high school (8.1%), some college (31.5%), college degree (27%), and graduate education (26.1%). Eighty-six percent of target parents were Euro-American, 5.8% African-American, 2.7% Hispanic-American, 1% Asian-American, 1% Native American, and 3.9% mixed ethnicity. The racial and ethnic compositions of the samples were representative of the regions in Tennessee and Vermont from which they were drawn. Based on the 2000 U.S. Census data, annual family income ranged from less than $5,000 to more than $180,000, with a median annual income of $40,000. Sixty-four percent of parents were married/partnered, 21.6% divorced, 3.6% separated, 9% had never married, and 1.6% were widowed (Compas et al. 2011).

*Measures*

*Children’s internalizing and externalizing symptoms.* Children’s internalizing and externalizing symptoms were analyzed using the Child Behavior Check List (CBCL) and the Youth Self Report (YSR). The CBCL is a 118-item parent questionnaire that asks the target parent to answer questions regarding their children’s internalizing and externalizing symptoms. Parents answer these questions based on their children’s behavior in the last 6 months using a 3-point Likert scale that ranges from never true (0) to very true or often true (2). This questionnaire provides researches with a measure of the child’s level of emotional distress and degree of behavioral problems as reported by the parent.

To compliment and help confirm the data collected from the CBCL, the children participating in the study were required to complete the YSR, a self-report questionnaire describing their own internalizing and externalizing problems. The CBCL and YSR were chosen together, because the reliability, validity and internal consistency of these two measures has been well established. For this study, the internal consistency for the CBCL ranged from (α) = .84 to .94 and (α) = .84 to .90 for the YSR. Test-retest reliability ranged from *r* = .82 to .91 for the CBCL and *r* = .78 to .91 for the YSR scale (Compas et al., 2011).

*Children’s coping style.* Researchers utilized the Parental Depression section of the Responses to Stress Questionnaire (RSQ) to determine how the participating children handled their parents’ depressive symptoms. The RSQ assesses the following types of coping strategies: primary control engagement coping, secondary control engagement coping, disengagement coping, involuntary engagement/stress reactivity, and involuntary disengagement. Both the target parent and the child responded to this questionnaire using a four-point Likert scale from not at all (1) to a lot (4). We calculated the proportion score by dividing the total score for each of the five coping styles by the total score on the RSQ. We created a composite score of the parents and adolescents’ scores and used these composite scores in the analyses (Compas et al., 2006; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000).

 *Parental depressive symptoms.* Researchers used a semi-structured diagnostic interview, the Structured Clinical Interview for DSM (SCID; First, Spitzer, Gibbon, & Williams, 2001), to assess parents’ past and present history of MDD and other psychopathology according to DSM–IV criteria (American Psychiatric Association, 1994). Researchers selected a random subset of these interviews to calculate inter-rater reliability and found 93% agreement (κ = 0.71) for MDD diagnoses. Parents completed the Beck Depression Inventory II to assess their current depressive symptoms. This self-report questionnaire has been used in numerous studies due to its ability to accurately assess the severity of parental depression and its high internal consistency (α) = .91. For this particular study, the internal consistency was measured at (α) = .93 (Compas et al., 2011).

*Design*

The participants included in the current study and the data analyzed in this study were taken from a longitudinal family cognitive-behavioral intervention. The intervention was intended to help depressed parents manage their symptoms and improve their parenting skills and their children understand depression and improve their coping skills. The families randomized to the comparison group, the written information condition, were mailed informational materials discussing the nature of depression, the effect of depression on the family unit, and signs of depression in children. The materials were mailed to the families to coincide with the sessions of the family group intervention (Compas et al., 2011).

*Procedure*

 Researchers recruited from a wide variety of sources ranging from mental health private practices to media outlets in order to enroll a representative sample of depressed or previously depressed parents. From these recruitment efforts, researchers contacted 574 parents who expressed interest in the study. Of the 574 parents originally contacted, 309 were approved for participation after being screened by research assistants. In order to qualify, the families needed to meet the following requirements: (a) parents met criteria for major depression currently or during children’s lifetime (b) parents did not have a history of bipolar I, schizophrenia, or schizoaffective disorder, (c) the children did not have autism spectrum disorder, mental retardation, bipolar I disorder, or schizophrenia, and (d) children did not meet criteria for conduct disorder or substance abuse or dependency. Eligible families were excluded if the parent was currently suicidal or had a substance dependency or abuse disorder (Compas et al., 2011).

After exclusion and inclusion criteria were taken into account, 180 parents were contacted to complete the baseline interview to finalize their eligibility in the study.

Families were randomized in blocks of eight families to the family cognitive-behavioral therapy (90 families with 121 children) or written information (90 families with 121 children) conditions. The parent with a history of depression completed all parent measures and their children ages 9 to 15 completed the child measures. The order of randomization was determined by a random number generator, and the assignment order was kept in a series of sealed envelopes that were opened by research assistants who were blind to assignment until the envelope was opened for a family (Compas et al., 2015).

Results

 In order to assess whether siblings differed in their internalizing and externalizing problems and whether they differed in their use of coping strategies, researchers conducted *t*-tests on the CBCL and YSR as well as the RSQ parent and child reports of primary, secondary, and disengagement coping. Tables one through four present the means, standard deviations, *T* scores, and *p* values comparing younger and older siblings.

*Descriptive Statistics Comparing Siblings on Internalizing & Externalizing Problems*

*Mothers’ reports on their children’s internalizing and externalizing problems.* Overall, mothers reported that the younger siblings’ scores did not differ from their older siblings’ scores on the CBCL. The mean *T* score for the younger siblings on the CBCL internalizing measure was 56.48 (*sd* = 10.11) while the older siblings mean score was 57.65 (*sd* = 10.73). The *t*-test revealed a non-significant *t*-value of -.64 (*p* = .53) for internalizing problems. Similarly, the younger siblings scored a mean *T* score of 53.83 (*sd* = 11.35) on the CBCL externalizing measure, and the older siblings scored a mean of 52.98 (*sd* = 9.76). The *t*-value for externalizing problems on the CBCL was non-significant (*p* = .63). These results are represented in Table 1.

 *Siblings’ self reports on their own internalizing and externalizing problems.* When the siblings reported on their own internalizing and externalizing problems using the YSR, the results did not vary greatly from their mothers’ responses on the CBCL. Younger siblings reported a mean *T* score of 55.75 (*sd* = 11.45) while their older siblings’ mean *T* score was 53.16 (*sd* = 11.48) on the YSR’s internalizing measure. The *t*-value for the internalizing measure was non-significant, *t* = 1.23 (*p* = .20). Younger siblings reported a mean *T* score of 49.57 (*sd* = 11.45) whereas the older siblings had a mean score of 50.06 (*sd* = 10.71) on the externalizing measure. The *t*-value was non-significant, *t* = -.22 (*p* = .82). Consequently, there was not a significant difference between the younger siblings’ reports of their internalizing and externalizing problems and their older siblings’ reports. These findings are reported in Table 2.

*Descriptive Statistics Comparing Siblings on Coping Styles*

 The secondary hypothesis of this study focused on the coping strategies that siblings used to manage their mothers’ depression. Consequently, *t*-tests were conducted to determine whether siblings differed in their coping behaviors. It is important to note that ratio scores on the RSQ were used in these analyses to reflect the relative use of each of the three types of coping. Thus, the mean *T*-ratio scores were reported as fractions that sum to one or 100%.

*Mothers’ reports on their children’s coping.* Mothers completed the RSQ about their children. The mean ratio score for primary control coping for the younger siblings was .12 (*sd* =.04) whereas the older siblings had a mean score of .18 (*sd* =.04). The *t*-value for primary control coping was -.21 (*p* = .14). For secondary control coping, the mothers reported a mean score of .22 (*sd* =.04) for the younger siblings. The older siblings received a mean score of .22 (*sd* =.05) for secondary control coping. The *t*-test for secondary control coping was *t* = -.86 (*p* = .39), which was not significant. For disengagement coping, the mothers reported a mean *t*-ratio score of .20 (*sd* = .04) for the younger siblings and a mean score of .20 (*sd* = .03) for the older siblings. The *t*-test for disengagement coping was *t* = -.30 (*p* = .32). In summary, the primary control coping, secondary control coping, and disengagement coping *t*-tests proved not significant. These findings are summarized in Table 3.

*Siblings’ self-reports on their own coping styles.* When the children reported on their own coping styles, younger siblings reported a mean score of .17 (*sd* = .03) for primary control coping. Similarly, the older siblings reported a mean score of .17 (*sd* =.04). The *t*-test not significant, *t* = -.82 (*p* = .42). For secondary control coping, the mean score for younger siblings was .23 (*sd* =.05) whereas the older siblings’ mean score was .24 (*sd* =.05). The *t*-test for secondary control coping was not significant, *t* = -1.09 (*p* = .28). Younger siblings reported a mean score of .20 (*sd* =.03) while their older siblings’ mean was .21 (*sd* = .03). The *t*-test for disengagement coping was not significant, *t* = -1.05 (*p* = .30). The results were not significant for primary control coping, secondary control coping, and disengagement coping when the siblings were the informants. The results are presented in Table 4.

*Correlations Comparing Siblings on Internalizing and Externalizing Problems*

Pearson correlations were used to examine the relationship between the younger siblings’ scores on the CBCL, YSR, and RSQ and their older siblings’ scores on the same measures. Tables five through eight present Pearson correlation values for younger siblings’ scores on the CBCL, YSR, and RSQ and their older siblings’ performance on those measures.

*Mothers’ reports on their children’s internalizing and externalizing problems*. When we compared the mothers’ interpretations of their younger children’s internalizing scores to their older children’s internalizing problems, we found an *r* = .18, which was not significant. Similarly, we examined the relationship between the younger siblings’ score on the externalizing measure of the CBCL and their older siblings’ externalizing score and found a significant correlation, *r* = .30, *p* < .05. We also compared the younger siblings’ internalizing problems with their older siblings’ externalizing problems. This analysis resulted in an *r* = .09 that was not significant. Additionally, we analyzed the relationship between the younger siblings’ externalizing scores and their older siblings’ internalizing scores. The result of that analysis was an *r* = .10, which was not significant. These findings are presented in Table 5.

*Siblings’ self-reports on their own internalizing and externalizing problems.* Interestingly, when the siblings reported on their own internalizing and externalizing problems on the YSR the results varied slightly from when their mothers reported on their children’s emotional and behavioral problems. The correlation between the younger siblings’ internalizing problems and their older siblings’ internalizing problems was not significant, *r* = .21. In examining the relationship between the younger siblings’ externalizing scores and their older siblings’ externalizing scores, the result was not significant, *r* = .01. The results were not significant when we compared the younger siblings’ internalizing scores to their older siblings’ externalizing scores and when we compared the younger siblings’ externalizing problems to their older siblings’ internalizing problems. Unlike the correlations based on mothers’ reports, none of the correlations based on siblings’ self-reports were significant. Table 6 depicts these findings.

*Correlations Comparing Siblings on Coping Styles*

 *Mothers’ reports on their children’s coping styles.* We also considered the relationship between younger siblings’ coping styles and their older siblings’ coping techniques. Mothers reported on their children’s coping styles in the RSQ. When we considered the relationship between the mothers’ reports of her younger children’s use of primary control coping and her older children’s use of primary control coping, we found a non-significant *r* of .21. When we examined the younger siblings’ tendency to use secondary control coping to their older siblings’ use of secondary control coping, we found a significant correlation of *r* = .31, *p* < .05. When examining the relationship between the younger siblings’ disengagement coping scores and their older siblings’ scores on the disengagement coping measure, there was a non-significant *r*-score of -.14. We also considered the relationship between the younger siblings’ use of primary control coping and their older siblings’ use of secondary control coping and found an *r* of zero, which was not significant. The correlation examining the relationship between the younger siblings’ scores on primary control coping and their older siblings’ reports regarding their disengagement coping was not significant, *r* = -.01. When we analyzed the relationship between the younger siblings’ use of secondary control coping and their older siblings’ use of primary control coping, the correlation was not significant (*r* = .11). We also considered the relationship between the younger siblings’ scores on secondary control coping and their older siblings’ scores on disengagement coping and found a non-significant association, *r* = -.23. We found a non-significant correlation between younger siblings’ disengagement coping and their older siblings’ primary control coping (*r* = .00). Additionally, the relationship between the younger siblings’ use of disengagement coping and their older siblings’ tendency to use secondary control coping was not significant (*r* = .18). In summary, the relationship between the younger siblings’ use of secondary control coping and their older siblings’ use of secondary control coping was significant (*r* = .31) whereas every other correlation was not significant when their mothers were the informants. These findings are depicted in Table 7.

*Siblings’ self-reports on their own coping.* When we examined the younger siblings’ reports on their use of primary control coping and their older siblings’ tendency to use primary control coping, we found a non-significant correlation. Similarly, the correlation between the younger siblings’ use of secondary control coping and their older siblings’ tendency to use secondary control coping was not significant. Interestingly, the younger siblings’ use of disengagement coping and their older siblings’ use of disengagement coping strategies were significantly correlated, *r* = .42, *p* < .01. The relationship between the younger siblings’ use of primary control coping to their older siblings’ use of secondary control coping was not significant. Additionally, the younger siblings’ use of primary control coping and their older siblings’ use of disengagement coping was not significantly correlated. The younger siblings’ use of secondary control coping and their older siblings’ tendency to use primary control coping were not significantly correlated. Similarly, the younger siblings’ use of secondary control coping and their older siblings’ disengagement scores were not significantly correlated. The relationship between the younger siblings’ use of disengagement coping and their older siblings’ use of primary control coping was significant, *r* = -.30, *p* < .05. The correlation of younger siblings’ use of disengagement coping and their older siblings’ use of secondary control coping was not significant. In conclusion, there were two significant results when the siblings’ self-reported on their coping styles: an inverse relationship between the younger siblings’ disengagement coping scores and their older siblings’ use of primary control coping as well as a positive relationship between the younger siblings’ and their older siblings’ disengagement coping scores. These results are depicted in Table 8.

Discussion

Living with a depressed parent is stressful for children and puts them at high risk of developing psychological and behavioral problems. The coping strategies that children use to manage their mothers’ depression play an important role in determining the children’s psychosocial outcomes. While there is extensive research delineating the ways in which siblings are similar across a number of different psychological constructs, few researchers have investigated whether children raised by a depressed parent differ in their psychological and behavioral outcomes as well as their use of coping styles. Klimes-Dougan and Bolger (1998) did examine whether siblings of depressed mothers were similar, and this current study intended to build on Klimes-Dougan and Bolger’s (1998) findings. More specifically, this study asked whether siblings of depressed parents differed in their experience of internalizing and externalizing symptoms and use of coping strategies. It was hypothesized that siblings would not differ in their internalizing and externalizing symptoms and would not differ in their use of coping strategies.

*Are Siblings of Depressed Parents Similar?*

In order to determine whether siblings differed in their symptoms and coping styles, a series of *t*-tests were conducted to compare younger and older siblings within families. Because siblings were expected to not differ, we anticipated that the results from the *t*-tests would not be significant. The *t*-tests comparing the younger and older siblings’ internalizing and externalizing scores on the YSR and CBCL were not significant, suggesting that siblings did not differ in their emotional and behavioral problems. Similarly, both parents and siblings reported that siblings did not differ in their use of primary, secondary, and disengagement coping. The fact that both the children’s and the parents’ reports were not significant suggests that parents and children were reporting different views of what was actually happening. Overall, the comparisons of siblings on the YSR, CBCL, and RSQ reveal that siblings do not differ in their experience of internalizing and externalizing symptoms or in their use of coping strategies to manage maternal depression.

*Are Siblings’ Scores Dependent on One Another?*

Correlations were examined to determine whether there was a relationship between the younger siblings’ scores on internalizing, externalizing, and coping measures and their older siblings’ internalizing and externalizing problems and coping styles. It was hypothesized that the correlations would be significant if the younger siblings’ scores did not differ from \ their older siblings’ scores. Overall, the CBCL correlations were not significant. However, mothers did report that their younger siblings’ scores on externalizing problems were related to their older siblings’ scores on externalizing symptoms. All four of the correlations comparing the younger siblings’ YSR scores to their older siblings’ YSR scores were not significant suggesting that the younger siblings believed that their experience was not dependent on their older siblings’ internalizing and externalizing problems. The fact that the majority of the correlations were not significant suggests that the younger siblings’ scores were not dependent on their older siblings’ internalizing and externalizing scores.

Similarly, the majority of the correlations comparing the younger siblings’ coping styles to their older siblings’ coping choices were not significant. This finding is consistent with Klimes-Dougan and Bolger’s (1998) conclusion that the younger siblings’ coping choices were not dependent on what coping styles their older sibling used. In the current study, however, mothers reported that the younger siblings’ scores on secondary control coping were related to their older siblings’ scores on secondary control coping. Interestingly, the siblings did not self-report that their scores on secondary control coping were dependent on one another. Rather, younger siblings self-reported that their scores on disengagement coping were negatively related to their older siblings’ use of primary control coping. Additionally, younger siblings reported that their use of disengagement coping was positively related to their older siblings’ scores on disengagement coping. In conclusion, the fact that the majority of the correlations were not significant suggests that siblings are not exceedingly similar as the younger siblings’ scores were not dependent on their older siblings’ performance on the CBCL, YSR, and RSQ.

*Explaining the Non-Significant Findings*

Considering the fact that 20 out of 20 *t*-tests were not significant, we can conclude that younger siblings did not differ from their older siblings in this sample. Since 22 out of 26 total correlations were not significant, this suggests that the younger siblings’ experience of internalizing and externalizing problems and use of coping styles were not dependent on their older siblings’ scores on the internalizing, externalizing, and coping measures. In general, the results suggest that siblings were similarly affected by living with a depressed parent. Specifically, siblings did not differ in their experience internalizing and externalizing symptoms, and they did not differ in their use of similar coping strategies to manage their parents’ depression. However, the younger siblings’ scores on the CBCL, YSR, and RSQ were not dependent on their older siblings’ performance on those measures.

*Explaining the Significant Findings*

Although there were relatively few significant results, it is important to consider the implications. Both mothers and children reported two significant results, for a total of four significant results out of 47 analyses. Since mothers and their children reported the exactly same number of significant results, it is likely that the mothers and the siblings were reporting different views of what was actually happening. There are several explanations that may account for the why some of the mothers’ reports were significant. The mothers may have reported that their younger children used more secondary control coping and displayed more externalizing problems when their older children also used more secondary control coping and displayed more externalizing problems, because the mothers may have noticed the older sibling using an extraordinary amount of secondary control coping and exhibiting an unmanageable number of externalizing symptoms that the mothers overgeneralized those symptoms and coping styles to their younger children as well.

The two significant correlations reported by the siblings can be similarly explained. While younger siblings did not appear to model their older siblings’ behavior in general since the majority of the analyses were not significant, it is possible that younger siblings mimicked their older siblings’ externalizing behaviors. This could explain why younger siblings reported that they exhibited more externalizing behaviors when their older siblings also experienced behavioral problems. The modeling explanation can also be applied to the significant result that younger siblings used less disengagement coping when their older sibling used more primary control coping. Since research has shown that primary control coping strategies are not effective in dealing with parental depression (Langrock et al., 2002), it is possible that siblings used less of the harmful disengagement coping when they noticed that it was as equally ineffective as their older sibling’s use of primary control coping skills. Gamble et al.’s (2010) finding that sibling modeling accounts for sibling similarities further supports the modeling hypothesis as an explanation for these two significant findings. These explanations for why there were four significant results out of a total of 46 analyses should be tested empirically to determine exactly why these results were significant.

*Strengths and Limitations*

Overall, the results of this study showed that living with a depressed parent is equally hard on both siblings and that the younger siblings’ experience is related but not dependent on their older siblings’ experience. A power analysis revealed that we were able to detect an effect size of .25 or greater when considering the entire sample size of 104 participants and an effect size of .35 or greater when considering the sample size of 52 pairs. While researchers were not able to detect small effect sizes, researchers were able to detect medium effect sizes, which is an advantage in itself. By showing that siblings do not differ in their internalizing and externalizing problems and in their use of coping styles, this study clarified the Klimes-Dougan and Bolger (1998) study and helped fill a gap in the literature.

There are several limitations to this study. As mentioned above, we were not able to detect small effect sizes, which means we may have failed to detect small significant effects. Additionally, the original study from which this data is extracted from did not directly examine sibling differences. As a result, we did not have access to critical pieces of information, like siblings’ self-reports of sibling influence or siblings’ attitudes of warmth toward one another, that could inform why siblings were generally similar to one another on the internalizing, externalizing, and coping measures (Feinberg & Hetherington, 2000; Whiteman et al., 2007). In order to gain a better understanding of why siblings of depressed parents have a similar experience, it would be beneficial to include questionnaires regarding the siblings’ relationship in any subsequent studies.

Another limitation of this study was the fact that we broadly examined the question of whether siblings were similar or different on these measures. Researchers did not investigate the reasons as to why siblings may be similar nor did we consider different factors, like age gap between siblings or sibling relationship, which may moderate these results (Feinberg & Hetherington, 2000; Gamble et al., 2010; Whiteman et al., 2007). Finally, we only hypothesized that siblings’ scores would not differ, but we did not hypothesize whether their scores would be dependent on one another. Thus, the results from the correlations that spoke to whether the siblings’ scores went up and down together or whether the scores had an inverse relationship did not correspond to any specific hypothesis.

*Future Directions*

 This study found that siblings of depressed parents do not differ in their experience of psychological and behavioral problems and that siblings do not differ in their use of coping strategies. However, additional studies must be conducted to clarify and expand upon these findings. Most importantly, we need to better understand *why* siblings of depressed parents do not differ. Based on the findings of this study and existing research, we would hypothesize that siblings do not differ because shared hardship tends to make individuals more similar and because siblings share a lot of their environment. Additional research could confirm or discount those hypotheses. Given research that suggests the number of years between siblings influences how similar siblings are (Feinberg & Hetherington, 2000) and considering research that suggests that the quality of the sibling relationship influences how similar siblings are (Feinberg & Hetherington, 2000; Gamble et al., 2010; Whiteman et al., 2007), it would be prudent to determine whether the age gap between siblings and the siblings’ relationship quality affects the results. Finally, this study has implications for interventions targeting children of depressed children. Since the results showed that siblings do not differ in their experience of internalizing and externalizing problems and in their use of coping strategies, clinicians and researchers do not need separate out younger and older siblings and tailor the intervention accordingly. Younger and older siblings are similarly affected by living with a depressed parent and would similarly benefit from a general intervention helping them understand parental depression and cope with the stressors that accompany it.

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**Table 1** CBCL Paired Sample *t*-tests Parents Comparing Younger Siblings to Older Siblings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CBCL Measures** | Younger Siblings Mean (*SD*) | Older Siblings Mean (*SD*) | *t*  | *p*  |
| Internalizing | 56.48 (10.11) | 57.65 (10.73) | -0.64 | 0.53 |
| Externalizing  | 53.83 (11.35) | 52.98 (9.76) | 0.49 | 0.63 |

**Table 2** YSR Paired Sample *t*-tests Younger Siblings Comparing Themselves to Older Siblings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **YSR Measures** | Younger Siblings Mean (*SD*) | Older Siblings Mean (*SD*) | *t*  | *p*  |
| Internalizing | 55.75 (11.45) | 53.16 (11.48) | 1.23 | 0.20 |
| Externalizing  | 49.57 (11.45) | 50.06 (10.71) | -0.22 | 0.82 |

**Table 3** RSQ Paired Sample *t*-tests Parents Comparing Younger Siblings to Older Siblings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RSQ Measures** | Younger Siblings Mean (*SD*) | Older Siblings Mean (*SD*) | *t*  | *p*  |
| Primary Control Coping Ratio Scores | .12 (.04) | .18 (.04) | -0.21 | 0.14 |
| Secondary Control Coping Ratio Scores | .22 (.04) | .22 (.05) | -0.86 | 0.39 |
| Disengagement Coping Ratio Scores | .20 (.04) | .20 (.03) | -0.30 | 0.32 |

**Table 4** RSQ Paired Sample *t*-tests Younger Siblings Comparing Themselves to Older Siblings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RSQ Measures** | Younger Sibling Mean (*SD*) | Older Sibling Mean (*SD*) | *t*  | *p*  |
| Primary Control Coping Ratio Scores | .17 (.03) | .17 (.04) | -0.81 | 0.42 |
| Secondary Control Coping Ratio Scores | .23 (.05) | .24 (.05) | -1.09 | 0.28 |
| Disengagement Coping Ratio Scores | .20(.03) | .21 (.03) | -1.05 | 0.30 |

**Table 5** CBCL Correlations Parents Comparing Younger Siblings to Older Siblings

|  |  |  |
| --- | --- | --- |
| **CBCL Measures** | Older Siblings Internalizing (*r)* | Older Siblings Externalizing (*r)* |
| Younger Siblings Internalizing (*r)* | 0.18 | 0.09 |
| Younger Siblings Externalizing (*r)* | 0.10 | .30\* |

\*Significant at the .05 level (2-tailed).

**Table 6** YSR Correlations Younger Siblings Comparing Themselves to Older Siblings

|  |  |  |
| --- | --- | --- |
| **YSR Measures** | Older Siblings Internalizing (*r)* | Older Siblings Externalizing (*r)* |
| Younger Siblings Internalizing (*r)* | 0.21 | 0.23 |
| Younger Siblings Externalizing (*r)* | 0.00 | 0.01 |

**Table 7** RSQ Correlations Parents Comparing Younger Siblings to Older Siblings

|  |  |  |  |
| --- | --- | --- | --- |
| **RSQ Measures** | Older Siblings Primary Control Coping (*r)* | Older Siblings Secondary Control Coping (*r)* | Older Siblings Disengagement Coping (*r)* |
| Younger Siblings Primary Control Coping (*r)* | 0.21 | 0.00 | -0.01 |
| Younger Siblings Secondary Control Coping (*r)* | 0.11 | .31\* | -0.23 |
| Younger Siblings Disengagement Coping (*r)* | 0.00 | 0.18 | -0.14 |

\*Significant at the .05 level (2-tailed).

**Table 8** RSQ Correlations Younger Siblings Comparing Themselves to Older Siblings

|  |  |  |  |
| --- | --- | --- | --- |
| **RSQ Measures** | Older Siblings Primary Control Coping (*r)* | Older Siblings Secondary Control Coping (*r)* | Older Siblings Disengagement Control Coping (*r)* |
| Younger Siblings Primary Control Coping (*r)* | 0.01 | 0.06 | -0.01 |
| Younger Siblings Secondary Control Coping (*r)* | -0.07 | 0.01 | -0.08 |
| Younger Siblings Disengagement Coping (*r)* | -0.30\* | 0.06 | .42\*\* |

\*Significant at the .05 level (2-tailed).

\*\*Significant at the .01 level (2-tailed).