



## Articles

# Emotional Availability and Social Skills: A Link Between Mother-Child Depressive Symptoms

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## Abstract

This research examined the intergenerational transmission of depressive symptoms from mothers to their adult children through two succeeding mediators: a child's perception of emotional availability from their mothers, and a child's social skills. To do so, this study integrated principles from the integrative model of risk from depressed mother to offspring, attachment theory, and the social skills deficit theory of depression. Child reports of depressive symptoms, perceived emotional availability from mothers, and social skills were assessed as well as mother reports of depressive symptoms from 224 (N = 448) mother-child dyads. Results showed that maternal depressive symptoms were significantly related to child perceptions of emotional availability. Moreover, emotional availability was positively related to child social skills, which in turn was negatively related to child depressive symptoms. Additionally, the indirect effect from maternal depressive symptoms to child depressive symptoms through the mediators was significant. The theoretical and practical implications of these findings are discussed.

*Keywords:* depressive symptoms, emotional availability, social skills, mother-child relationship

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In 2010 the American Academy of Pediatrics projected that roughly 400,000 children were born per year to a depressed mother (Earls, 2010), and the Institute of Medicine (IOM, 2009) report estimated that 7.5 million parents suffer from depression in the United States. Children of depressed mothers have increased vulnerability for various negative social and mental health outcomes including low relational quality with romantic partners (Katz, Hammen, & Brennan, 2013), low levels of social competence (Lewinsohn, Olino, & Klein, 2005), as well as higher levels of stress (Adrian & Hammen, 1993), depression, and psychopathology (Goodman et al., 2011). Overall, an abundance of research indicates a direct link between mother-child psychological functioning (for review see Goodman et al., 2011). Consequently, there is a growing line of research investigating the factors that mediate the link between mother-child depressive symptoms. Given that depression includes symptoms that are inherently social and expressive (e.g., irritability, emotional dysregulation, hostility), an interpersonal communication perspective on the intergenerational transmission of depressive symptoms seems particularly relevant. Therefore, this study proposes that maternal depressive symptoms transfer to adult children through two succeeding mediators: perceived emotional availability of mothers and social skills.

## Mother-Child Transmissions of Depressive Symptoms

Investigations into the intergenerational transmission of depression in parent-child relationships shows that children of depressed parents suffer long term risks for major depressive disorders, anxiety disorders, and substance use throughout adulthood (Weissman et al., 2006). Although research indicates that depressive symptoms from either parent increases a child's vulnerability to psychological problems, Pilowsky et al.'s (2014) study highlighted that compared to a father's depressive symptoms, maternal depression had a larger effect on a child's psychological health. Specifically, children of depressed mothers had higher levels of impairment and psychiatric disorders such as depression, anxiety, and schizophrenia compared to children of depressed fathers (Pilowsky et al., 2014). Therefore, because maternal psychological health is known to be a significant factor influencing child development this study examines intergenerational transmissions of mother-child depressive symptoms.

In their theoretical model of intergenerational transmissions of depression from mothers to offspring, Goodman and Gotlib (2001) argue that there are four dominant mechanisms through which depressive symptoms are transferred: heritability of depression, innate dysfunctional neuroregulatory, exposure to mother's negative behaviors and affect, and exposure to stressful environments. Certainly past studies support the notion that depression can be transmitted intergenerationally through genetics (see Rice, Harold, & Thapar, 2002). Moreover, studies conducted by Wickrama and colleagues consistently indicate that environmental factors such as socioeconomic status, neighborhood conditions, and negative life events partially explain intergenerational transmissions of depression (Wickrama, Conger, Lorenz, & Jung, 2008; Wickrama, Noh, & Elder, 2009). To add to this body of knowledge, the current study focuses on exposure to maladaptive behaviors and affect as the mechanism through which mother-child depressive symptoms are related. Prior research in this domain demonstrates that parental hostility and negativity are related to major depressive disorders in children (Schwartz, Dorer, Beardslee, Lavori, & Keller, 1990). This study builds upon this work then, by testing child perceptions of maternal emotional availability and their perceptions of social skills as succeeding mediators that explain the link between mother-child depressive symptoms. In doing so, this research expands the literature on offspring exposure to maladaptive affect and behaviors as a driving mechanism for transgenerational patterns of depressive symptoms in families.

## Maternal Depression as an Inhibitor of Mother-Child Emotional Closeness

Extant research on the cognitive and social effects of depressive symptoms demonstrate that maternal depression can relate to offspring perceptions of emotional unavailability. Depression is characterized by symptoms such as irritability, self-centeredness, emotional dysregulation, and social isolation (APA, 2010; Downey & Coyne, 1990; Joormann & Gotlib, 2010; Luhmann, Schönbrodt, Hawkey, & Cacioppo, 2015). Parental emotional availability is conceptualized as behaviors that communicate sensitivity and understanding regarding a child's emotional state (Biringen, 2000). Research on the cognitive processes associated with depression suggest that experiencing depressive symptoms may inhibit the ability to understand and respond positively to the emotional needs of others. For example, Joormann and Gotlib (2010) point out that depression exaggerates negative perceptions and inhibits positive affect. Thus, individuals with depressive symptoms tend to ruminate over negative stimuli, and are less likely to reappraise negative messages (Joormann & Gotlib, 2010). Shane and Peterson (2007) observed similar results, as they found that individuals with depressive symptoms were more likely to focus on negative messages. Consequently, increased negative cognitions may manifest in negative behaviors during mother-child interactions. Past work supports this claim, as Lovejoy, Graczyk, O'Hare, and Neuman (2000) showed that depressed mothers tend to communicate with increased negativity, and low levels of supportive communication. Thus, maternal de-

pressive symptoms can lead to increased negative cognitions and behaviors which may signal emotional unavailability to children.

In addition to amplified negative cognitions, depression is also related to difficulties concentrating and reduced cognitive functioning (APA, 2010; Levin, Heller, Mohanty, Herrington, & Miller, 2007). For example, Bredemeier et al. (2012) found that depressive symptoms increase cognitive load such that experiencing depression mirrors the reduction in cognitive ability experienced when multi-tasking. Similarly, individuals experiencing depressive symptoms typically exhibit difficulties focusing and are often distracted (Levin et al., 2007). Thus, reduced cognitive processing may manifest in behaviors that signal emotional discord to children of depressed mothers – particularly in social interactions that require complex cognitive engagement. A well-documented example that illustrates the influence of depression on parent-child bonding is conflict interactions. During conflict, depressed mothers tend to use controlling, low-effort messages compared to communication strategies that require more cognitive work such as collaboration (Downey & Coyne, 1990). More generally, reduced cognitive functioning may also contribute to the finding that depressed mothers speak less to their children and display less warmth and support (Downey & Coyne, 1990; Hammen, Brennan, & Shih, 2004). In other words, mothers may lack the cognitive stamina needed to show support in times of emotional turmoil for their children. As such, the behaviors associated with maternal depression likely lead children to conclude that their mother does not have the motivation or ability to be emotionally supportive. Thus, this study predicts the following:

H1: Maternal depressive symptoms is negatively related to child perceptions of emotional availability.

## **Emotional Availability and Social Skill Development**

According to attachment theory (Bowlby, 1969) a child's social and psychological development is influenced by the emotional bond in their relationship to a primary caregiver. Bowlby (1969) argues that children experience security when their caregiver is responsive and comforting during times of need. Conversely, children experience negative consequences such as social anxiety and avoidance when caregivers are emotionally detached. This study focuses on perceived emotional availability of mothers as an indicator of attachment because caregiver emotional availability is a fundamental building block of attachment orientations (Bretherton, 2000). Research show that securely attached individuals tend to experience high quality and highly rewarding social lives compared to those with insecure attachments (Anders & Tucker, 2000; Gillath, Johnson, Selcuk, & Teel, 2011). For example, Anders and Tucker (2000) found that interpersonal communication competence mediated the link between secure attachment and social support, indicating that securely attached adults may have larger social supports networks because they have higher levels of social skills. Securely attached individuals also show higher levels of social network management skills such that they initiate and maintain high quality personal relationships over the life course more consistently than insecure individuals (Gillath et al., 2011). Mallinckrodt (1992) observed that young adults who felt emotionally distant from their mothers had low levels of social skills and social support. In fact, Lee and Gotlib (1991) argue that a mother's emotional unavailability is potentially detrimental to child development as it sets a foundation for dysfunctional expectations for social relationships. Moreover, because emotional availability is characterized as parental responsiveness and involvement (Lee & Gotlib, 1991), children of emotionally unavailable mothers may be less exposed to positive and constructive communication behaviors. Given that children learn social behaviors through observing their parents (Bandura, 1977), children may observe more hostile and rejecting communication from mothers who are emotionally unavailable – in turn affecting their social skill development. On the other hand, children with emotionally available mothers may observe and learn behaviors

that are fundamental to social skill development, such as supportive communication. As such the study proposes the following hypothesis:

H2: Child reports of perceived emotional availability is positively related to child social skills.

### Child Social Skills and Depressive Symptoms

Several theoretical perspectives suggest that depressive symptoms are related to low quality social interactions and social skills. Lewinsohn's (1974) social skills deficit theory of depression claims that low social skills increase the risk of social rejection and low quality relationships which in turn makes individuals vulnerable to depression. Likewise, the social skills deficit vulnerability model (Segrin, 1996) posits that individuals who lack social skills are at higher risks of experiencing stress and subsequently psychological issues such as depression. In support of these theoretical principles, an abundance of empirical studies show that low social skills are in fact associated with depressive symptoms (e.g., Borden & Baum, 1987; Segrin, 1990; Segrin, McNelis, & Swiatkowski, 2016). For example, in a longitudinal study, Segrin et al. (2016) found that baseline reports of social skills predicted psychological distress and access to social support in a one year follow-up. As Segrin et al. (2016) argue, their results indicate that people who are socially skilled have an easier time attaining support in times of distress and are less prone to experiencing psychological problems. Moreover, in a meta-analysis on the link between social skills and depression Segrin (1990) reported that depression was significantly related to deficits in social skills. Overall, this research demonstrates that individuals who report low social skills may be prone to higher levels of depressive symptoms. As such, this study proposes the following hypothesis:

H3: Child reports of social skills is negatively related to child reports of depressive symptoms.

In summary, this report hypothesizes that mother reports of depressive symptoms predicted her child's perception of emotional availability with the mother. In turn, emotional availability will predict a child's social skills which will subsequently predict the child's depressive symptoms. Therefore, a goal of this research is to test the indirect effect of maternal depressive symptoms on child depressive symptoms. Therefore, it is proposed that:

H4: There will be an indirect effect from maternal depressive symptoms to child depressive symptoms through two succeeding mediators: perceived emotional availability and child social skills.

Overall, this study seeks to highlight a theoretical integration of attachment theory, the integrative model of risk from depressed mother to offspring, and the social skills deficit theory of depression to partially explain how depressive symptoms transmit from generation to generation in families. Moreover, this project aims to show that depressive symptoms inhibit a mother's ability to communicate emotional closeness with her child which in turn leads to increased risk of child depressive symptoms. Through this, the study highlights maternal depressive symptoms as not only a psychological problem, but also a construct that inherently influences one's communicative behaviors.

## Method

### Participants and Procedures

Data from this study was part of a larger project on family communication and mental health. Mother-child dyads were recruited in two ways. First, participants were recruited from undergraduate classes at a large Southwestern university in the United States in exchange for credit in an introductory-level communication studies course.

Second, students enrolled in an advanced undergraduate communication course at the same university solicited participants via convenience sample in exchange for course credit. Overall, this study yielded 224 ( $N = 448$ ) mother-child dyads. Adult children were predominantly female (71.1%) and ranged in age from 18 – 53 years old ( $M = 20.87$ ;  $SD = 4.67$ ). Mothers' age ranged from 38 – 78 years old ( $M = 50.15$ ;  $SD = 5.64$ ). The sample was largely white: 82.4% White, 6.9% African American, 2.4% Latina, 4.5% Asian, and 3.7% other.

Those who wished to participate were asked to send their e-mail and their mother's e-mail addresses to the researchers, in order for them to gain access to their respective survey. Participants received a link to their survey via email. Students earned credit if both members of the mother-child dyad completed their survey. In order to pair the data participants were asked to provide their full name as well as their partners. Both mothers and adult children responded to items measuring depressive symptoms and social skills, and adult children responded to items measuring perceived emotional availability of mothers. Also, all participants responded to items not used in the current study such as taking conflict personally, anxiety, and family communication climates. Once dyads were paired and assigned matching identification numbers all identifying information was permanently deleted. The surveys took approximately 15 minutes for participants to complete. All of the procedures reviewed above were approved by the Institutional Review Board.

## Measures

### Depressive Symptoms

Depressive symptoms were measured with a subscale of the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983). Seven items were rated on different 4-point Likert scales (e.g., "I feel cheerful": 1 = *not at all*, 2 = *not often*, 3 = *sometimes*, 4 = *most of the time*). Higher scores indicated the presence of more depressive symptoms ( $\alpha = .70$ ;  $M = 10.24$ ;  $SD = 2.56$  for child reports;  $\alpha = .72$ ;  $M = 10.31$ ;  $SD = 2.51$  for mother reports). Although the Cronbach's  $\alpha$  reported here are acceptable, Turk et al. (2015) report that reliability scores for this scale tend to be higher. Previous research shows convergent validity for this scale as well as predictive validity (e.g., Turk et al., 2015).

### Emotional Availability

The Lum Emotional Availability of Parents scale (LEAP; Lum & Phares, 2005) was used to measure child reports of their mother's emotional availability. The 15 item measure (e.g., "Shows she cares about me") were rated on a 6-point Likert scale that was altered to only assess a mother's emotional availability (1 = *Never like my mother* – 6 = *Always like my mother*). Higher scores indicated higher perceived emotional availability. The scale was highly reliable, as Cronbach's  $\alpha = .96$  ( $M = 68.39$ ;  $SD = 9.30$ ). Also, Lum and Phares (2005) report convergent, concurrent, and construct validity for this scale.

### Social Skills

The Texas Social Behavior Inventory (TSBI; Helmreich & Stapp, 1974) was used to measure child social skills. This 16 item scale (e.g., "I am not likely to speak to people until they speak to me.") was rated on a 5-point Likert scale (1 = *Not at all characteristic of me*. – 5 = *Very much characteristic of me*.). Higher scores indicated more social skills ( $\alpha = .84$ ;  $M = 58.65$ ;  $SD = 8.55$ ). Along with good reliability scores, this scale has face validity for assessing one's general social skills.

## Results

Table 1 presents correlations for the variables of interest in this study. Mother reports of depressive symptoms was positively associated with child reports of depressive symptoms, and negatively associated with a child's social skills and perceived emotional availability. Child reports of depressive symptoms were negatively associated with emotional availability and social skills. Last, emotional availability was positively correlated with child reports of social skills.

Table 1  
Zero Order Correlations

Variable	1	2	3	4
1. Child Depression	-			
2. Mother Depression	.28**	-		
3. Emotional Availability	-.38**	-.28**	-	
4. Social Skills	-.48**	-.22**	.26**	-

Note. Both emotional availability and social skills are child reports only.

\*\* $p < .01$  (two-tailed).

Hayes' (2013) PROCESS macro for SPSS enabled bootstrapping to test for indirect effects in a mediational path model. Direct and indirect effects were calculated based on 5,000 bootstrap samples and a 95% confidence interval. This method generates regression coefficients between the independent variable to the first mediating variable, the first mediating variable to the second mediating variable, the independent variable to the dependent variable while controlling for the mediators, and the independent variable to the dependent variable through mediator one and mediator two in serial. Thus, this analysis tested all four hypotheses simultaneously. In bootstrapping analyses indirect effects are observed when confidence intervals do not include zero. See Figure 1 for a visual depiction of the results and hypothesized model.

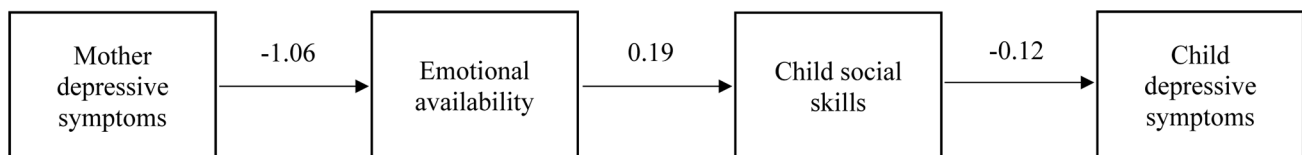


Figure 1. The hypothesized model.

Note. Indirect effect = 0.02, 95% CI = [-0.01, -0.06].

H1 stated that maternal depressive symptomology would be negatively related to child perceptions of emotional availability. Results supported H1 as there was a significant negative relationship between maternal depression and child perceptions of emotional availability from their mother ( $B = -1.06$ ,  $SE = .24$ ,  $t = -4.35$ ,  $p < .001$ ). Thus, the higher mother reports of depressive symptoms, the less children perceived their mothers as emotionally available.

H2 stated that perceived emotional availability from mothers would be positively associated with social skills in adult children. Results fully supported H2. Specifically, there was a significant positive association between

emotional availability and social skills ( $B = 0.19$ ,  $SE = .06$ ,  $t = 3.17$ ,  $p < .01$ ). Thus, the higher levels of perceived emotional availability from mothers predicted higher social skills in adult children.

H3 predicted that social skills would negatively associated with depressive symptoms in adult children. H3 was fully supported as social skills negatively predicted depressive symptoms ( $B = -0.12$ ,  $SE = .02$ ,  $t = -6.75$ ,  $p < .001$ ). Thus, the higher reports of social skills, the lower depressive symptoms were in adult children.

Last, H4 predicted that there would be an indirect effect from mother reports of depressive symptoms to child reports through emotional availability and social skills. The mediation test showed a significant indirect effect from mother reports of depressive symptoms to child reports of depressive symptoms through emotional availability and social skills in succession ( $B = 0.02$ ,  $SE = .01$ , 95% CI = [-0.01, -0.06]). Therefore, the model showed support for intergenerational transmission of depressive symptoms through emotional availability and child social skills. Although the indirect effect was small, [Abelson \(1985\)](#) argued that a small indirect effect observed from cross-sectional data can be quite influential if it represents a phenomenon that occurs over time. Given that this model represents a process by which intergenerational transmission of depressive symptoms occur, the small indirect effect may be substantial over the life course.

## Discussion

One of the largest risk factors for the onset of major depressive disorder is having a depressed mother ([Goodman & Gotlib, 2001](#)). The goal of this study was to test the mediating role of perceived emotional availability and adult children's social skills in the relationship between mother-child intergenerational transmissions of depressive symptoms. The results showed that maternal depressive symptoms was significantly related to a child's perceptions of their mother's emotional availability. In turn, emotional availability predicted a child's social skills which subsequently predicted depressive symptoms for the adult child. Also, the path analysis revealed a small, yet significant indirect effect from mother reports of depressive symptoms to child reports of depressive symptoms though the two mediators. Taken together, these findings suggest that mother depressive symptoms transmit to offspring symptoms due in part to the effect that depressive symptoms have on a child's perception of emotional availability and social skill development. The following paragraphs elaborate on the theoretical and practical implications for literature on mother-child intergenerational transmissions of depressive symptoms.

As expected, mother reports of depressive symptoms negatively correlated with her adult child's perception of emotional availability. This result is in line with previous research suggesting that depressed mothers are less responsive and accessible to their children during times of need ([Beardslee, Gladstone, & O'Connor, 2011](#)). Whether mothers with higher levels of depressive symptoms are aware or not, the behaviors associated with depression such as low frequency of talk, emotional dysregulation, and elevated levels of controlling and self-centered messages appear to communicate emotional distance and unavailability to their offspring. Paradoxically, mothers with high levels of depressive symptoms may desire and intend to increase their emotional bond in close relationships during times of psychological distress. For example, [Katz, Petracca, and Rabinowitz \(2009\)](#) observed that mother reports of depression was positively associated with seeking emotional support and reassurance from daughters. Given that depression is associated with increased self-centeredness, mothers with depressive symptoms may tend to seek emotional bonding through role reversals with children rather than being available to the emotional needs of their children. Thus, this finding has important implications for family counselors when

assisting depressed mothers. Because depressive symptoms are associated with reduced cognitive resources, mothers may be unaware that their depressive symptoms have an inverse effect on their child's perception of their emotional availability. Therefore, counselors could assist mothers by encouraging behaviors communicate emotional availability to their children. This suggestion is in line with [Dobson, Quigley, and Dozois' \(2014\)](#) theoretical argument to integrate cognitive behavioral therapy with interpersonal risk models of depression. Social skills training can increase coping skills, improve perceptions of social support, and increase one's awareness of their social skill deficits ([Dobson et al., 2014](#)). Thus, social skills training that focus on the behavioral symptoms of depression such as increased negative messages, irritability, and interpersonal withdrawal may serve to improve mother-child relational quality and closeness. Moreover, communicating emotional availability to offspring may serve to increased levels of emotional closeness as well as alleviate depressive symptoms such as social isolation.

Furthermore, emotional availability from mothers was negatively related to social skills in adult children. This observation is consistent with the principles of attachment theory ([Bowlby, 1969](#)) which claims that inconsistent nurturing from a parent can promote attachment anxiety and avoidance – both of which have been shown to relate to low social skills ([DiTommaso, Brannen-McNulty, Ross, & Burgess, 2003](#)). Young adults with insecure attachment orientations report lower levels of extraversion and openness with others compared to those with secure attachments. ([Jenkins-Guarnieri, Wright, & Hudiburgh, 2012](#)). Thus, it is plausible that children with emotionally unavailable mothers may develop negative relational schemas wherein they perceive relationships as unrewarding and view others as generally cold and untrustworthy. This type of relational schema may then increase social anxieties and decrease communication competence in social interactions.

Given that social skills were negatively related to depressive symptoms in young adults, social skills appear to be a crucial mechanism in the intergenerational transmission of depressive symptoms. Although there is some debate on the causal order between social skills and depression, these results align with [Segrin et al. \(2016\)](#) and indicate that individuals with low social skills are vulnerable to elevated levels of depressive symptoms. The findings reported here add to the literature on social skills and depression by integrating principles from attachment theory and the social skills deficit theory of depression to show that a key predictor of low social skills and subsequently depressive symptoms is the amount of emotional support one perceives from their mother. Put together, the results from H2 and H3 imply that emotional dysfunction in mother-child relationships has broad consequences for children, as it appears to influence their general social skill abilities.

In support of the final hypothesis, the mediation analysis showed a small indirect effect from maternal depressive symptoms to child depressive symptoms through emotional availability and child social skills. This finding supports the argument that relational and communicative variables account for the transmission of depressive symptoms across generations. Most research examining the relationship between mother-child depressive symptoms has tested parenting behaviors as the mediating variable. For example, [Arroyo, Segrin, and Curran \(2016\)](#) found that maternal care mediated the relationship between mother-child psychosocial problems. The findings observed here add a unique contribution to the literature on intergenerational transmissions of depression because this study focused on the under explored role of a child's communication behavior. Thus, while mere exposure to a mother's negative behaviors and affect can certainly influence a child's depressive symptoms, the present results suggest that this effect can be explained partially through child social skills. Although the indirect effect was small, [Abelson \(1985\)](#) argues that small effect can have a significant impact if the observed effect occurs over time. Because a mother-child relationship unfolds over an extended period of time, this seemingly small indirect effect may have a considerable influence on transmissions of mother-child depressive symptoms.



It is important to note several limitations when considering the implications of the present study. All variables of interest from this study were collected at one time point. Therefore, although a path analysis was conducted, the causal relationship between variables cannot be determined. For example, it is possible that low levels of social skills in adult children causes them to perceive their mothers as more emotionally distant. Moreover, the data was heteronormative in that most of the sample was mother-daughter dyads and a large portion of the sample was white. Thus, the limits of the sample inhibit the ability to generalize to a larger population. A more diverse sample in terms of sex and ethnicity may have shown different results, particularly when considering that daughters are more prone to negative effects of depression in mothers (Goodman et al., 2011). Future studies should address this limitation and draw samples from more representative populations. Additionally, while this research was specifically interested in mother-child relationships, depressive symptoms from an adult child's second parent may have important implications on transmission of depression in families that this study is unable to address. Triadic data from two parents and an adult child would certainly be a more robust investigation into how a child's depressive symptoms is influenced by earlier generations and should be the focus of future research.

Overall, the findings reported here point to a growing theme of relational scholarship: the dynamic of mother-child relationships is both influenced and shaped my mental health variables. In line with this conclusion, the results from this dyadic study highlight that levels of depressive symptoms in mothers is significantly related to levels of depressive symptoms in their adult children; and that this relationship can be explained, in part, by the level of emotional availability a child perceives in their relationship with their mother, and a child's general social skills. Ultimately, this work provides a promising step toward fully understanding the mechanisms through which mothers transmit depressive symptoms to their adult children.

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## Competing Interests

The author has declared that no competing interests exist.

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