Distribution Agreement

In presenting this thesis as a partial fulfillment of the requirements for a degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis in whole or in part in all forms of media, now or hereafter now, including display on the World Wide Web. I understand that I may select some access restrictions as part of the online submission of this thesis. I retain all ownership rights to the copyright of the thesis. I also retain the right to use in future works (such as articles or books) all or part of this thesis.

Michelle Peretz April 9, 2014

Maternal Depression and Parenting: Can Social Support Make a Difference?

By

Michelle Peretz

Dr. Patricia Brennan
Adviser

Department of Psychology

Dr. Patricia Brennan
Adviser

Dr. Barbara Strock
Committee Member

Dr. Corey Keyes
Committee Member

2014

Maternal Depression and Parenting: Can Social Support Make a Difference?

By

Michelle Peretz

Dr. Patricia Brennan
Adviser

An abstract of

a thesis submitted to the Faculty of Emory College of Arts and Sciences

of Emory University in partial fulfillment

of the requirements of the degree of

Bachelor of Arts with Honors

Department of Psychology

2014

Abstract

Maternal Depression and Parenting: Can Social Support Make a Difference?

By Michelle Peretz

Parenting is a major determinant of child behavioral and health outcomes, and thus it is critical to examine what factors impede or aid parenting in high-risk populations. The present study examined the impact of social support on the parenting behaviors of depressed mothers. Independent associations between these constructs have been demonstrated in previous studies; however, the mechanism through which social support impacts parenting in depressed mothers is still unclear. A sample of 131 mothers (97 with a history of depressive disorders) participated in this study with their preschool aged children. Social support was measured using the total Multidimensional Scale of Perceived Social Support (MSPSS) as well as the Significant Other, Friend, and Family subscales. Maternal depression was operationalized in two ways: current depressive symptoms, using Beck's Depression Inventory (BDI) and total duration of mental illness during the child's lifetime, measured in months using the Structured Clinical Interview for DSM-IV (SCID). Parenting behaviors, obtained from videos of parent-child interactions, fell under three categories: Negative Engagement, Positive Engagement and Positive Reinforcement. Results were obtained by conducting simple and multiple linear regressions. Duration of mental illness significantly predicted frequency of Negative Engagement behaviors. Current and total duration of maternal depression also significantly predicted perception of social support. Contrary to predictions, social support was not associated with parenting behaviors nor did it moderate the maternal depression-parenting relationship. Implications and future directions are discussed.

Maternal Depression and Parenting: Can Social Support Make a Difference?

By

Michelle Peretz

Dr. Patricia Brennan
Adviser

A thesis submitted to the Faculty of Emory College of Arts and Sciences

of Emory University in partial fulfillment

of the requirements of the degree of

Bachelor of Arts with Honors

Department of Psychology

2014

Table of Contents

Maternal Depression and Parenting: Can Social Support Make a Difference?

Numerous studies have found that offspring of mothers with mental illnesses are at high risk for behavioral, cognitive, and attentional deficits (Anderson & Hammen, 1993; Barker, Copeland, Maughan, Jaffee, & Uher, 2012). In particular, maternal depression has been significantly related to internalizing and externalizing behaviors and later psychopathology in children (Brennan et al., 2000; Downey & Coyne, 1990; Goodman et al., 2011). This increased risk warrants further examination into how and through which mechanisms these negative outcomes occur.

Parenting and Psychopathology. One potential mechanism by which psychopathology may be passed from one generation to the next is through parenting. Parenting plays an important role in shaping the course of child development. Depressed mothers, in particular, face greater parenting difficulties and exhibit less effective parenting behaviors. For example, research has demonstrated that depressed mothers are more likely to be irritable, hostile and express depressive symptoms of sadness and anxiousness when interacting with their children (Adrian, 1989; Downey & Coyne, 1990). Additionally, depressed mothers have more difficulty maintaining the consistent positive and energetic behaviors necessary to foster a healthy relationship with their young children. As a result, depressed mothers often handle conflict with their children in a coercive manner (Downey & Coyne, 1990). A meta-analysis conducted by Lovejoy, Graczyk, O'Hare, and Neuman (2000) analyzed the results of 46 observational studies of the relationship between maternal depression and parenting behaviors. Parenting behaviors were categorized as either: Negative (i.e. hostile or coercive behavior, threatening gestures, expressed anger), Positive (i.e. play, praise, affection) or Disengaged (i.e. neutral affect,

withdrawal). Results indicated a moderate positive association between maternal depression and Negative parenting.

Researchers have long been interested in formulating a framework to better understand parenting in general and more specifically, why negative parenting occurs. While there is no single definitive model, Belsky's Process Model of Determinants of Parenting provides a comprehensive framework on which subsequent researchers have based their studies (Belsky, 1984). Belsky (1984) posits that there are three elements that shape parenting behaviors: the individual parent, the individual child, and the broader social context. The individual parent and individual child, separately, contribute their developmental history, personality traits and psychological well-being. The broader social context relates to social support from the spouse and social network (friends, neighbors, community and extended family) as well as employment and economic standing. Belsky (1984) stresses that the weakness of one factor alone may not harm the parenting process. However, should any two factors be compromised simultaneously, then parental functioning is most at risk. Belsky (1984) suggests that the best defense against parenting dysfunction is achieved by providing the parent with adequate psychological resources to maintain their well-being. The question that must be addressed is what happens when parental psychological well-being is the weak link in the model? Do other factors, such as social support, contribute to buffering potential harmful effects? The present study aims to examine these questions and assess the role that social support plays in the relationships between psychopathology and parental functioning.

Social Support. Social support has been conceptually defined in a number of different ways. Cobb (1976) provided what is now a commonly utilized definition of social support, stating that social support is "information leading the subject to believe that he is cared for and

loved…esteemed and valued…[and that] he belongs to a network of communication and mutual obligation" (Cobb, 1976, p. 301). In its simplest form, social support is the type of support, resources and aid an individual perceives or actually receives from another person or group of people (Leavy, 1983; McIntosh, 1991). Social support involves cognitive processes, emotional processes and the expression of certain behaviors from both the recipient and the provider. The provider can be a significant other, or social networks (i.e. friends, extended family, neighborhood, community). Researchers have identified four primary types of social support: (1) Emotional, (2) Instrumental, (3) Informational, (4) Appraisal (Leavy, 1983). Emotional support refers to trusting and being cared for by others. Instrumental support is associated with the provision of tangible resources. Informational support refers to the provision of information that helps an individual solve problems or teaches them a new skill. Appraisal support involves information that appraises or evaluates the work or actions of the individual (Leavy, 1983).

Social support can be measured in terms of actual received support or the perception of support. Received support is measured by having the individual recall specific examples of support they received and from whom. Perceived social support is measured through general evaluation of social support in self-report questionnaires (Haber, Cohen, Lucas, & Baltes, 2007). Researchers have often debated which measurement is more accurate or predictive of outcomes. A meta-analytic review of studies examining received and perceived social support yielded a significant positive correlation between the two measures of support. Therefore, received and perceived social support are deeply intertwined and connected (Haber et al., 2007). Furthermore, a study conducted by Wethington and Kessler (1986) determined that perceived support was more predictive of better adjustment to stressful life events than received support. These findings suggest that measures of perceived social support are valid indications of how an individual

views and experiences social support. As such, this study will utilize a measure of perceived social support in examining its potential protective role in the maternal depression-parenting relationship.

Social Support and Psychopathology. Social support has been shown to impact individuals in many facets of their life, including the realm of mental health (Cobb, 1976). Research has supported the notion that social support is strongly related to psychological well-being (Eom et al., 2013; Grav, Hellzèn, Romild, & Stordal, 2012; Mitchell & Trickett, 1980). Those with depressive mental illnesses have been shown to recover rapidly and experience less depressive episodes when they perceived higher levels of social support (Blais & Renshaw, 2012). Alternatively, experiencing lower levels of social support is associated with exhibiting greater psychological disturbances (Blais & Renshaw, 2012; Eom et al., 2013; Grav et al., 2012; Henderson & Moran, 1983; Leavy, 1983). In particular, instrumental support and emotional support, as defined previously, are the most prominent types of social support relevant to mental health (Finfgeld-Connett, 2005; Green, Furrer, & McAllister, 2007; Leavy, 1983; Manuel, Martinson, Bledsoe-Mansori, & Bellamy, 2012). Research also demonstrates an association between low levels of social support and greater number of years since diagnosis of depression (Eom et al., 2013).

While many studies focus on the impact of social support on psychopathology, some researchers have theorized that individuals with depression may actually reduce their levels of social support through their symptoms and associated behaviors. For example, research conducted by (Hammen, 1991) found that depressed women experienced more stress than non-depressed women. This stress was largely interpersonal by nature and was often associated with behavior exhibited and actions committed by the depressed individual. Depressive symptoms,

such as sadness, irritability and hostility, may pose difficulty on a depressed individuals' ability to foster close relationships with those around them (Downey & Coyne, 1990). Therefore, lower levels of social support may be a product of the impact of depressive symptoms on interpersonal relationships.

There are two predominant methods of examining social support and its relationship to mental health: the Direct Effect Hypothesis and the Stress Buffer Hypothesis (Eom et al., 2013). The Direct Effect Hypothesis stipulates that social support impacts health regardless of the presence of stress. An individual with a high level of social support experiences the positive benefits of support and is more likely to be healthy. An individual with a low level of social support is more likely to be unhealthy even in the absence of stress. The Stress Buffer hypothesis suggests that social support serves as a protective factor against the harmful effects of stress. In times of stress, an individual benefits from perceiving a large amount of social support (Cohen & Wills, 1985; Eom et al., 2013). Findings in this field have been inconsistent, with studies providing support for both hypotheses (Cohen & Wills, 1985; Manuel et al., 2012). In an effort to determine when each of these effects is likely to occur, Cohen and Wills (1985) examined studies in this field based on method of social support measurement. They concluded that Direct Effect Hypothesis was supported in studies measuring social support by the size of the social network. The Stress Buffer Hypothesis, on the other hand, was supported in studies that measured the perception of available support.

The present study will measure perceived social support, which lends itself well to examining whether social support protects against the negative effect of psychological illness on parenting. However, an additional test of the mediating effect of social support will be conducted

in order to better understand the role of social support in the relationship between psychopathology and parenting.

Social Support and Parenting. Social support has been linked to parenting in terms of quality of parent-child interactions, parenting behaviors, and parenting beliefs. An early study demonstrated that quality of parenting during infancy was predictive of better child emotional and verbal abilities when the mother had frequent contact with friends (Powell, 1980). Subsequent studies have elaborated upon these findings and have provided more insight into the relationship between maternal social support and parenting. A meta-analysis of 66 studies found that maternal perceived support was generally positively related to parenting behavior (Andresen & Telleen, 1992). Many of these studies focus primarily on middle class, high-functioning mothers. Subsequent research has attempted to broaden the scope of these studies by examining social support and parenting in high-risk samples. For example, Belle (1982) examined mothers in racial minority groups who experienced high stress due to low income and poverty. Results indicated that higher levels of social support positively influenced parental efficacy and protected against the negative impact of stressors due to poverty. Thus, the protective benefits of social support have been shown in high-risk samples. Mothers with mental illnesses are also a high-risk population; however, they are seldom studied in the context of social support and parenting. The present study aims to expand upon findings, such as those in Powell (1980), Belle (1982) and Andresen and Telleen (1992) to a high-risk population of mothers with psychological illnesses.

A study conducted by Respler-Herman, Mowder, Yasik, and Shamah (2012) examined the relationship between parenting stress, social support and parenting beliefs. They hypothesized that social support would moderate the relationship between parenting stress and parenting beliefs. Social support was measured using the Multidimensional Scale of Perceived

Social Support (MSPSS), the same measure used in the present study. Respler-Herman et al. (2012) chose to focus exclusively on the perceived support measure as a whole instead of utilizing the Significant Other, Friend and Family subscales included in the measure. Parenting stress was measured through self-reported levels of parenting distress, level of child difficulty, and dysfunction in parent-child interactions. Parenting beliefs were separated into eight categories and were rated by the parent based on importance. These beliefs included: bonding, discipline, education, general welfare, protection, responsivity, sensitivity, and negativity. Results indicated that, even though perceived social support and parenting stress independently predicted parenting beliefs, social support was not a moderator. Parenting stress and parenting beliefs were related, regardless of level of perceived social support. Additionally, Respler-Herman et al. (2012) found that higher levels of social support were related to greater importance of general welfare and responsivity in parenting. Thus, perceiving a high level of social support heightened parents' beliefs of the importance of being responsive and providing their children with basic care.

Respler-Herman et al. (2012) reliance on self-report parenting measures limited their ability to parse a subjective view of parenting from actual parenting behaviors. Additionally, they chose to examine social support in general, rather than specific aspects of social support that might differentially relate to parenting. The present study aims to address these limitations by utilizing objective measures of parenting captured through videos of parent-child interactions and incorporating social support subscales into the study.

Social Support, Parenting and Psychopathology. The present study will explore the relationship between three variables that are infrequently studied together. Only two related studies were located in the literature that assessed maternal depression, parenting, and social

support. In one, Herwig, Wirtz, and Bengel (2004) examined whether maternal depression, partnership quality, social support and parenting separately predicted internalizing and externalizing behaviors in offspring. They found that their mothers' partnership quality and mothers' parenting predicted children's behavioral problems, whereas maternal depression and social support were indirectly related to child behavioral problems. Both social support and maternal depression were correlated with parenting, suggesting that a relationship exists among these three constructs. However, further examination is needed to elaborate upon the specific nature of this relationship.

Much like the present study, Simons, Lorenz, Wu, and Conger (1993) utilized the Belsky (1984) model of parenting and examined relationships between social support and parenting in a high risk context. They focused primarily on whether social support moderates or mediates the impact of economic pressures on parenting. The study also incorporated other important aspects of Belsky's model, such as maternal psychological well-being. In particular, maternal psychological well-being was indicated by ratings of depressed mood by self-report, spousal report and ratings by independent observers. The study measured social support in two ways: spousal support and social network (friends and extended family). Analyses demonstrated that spousal support, more so than support from an extended network, buffered the relationship between maternal depression and quality of parenting. In particular, results indicated that for women who perceived low levels of spousal support, there was a strong negative association between maternal depression and supportive parenting (i.e. concern for child's feelings, an interest in the child's activities, expression of love and acceptance and reinforcement of accomplishments). It is important to note that the sample in the Simon et al., (1993) study was a community sample, and that depressive symptoms experienced by the mothers in this sample

likely did not reach the level needed to obtain a diagnosis of depressive disorder. Therefore, their findings may not be applicable to women who suffer the distress and parenting difficulties associated with a diagnosed mental illness.

The present study will attempt to address the limitations of previous literature as well as expand upon current knowledge on the subject of social support, maternal psychopathology and parenting. This study will specifically address three aspects of the Belsky (1984) model: parenting, psychopathology and social support. The present study will use measures of total levels of perceived social support as well as social support from significant other, friend, and family, separately. Parenting will be assessed using an objective method of measurement so as to avoid parental report biases. In addition, this study will attempt to replicate the findings by Simons et al., (1993) in a predominantly clinically ill sample of mothers. Clinical depression is indicated both by a diagnostic interview as well as mothers self-report about their depressive symptoms.

Hypotheses.

(1) It is hypothesized that the duration of maternal psychopathology during the child's lifetime will be correlated with observed parenting behaviors.

(2) It is hypothesized that the duration of maternal psychopathology during the child's lifetime will be correlated with maternal perceived social support.

(3) It is hypothesized that maternal perceived social support will be correlated with observed parenting behaviors.

(4) Should the above hypotheses be supported, it is further hypothesized that maternal perceived social support mediates the relationship between the duration of maternal psychopathology during the child's lifetime and

perceived parenting behaviors. That is, maternal psychopathology will predict social support, which in turn will predict observed parenting behaviors.

(5) Alternatively, it is hypothesized that maternal perceived social support moderates the relationship between psychopathology and parenting. Thus, the relationship between duration of maternal psychopathology during the child's lifetime and observed parenting behaviors will differ at high and low levels of maternal perceived social support.

(6) A final exploratory hypothesis will be conducted to examine the impact of current maternal depressive state versus the total duration of maternal psychopathology during the child's lifetime on perceived social support and observed parenting.

Method

Participants

A sample of 131 mothers was recruited from the Emory Child Study Center database and Emory Women's Mental Health Program (WMHP) to participate in a Preschool Outcomes Study assessing developmental outcomes related to maternal psychopathology and prenatal psychotropic medication use. The Child Study Center database contains contact information of mothers with young children who previously expressed an interest in participating in studies related to child development. Women from the WMHP had previously participated in a study on perinatal psychotropic medication use and had also expressed a willingness to be contacted for future research studies. The women from the two data sources (n = 30, Child Study database; n =

101, WMHP) were not significantly different in terms of maternal level of education, maternal age or marital status ($p > 0.12$).

Mother's ages ranged from 22 to 49 years of age (M=37.12, SD = 5.01). Mothers participated in the study with one of their children (48.9% female and 51.1% male), whose ages ranged from 29 to 66 months (M=44.86, SD = 10.36). Of the sample, 35.1% graduated from a four-year undergraduate program and 40.5% continued on and completed graduate or professional school.

Exclusion criteria for the current study were: maternal bipolar disorders, schizophrenia or other psychoses. Inclusion criteria were participation in the Preschool Outcomes Study, and the availability of coded parent-child interactions. Further descriptive and frequency statistics for this sample, including maternal level of education, ethnicity, marital status and status of lifetime diagnosis of Major Depressive Disorder, Dysthymic Disorder and Depressive Disorder NOS, are located in Table 1.

Procedure

Participants came to the Biosocial Underpinnings Involved in Learning and Development (BUILD) Lab as part of the Preschool Outcomes Study examining the effect of psychotropic medication use during pregnancy on preschool-aged children's behavioral and cognitive development. Researchers acquired informed consent from the mothers before continuing with the study in which the mother and child were asked to complete a number of tasks and questionnaires. Mothers participated in a Structured Clinical Interview for DSM-IV (SCID) and completed the Beck's Depression Inventory (BDI) and Multidimensional Scale of Perceived Social Support (MSPSS). At the end of the three-hour lab visit, the mother and child were filmed playing in a room with toys for 20 minutes. The first 10 minutes consisted of unstructured play in

which mothers were told to play with their child as if they were at home. During the subsequent 10 minutes, the mother and child engaged in structured play where they were told to clean up the toys and play with a provided puzzle. Research assistants later coded the parent-child interaction videos offline utilizing the Dyadic Parent-Child Interaction Coding Scheme (DPICS; described in detail below).

Measures

Social Support. The Multidimensional Scale of Perceived Social Support (MPSSS; Zimet, Dahlem, Zimet, & Farley, 1988) is a 12-item self-report questionnaire used to measure the level of social support an individual perceives from three sources: significant other, friends and family. Participants rate how much they agree with each of the 12 items on a 7-point Likert-scale (1 = Very Strongly Disagree to 7 = Very Strongly Agree). The total social support score is the sum of the rating from each of the 12 items. High scores are indicative of high perception of social support and low scores indicate perception of low social support. The maximum score an individual can receive is 84. Each subscale (Significant Other, Friends, Family) is comprised of four items. An example of a Significant Other item is "there is a special person who is around when I am in need." An example of a Friends item is "My friends really try to help me." An example of a Family item is "I get the emotional help and support I need from my family." Mean and standard deviation values for the MSPSS and for each of the three subscales are presented in Table 2.

Chronbach's alphas were calculated for the overall MSPSS scale and the Significant Others, Friends and Family subscales. In the previous literature, the MSPSS and subscales showed good internal reliability, yielding α values of 0.88, 0.91, 0.87, and 0.85, respectively (Zimet et al., 1988). In this sample, Chronbach's alphas were consistent with the findings of

Zimet et al. (1988) and were of good internal reliability. The Chronbach's alpha of the MSPSS, as a whole, was 0.95. The values of the alphas for the Significant Others, Friends and Family subscales were 0.95, 0.96, and 0.94, respectively.

Maternal Psychopathology. The Structural Clinical Interview-DSM-IV (SCID;First, Spitzer, Gibbon, & Williams, 2012) is a diagnostic tool administered by researchers and clinicians to review the participant's psychological history and determine lifetime DSM diagnoses. SCID interviewers also collect data on demographics and family and spousal psychological history. Several of these factors, including maternal age and level of education, were examined as potential confounds in this study.

MA and PhD level psychologists administered the SCID during the participant visit. In the current study, maternal psychopathology is operationalized as the total duration in months of maternal Axis I psychiatric disorders (primarily depressive and anxiety disorders) since child's birth (mean and standard deviation located in Table 2).

Beck's Depression Inventory (BDI; Beck, 1997) was included as an exploratory measure of maternal psychopathology to examine whether the current state of maternal psychological health differentially impacts the relationships between social support, psychopathology and parenting behaviors. The BDI is a 21-item self-report measure in which participants choose statements that best describe the state of their depressive symptoms over the past two weeks. A high BDI score indicates a greater amount of depressive symptoms in the past two weeks. The highest score an individual can receive is 63. The Chronbach's alpha for the BDI was 0.92, indicating that it was of good internal reliability. Mean and standard deviation value of the BDI are located in Table 2.

Parenting. The Dyadic Parent-Child Interaction Coding System (DPICS; Eyberg & Robinson, 1981) assesses the quality of parent-child interactions by identifying observable behaviors by both child and parent. Trained research assistants coded twenty minutes of recorded interactions from each participant, recording the frequency of each code-able behavior. Coded parenting behaviors fall under one of three categories: verbalization, vocalization and physical behavior.

Scales of observed parenting were created using a Principle Components Analysis (PCA). First, parental verbalizations and vocalizations in both structured and unstructured parent-child play were combined to yield the 10 categories of behaviors listed in Table 3. Next, these variables were entered into a PCA using oblique rotation (Promax) in order to permit correlation between factors. Table 3 shows the resulting pattern matrix, with bolded factor loading indicated by a value of 0.40 or higher, a value used in standard PCA practice with a sample of this size (Field, 2009). The PCA yielded three distinct factors. Factor 1 (Positive Engagement) consists of indirect command, indirect question, direct question, neutral talk and reflective statements. Factor 2 (Negative Engagement) consists of negative talk and direct commands. Factor 3 (Positive Reinforcement) consists of unlabeled praise, behavioral descriptions and labeled praise. The inter-rater reliabilities for parenting behaviors with adequate frequencies are good to excellent (see Table 4). The inter-rater reliability could not be calculated for two parenting behaviors, Behavioral Descriptions and Labeled Praise, due to inadequate frequency.

Positive Reinforcement. The Positive Reinforcement factor consists of three maternal behaviors: Unlabeled Praise ($M = 3.39$, $SD = 1.89$), Labeled Praise ($M = 0.41$, $SD = 0.71$), and Behavioral Description ($M = 0.82$, $SD = 0.89$). Unlabeled Praise occurs when the parent positively evaluates the child, an attribute of the child or any nonspecific behavior or activity by

the child such as “good job” or “I like that.” Labeled Praise is a positive evaluation about a specific behavior or activity of the child such as “your picture is pretty” or “you are a good builder.” Behavioral Description is a declarative sentence or phrase about the child’s actions. Some examples include “you are singing a song” or “you and I are doing a puzzle” (Eyberg & Robinson, 1981).

Negative Engagement. The Negative Engagement factor consists of two behaviors: Negative Talk (M = 2.59, SD = 1.73) and Direct Command (M = 11.81, SD = 4.29). Negative Talk occurs when the parent expresses disapproval of the child itself or the activities and choices of the child. Some examples of this behavior include rude or sarcastic speech such as “You can’t do that” or “I think you are being careless.” Direct Command is a declarative statement that orders or directs the child to engage in a certain behavior such as “hurry up” or “put these away” (Eyberg & Robinson, 1981).

Positive Engagement. The Positive Engagement factor consists of five behaviors: Indirect Command (M = 9.47, SD = 3.42), Information Question (M =11.53, SD = 3.44), Descriptive Question (M = 10.11, SD = 2.31), Neutral Talk (M = 15.9, SD = 2.32) and Reflective Statements (M = 3.21 , SD = 1.52). Indirect Command occurs when a parent suggests their child perform vocal or motor behaviors. This suggestion can be made in the form of a question or a statement. Examples of Indirect Commands include: “I’d like you to finish the picture” and “Will you tell me what color this is?” Information Questions occur when a parent asks a question to which they expect an informative response, regardless of whether the child does or does not give a brief response. An example of an Information Question is, “what time is it?” Descriptive Questions is a descriptive or reflective statement expressed in question form with the expectation that the child give a brief response. An example is, “that was fun, wasn’t it?” Neutral Talk is comprised

of statements addressed to the child but is not descriptive or evaluative of the child or the child's current actions. Examples include, "careful" or "I want to draw with you." Finally, Reflective Statements are statements that reflect upon and have the same meaning as previous verbalizations made by the child. For example, if the child said, "this game is fun," a reflective statement is "you like playing this game" (Eyberg & Robinson, 1981).

Potential Confounds. A number of demographic variables collected from the SCID (First, et al., 2002) were examined as potential confounds in this study, including maternal age (in years), identification as an ethnic minority (yes/no), marital status (yes/no), and mothers' highest level of completed education. Frequency statistics for each of these variables are located in Table 1.

Results

Primary Variables and Covariates. Correlations between independent and dependent measures in this study are presented in Table 5. Prior to conducting analyses related to the study hypotheses, potential confounding variables were assessed by testing associations among demographic factors and the dependent measures of social support and parenting. Table 6 provides partial correlations between potential confounds and parenting behaviors, controlling for total parenting behavior frequency. As shown, Positive Engagement was significantly correlated with marital status, mother's race, mother's level of education, and mother's age. Negative Engagement was negatively correlated with education level and maternal age. Table 7 provides correlations between potential confounds and social support variables. Marital status had a weak but significant association with Total Social Support, Significant Other, Friend and Family support. Total Social Support was also significantly correlated with maternal race. All

significant confounds were controlled for in analyses testing primary hypotheses, as specified below.

Parenting and Maternal Psychopathology. In order to test the hypothesis that maternal psychopathology would predict observed parenting behaviors, we conducted a series of simple linear regressions, controlling for significant confounds. Table 8 provides the results for these analyses. As shown, Total Duration of maternal psychopathology was significantly and positively associated with frequency of Negative Engagement parenting behaviors ($t(126) = 2.050$).

Social Support and Maternal Psychopathology. Table 9 provides the results of simple linear regression analyses examining social support measures as predicted by maternal psychopathology. Both measures of maternal psychopathology were significantly related with all four measures of social support, with the exception of Family Support, which was not significantly related to Total Duration of Maternal Psychopathology. Subsequent analyses were conducted in which both BDI and Total Duration were entered simultaneously as predictors of social support. In these analyses, BDI remained a significant predictor of perceived social support, and Total Duration of Maternal Psychopathology did not.

Social Support and Parenting. Table 10 provides the results of the simple linear regressions between social support measures and parenting behaviors. Contrary to our hypotheses, none of these associations were significant.

Social Support as a Mediator. Because hypotheses 1 through 3 were not supported, we did not conduct further analyses assessing social support as a mediator.

Social Support as a Moderator. We conducted 24 separate multiple regression analyses to determine whether social support measures served as moderators between maternal

psychopathology and parenting behaviors. Interaction terms in all 24 analyses were non-significant, indicating that social support is not a moderator between maternal psychopathology and parenting.

Discussion

The present study was conducted in order to better understand the parenting practices of mothers with depression. Specifically, the focus was on social support and its potential to buffer or contribute to the effect of maternal depression on parenting, and consequently, child health outcomes. The strongest relationships were found between both current maternal depressive symptoms and total duration of maternal mental illness and forms of social support. Additionally, mothers with a longer duration of depression since diagnosis exhibited more negative parenting behaviors and also had lower perceived levels of social support. However, the primary hypotheses of this study were not supported, in that social support was neither a mediator nor a moderator of the maternal depression and parenting relationship. From the present findings, it also seems that social support may not be a direct predictor of parenting behaviors of mothers with depression.

There is consensus in the literature regarding the relationship between psychopathology and social support. The presence of social support can reduce the intensity of depressive illness while a lack of adequate social support is linked to greater psychological disturbances (Blais & Renshaw, 2012; Eom et al., 2013; Grav et al., 2012; Henderson & Moran, 1983; Leavy, 1983). The present findings are in accordance with the literature, as current maternal depressive symptoms and total duration of maternal mental illness during a child's lifetime were both significantly and negatively associated with social support. Only social support from friends was

not significantly associated with total duration of maternal mental illness. Subsequent analyses were conducted in which both the BDI and Total Duration were entered simultaneously as predictors of social support. In these analyses, BDI remained a significant predictor of perceived social support, and Total Duration of Maternal Psychopathology did not.

There are two ways to interpret the relationship between current depressive symptoms, as indicated by the BDI, and social support. It is possible that depressive symptoms directly influence levels of social support. Hammen (1991) demonstrated that depressed women experience a greater amount of interpersonal stress largely influenced by their depressive behavior. Thus, depressive symptoms may hinder ability to form close relationships and lead to less social support. Alternatively, depressive symptoms may cloud the mother's judgment and lead her to perceive lower levels of social support. Depression is characterized by negative thought processes (Downey & Coyne, 1990). As a result, depressed mothers who experience these thought processes and attributions may view their relationships negatively and, consequently, perceive less social support regardless of actual level of support provided by the individuals in their social network.

The present study demonstrated that depression influences parenting behaviors. Mothers with a longer duration of depressive illness more frequently engaged their children in a negative manner by expressing more disapproval and commands. These findings are congruent with other studies that suggested depressed mothers exhibited more hostility, irritability and coercive parenting behaviors (Downey & Coyne, 1990; Lovejoy et al., 2000). The lack of association between depression and positive parenting behaviors is not unusual given the weak link indicated in previous literature (Lovejoy et al., 2000). A likely explanation is that depressive symptoms act

upon negative thought processes, appraisals and emotions, thus exacerbating negative parenting behaviors rather than impacting positive parenting behaviors (Dix & Meunier, 2009).

Surprisingly, the present study also found that maternal perceived social support was not a direct predictor of parenting. This finding deviates from the previous literature (Andresen & Telleen, 1992; Belle, 1982; Powell, 1980; Respler-Herman et al., 2012). Notably, previous studies focused on different high-risk populations including low income women and women of various ethnic backgrounds. However, none examined social support and parenting exclusively in a high-risk population composed of clinically depressed mothers. Thus, these findings extend the current literature by demonstrating that the social support-parenting relationship may not be significant in depressed mother populations. One explanation is that perhaps the support a mother receives is not applicable to their actual exhibited parenting behaviors, but is experienced in other ways that do not impact parenting strategies. Individuals who provide support may be less apt to intervene or comment on parenting for a number of reasons, such as prevailing cultural standards or so as not to further upset the depressed individual. Additionally, this study focused solely on maternal perception of social support. No information was provided about how that support system extends itself to the child or what level of support the child perceives. Other avenues of support measurement related to the child's perceptions of support should be explored.

It is also important to note that the strong association between social support and maternal depressed mood might suggest an indirect path of influence from social support to parenting, via maternal current mood state. In this study, social support was examined as the "outcome" and depressive symptoms as the "predictor." However, as noted above, the association between maternal depression and social support is likely bidirectional. If our study

had been able to test for associations across time, it is possible that we may have noted an indirect effect of social support on parenting, through decreases in maternal symptomatology.

Finally, social support did not moderate the relationship between maternal depression and parenting. Belsky's Parenting Process Model served as a guide for the present study, informing the decision to focus on social support as a moderator. However, Belsky (1984) noted other determinants of parenting beyond social support. Parental employment status was noted as a relevant factor, in addition to economical and financial stability. Additionally, psychological well-being of spouses or other parental figures might be a relevant moderator. The presence of siblings, and older siblings in particular, may lessen the impact of depression on parenting. It is also possible that a younger child may experience less negative parenting behaviors if the depressed mother has learned from her previous parenting experiences. Additionally, research has suggested that spousal support is more impactful than support from the individual's extended social network (Simons et al., 1993). Because our "significant other" scale was open to interpretation as to whether it referred to a special friend or a spouse/partner, our study was unable to replicate the Simons et al., (1993) findings. However, marital status predicted total social support, significant other, family and friend support as well as positive engagement parenting behaviors in this study. The role of spousal support as a particularly potent moderator of the relationship between maternal depression and parenting should be explored further.

Clinical Implications. The present study supports the notion that depression influences both perceptions of social support and the expression of particular parenting behaviors. However, perceived social support does not directly predict parenting in depressed mothers. When intervening in or decreasing the frequency of negative parenting behaviors, priority should be given to alleviating the mother's depressive symptoms. A decrease in depressive symptoms

would reduce negative parenting behaviors such as hostility and irritability and, consequently, reduce the likelihood of negative outcomes for their children. Because social support may alleviate maternal symptoms, it may still play an indirect role in improving parenting. In addition, social support should also be considered from the standpoint of the child. Perhaps having another supportive adult in their life (such as a father, teacher or grandparent) might help to offset negative outcomes that might otherwise result from non-adaptive parenting by their mothers.

Strengths and Limitations. The goal of this study was to examine a high-risk population largely drawn from a clinically treated population. However, the findings lack generalizability as a majority of these mothers were of high socioeconomic status. Of the sample, 35% graduated from a 4-year undergraduate program and 40.5% continued on and completed a graduate program. Thus, this sample consisted of a highly educated group of women. Additionally, there was a possibility of skew due to the large number of married participants (n = 110) as opposed to unmarried (n = 21). The restricted demographic diversity of the sample likely limited the generalizability of the findings.

The present study was able to employ an objective measure of parenting, as opposed to the subjective measures utilized in other studies (Respler-Herman et al., 2012). However, as parent-child interactions were filmed in the lab, the DPICS data did not provide fully naturalistic parenting behavior data. Despite instructing parents to behave the way they would at home, parenting behaviors recorded in the lab still may differ from those exhibited under less controlled conditions. Finally, while both instrumental and emotional support are cited as impacting psychological health, the measure utilized in this study only tapped into emotional support (Finfgeld-Connett, 2005; Green et al., 2007; Leavy, 1983; Manuel et al., 2012). Therefore, the

study would have benefited from utilizing a comprehensive social support measure that examines different types of support in addition to types of support providers.

Despite these limitations, there were a number of strengths to this study. Women with high rates of depression were the focus of the study; this is a high-risk population that has not often been studied in research on the social support-parenting relationship. Additionally, maternal psychopathology was measured in two ways: current depressive symptoms and total duration of psychological illness. This study parsed current maternal emotional state from the impact of overall psychological illness. This allowed for in-depth exploration into the relationship between maternal depression, social support and parenting. While the separate relationships among the three main variables had been established in the literature, the present study sought to explain how the three variables functioned together to impact maternal parenting. The possibility of social support as a moderator was suggested in previous literature (Herwig et al., 2004; Simons et al., 1993). However, the present study attempted to elaborate upon that possibility and ultimately could not replicate some of the expected relationships when more severe levels of maternal depression were considered.

Future Directions. There are many opportunities for further exploration in this field of research. Future research should continue exploring Belsky's Parenting Process Model and examine how these parenting determinants lead to specific types of parenting (Belsky, 1984). While social support may not have moderated the depression-parenting relationship, researchers should continue exploring other potential moderators. Research should also extend these findings beyond the realm of depression. Mothers with more severe forms of mental illnesses may face greater parenting difficulties and determining what factors reduce the impact of their psychopathology on parenting may prove especially beneficial.

Future research should aim to address some of the limitations discussed in the present study. It is advantageous to utilize an objective measure of parenting; however these measurements should be made on parenting exhibited in more naturalistic settings. Examining parenting at home or in various areas frequented by the parent and child would provide more accurate insight into the parenting styles of depressed mothers.

While there is more to be examined in this area of research, the present study provides a solid starting point. Findings from this study elaborated upon the role of social support in parenting of depressed mothers. Ultimately, insight garnered from the present study will contribute to the ongoing research searching for ways to improve the lives of depressed women and their children.

References

Adrian, C. (1989). Observations of interactions of depressed women with their children. *Am J Psychiatry, 146*(1), 50-55.

Anderson, C.A., & Hammen, C.L. (1993). Psychosocial outcomes of children of unipolar depressed, bipolar, medically ill, and normal women: A longitudinal study. *Journal of Consulting and Clinical Psychology, 61*(3), 448-454. doi: 10.1037/0022-006X.61.3.448

Andresen, P.A., & Telleen, S.L. (1992). The relationship between social support and maternal behaviors and attitudes: A meta-analytic review. *American Journal of Community Psychology, 20*(6), 753-774.

Barker, E.D., Copeland, W., Maughan, B., Jaffee, S.R., & Uher, R. (2012). Relative impact of maternal depression and associated risk factors on offspring psychopathology. *The British Journal of Psychiatry, 200*(2), 124-129.

Beck, A.T., Steer, R.A., & Brown, G.K. (1997). *Beck depression inventory: Second edition* (Vol. The Psychological Corporation). San Antonio.

Belle, D. (1982). *Lives in stress: Women and depression* (Vol. 45): Sage Publications, Inc.

Belsky, J. (1984). The determinants of parenting: A process model. *Child development*, 83-96.

Blais, R.K., & Renshaw, K.D. (2012). The association of biological and psychological attributions for depression with social support seeking intentions in individuals with depressive symptoms. *Behavioural and cognitive psychotherapy, 40*(05), 605-617.

Brennan, P.A., Hammen, C., Andersen, M.J., Bor, W., Najman, J.M., & Williams, G.M. (2000). Chronicity, severity, and timing of maternal depressive symptoms: Relationships with child outcomes at age 5. *Developmental Psychology, 36*(6), 759-766. doi: 10.1037/0012-1649.36.6.759

Cobb, S. (1976). Presidential address-1976. Social support as a moderator of life stress. *Psychosomatic medicine, 38*(5), 300-314.

Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310-357. doi: 10.1037/0033-2909.98.2.310

Dix, T., & Meunier, L.N. (2009). Depressive symptoms and parenting competence: An analysis of 13 regulatory processes. *Developmental Review, 29*(1), 45-68. doi: http://dx.doi.org/10.1016/j.dr.2008.11.002

Downey, G., & Coyne, J.C. (1990). Children of depressed parents: An integrative review. *Psychological Bulletin, 108*(1), 50-76. doi: 10.1037/0033-2909.108.1.50

Eom, C.S., Shin, D.W., Kim, S.Y., Yang, H.K., Jo, H.S., Kweon, S.S., . . . Park, J.H. (2013). Impact of perceived social support on the mental health and health-related quality of life in cancer patients: Results from a nationwide, multicenter survey in south korea. *Psycho-Oncology, 22*(6), 1283-1290.

Eyberg, S.M., & Robinson, E.A. (1981). Dyadic parent-child interaction coding system. *Seattle, WA: Parenting Clinic, University of Washington*.

Field, A. (2009). *Discovering statistics using spss*: Sage publications.

Finfgeld-Connett, D. (2005). Clarification of social support. *Journal of Nursing Scholarship, 37*(1), 4-9.

First, M.B., Spitzer, R.L., Gibbon, M., & Williams, J.B. (2012). *Structured clinical interview for dsm-iv® axis i disorders (scid-i), clinician version, administration booklet*: American Psychiatric Pub.

Goodman, S.H., Rouse, M.H., Connell, A.M., Broth, M.R., Hall, C.M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical child and family psychology review, 14*(1), 1-27.

Grav, S., Hellzèn, O., Romild, U., & Stordal, E. (2012). Association between social support and depression in the general population: The hunt study, a cross-sectional survey. *Journal of clinical nursing, 21*(1-2), 111-120.

Green, B.L., Furrer, C., & McAllister, C. (2007). How do relationships support parenting? Effects of attachment style and social support on parenting behavior in an at-risk population. *American Journal of Community Psychology, 40*(1-2), 96-108.

Haber, M.G., Cohen, J.L., Lucas, T., & Baltes, B.B. (2007). The relationship between self-reported received and perceived social support: A meta-analytic review. *American Journal of Community Psychology, 39*(1-2), 133-144. doi: 10.1007/s10464-007-9100-9

Hammen, C. (1991). Generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology, 100*(4), 555-561. doi: 10.1037/0021-843X.100.4.555

Henderson, A., & Moran, P. (1983). Social relationships during the onset and remission of neurotic symptoms. A prospective community study. *The British Journal of Psychiatry, 143*(5), 467-472.

Herwig, J.E., Wirtz, M., & Bengel, J. (2004). Depression, partnership, social support, and parenting: Interaction of maternal factors with behavioral problems of the child. *Journal of Affective Disorders, 80*(2), 199-208.

Leavy, R.L. (1983). Social support and psychological disorder: A review. *Journal of Community Psychology, 11*(1), 3-21.

Lovejoy, M.C., Graczyk, P.A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical psychology review, 20*(5), 561-592.

Manuel, J.I., Martinson, M.L., Bledsoe-Mansori, S.E., & Bellamy, J.L. (2012). The influence of stress and social support on depressive symptoms in mothers with young children. *Social science & medicine, 75*(11), 2013-2020.

McIntosh, N.J. (1991). Identification and investigation of properties of social support. *Journal of Organizational Behavior, 12*(3), 201-217. doi: 10.1002/job.4030120304

Mitchell, R.E., & Trickett, E.J. (1980). Task force report: Social networks as mediators of social support. *Community Mental Health Journal, 16*(1), 27-44.

Powell, D.R. (1980). Personal social networks as a focus for primary prevention of child mistreatment. *Infant Mental Health Journal, 1*(4), 232-239.

Respler-Herman, M., Mowder, B.A., Yasik, A.E., & Shamah, R. (2012). Parenting beliefs, parental stress, and social support relationships. *Journal of Child and Family Studies, 21*(2), 190-198.

Simons, R.L., Lorenz, F.O., Wu, C.-i., & Conger, R.D. (1993). Social network and marital support as mediators and moderators of the impact of stress and depression on parental behavior. *Developmental Psychology, 29*(2), 368-381. doi: 10.1037/0012-1649.29.2.368

Wethington, E., & Kessler, R.C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social behavior*, 78-89.

Zimet, G.D., Dahlem, N.W., Zimet, S.G., & Farley, G.K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment, 52*(1), 30-41.

Table 1
Descriptive Statistics of Sample

Variables	N	%
Maternal Education		
Graduated high school or GED	4	3.1
Part College	15	11.5
Graduated 2-year college	6	4.6
Graduated 4-year college	26	35.1
Part graduate/professional school	7	5.3
Completed graduate/professional school	53	40.5
Maternal Race/Ethnicity – Minority		
Yes, minority	20	15.3
No, non-minority	111	84.7
Marital Status		
Yes, married or partner	110	84
No, married or partner	21	16
Lifetime Diagnosis of Major Depressive Disorder		
Absent	42	32.1
Subthreshold	1	0.8
Threshold (in full remission)	53	40.5
Threshold (in partial remission)	25	19.1
Threshold (current)	10	7.6
Lifetime Diagnosis of Dysthymic Disorder		
Absent	130	99.2
Threshold (current)	1	0.8
Lifetime Diagnosis of Depressive Disorder NOS		
Absent	124	94.7
Threshold (in full remission)	5	3.8
Threshold (current)	2	1.5

Table 2
Mean and Standard Deviation of Primary Variables

Variables	M	SD
MPSS		
Total	70.87	13.51
Significant Other	24.14	5.80
Friends	22.96	5.38
Family	22.88	6.34
BDI	6.53	7.17
Total Duration of Illness (in months)	11.20	17.07
Positive Parenting		
Unlabeled Praise	3.39	1.89
Labeled Praise	0.41	0.71
Behavioral Descriptions	0.82	0.89
Negative Parenting		
Negative Talk	2.59	1.73
Direct Command	11.81	4.29
Talking Parenting		
Indirect Command	9.47	3.42
Information Question	11.53	3.44
Descriptive Question	10.11	2.31
Neutral Talk	15.9	2.32
Reflective Statements	3.21	1.52

Table 3
Pattern Matrix Component of Parenting Behaviors

	Rotated Factor Loadings		
Items	1	2	3
Negative Talk	--	**0.897**	--
Direct Command	--	**0.972**	--
Indirect Command	**0.447**	0.306	--
Information Question	**0.829**	--	--
Descriptive Question	**0.839**	--	--
Neutral Talk	**0.729**	--	--
Reflective Statement	**0.584**	--	--
Unlabeled Praise	--	--	**0.590**
Behavioral Descriptions	--	--	**0.535**
Labeled Praise	--	--	**0.896**

Note. Factor loading > 0.40 are in boldface.

Table 4
Inter-rater Reliability of DPICS Parenting Behaviors

Parenting Behavior	Chronbach's Alpha (α)
Direct Command	
Compliance	0.997
No compliance	0.955
No opportunity for compliance	0.940
Indirect Command	
Compliance	0.981
No compliance	0.981
No opportunity for compliance	0.960
Descriptive Question	0.996
Information Question	
Answer	0.961
No answer	0.493
No opportunity for answer	0.873
Negative Talk	0.978
Reflective Statements	0.937
Neutral Talk	0.991
Unlabeled Praise	0.985

Table 5
Correlation between Primary Variables

Variable	1	2	3	4	5	6	7	8	9
1. Positive Reinforcement	--								
2. Negative Engagement	**-0.314***	--							
3. Positive Engagement	-0.029	**-0.826***	--						
4. BDI	-0.094	0.121	-0.079	--					
5. Total Duration	-0.008	0.165	-0.143	**0.377***	--				
6. Total Social Support	0.017	-0.052	0.036	**-0.447***	**-0.310***	--			
7. Significant Other Support	-0.030	-0.051	-0.016	**-0.323***	**-0.216***	**0.891***	--		
8. Friend Support	-0.049	-0.044	0.036	**-0.341***	**-0.263***	**0.833***	**0.715***	--	
9. Family Support	0.110	-0.131	0.069	**-0.277***	-0.142	**0.851***	**0.725***	**0.569***	--

Note. *p<0.05; values related to the parenting variables were obtained through a partial correlation controlling for total parenting behavior frequency.

Table 6
Partial Correlation between Parenting Behaviors and Confounds

Variable	Positive Reinforcement	Negative Engagement	Positive Engagement
Marital Status (Y/N)			
r	-0.059	-0.163	0.175
p	0.508	0.064	**0.047***
Race Minority (Y/N)			
r	-0.021	0.133	-0.198
p	0.810	0.130	**0.024***
Child Age			
r	0.148	-0.106	0.063
p	0.092	0.232	0.478
Child Gender			
r	-0.049	0.038	-0.001
p	0.583	0.668	0.993
Education			
r	0.031	-0.337	0.293
p	0.724	**0.000***	**0.001***
Mom Age			
r	0.013	-0.352	0.248
p	0.883	**0.000***	**0.004***

Note. ***p<0.05**; partial correlation controlling for total parenting behavior frequency

Table 7
Correlation between Social Support and Confounds

Variable	Total Social Support	Significant Other	Friend	Family
Marital Status (Y/N)				
r	0.385	0.382	0.269	0.184
p	**0.000***	**0.000***	**0.003***	**0.036***
Race Minority (Y/N)				
r	-0.182	-0.097	-0.108	-0.144
p	**0.039***	0.268	0.220	0.100
Child Age				
r	0.055	0.083	0.605	0.158
p	0.534	0.339	0.954	0.069
Education				
r	0.080	0.020	0.056	0.152
p	0.367	0.817	0.531	0.083
Mom Age				
r	-0.013	-0.077	-0.021	0.143
p	0.881	0.380	0.817	0.103

Note. ***p<0.05**

Table 8

Linear Regression Analysis for Parenting and Maternal Psychopathology

Variable	Positive Reinforcement	Negative Engagement	Positive Engagement
Total Duration			
F Change	0.023	4.202	2.325
R^2 *Change*	0.000	0.015	0.004
df_2	128	126	124
p	0.879	**0.042***	0.130
BDI			
F Change	0.963	2.486	0.630
R^2 *Change*	0.005	0.009	0.001
df_2	130	126	124
p	0.328	0.117	0.429

Note. ***p<0.05**; analyses conducted controlling for total parenting behavior frequency

Table 9
Linear Regression Analysis for Social Support and Maternal Psychopathology

Variable	Total Duration	BDI
Total Social Support		
F Change	11.685	31.029
R^2 *Change*	0.072	0.168
df_2	125	125
p	**0.001***	**0.000***
Significant Other		
F Change	4.265	12.434
R^2 *Change*	0.028	0.076
df_2	128	128
p	**0.041***	**0.001***
Friend		
F Change	7.662	17.078
R^2 *Change*	0.053	0.111
df_2	127	127
p	**0.006***	**0.000***
Family		
F Change	1.869	9.093
R^2 *Change*	0.014	0.064
df_2	128	128
p	0.174	**0.003***

Note. ***p<0.05**

Table 10
Linear Regression Analysis for Social Support and Parenting

Variable	Positive Reinforcement	Negative Engagement	Positive Engagement
Total Social Support			
F Change	0.068	0.211	0.221
R^2 *Change*	0.000	0.001	0.000
df_2	128	124	122
p	0.795	0.647	0.639
Significant Other			
F Change	0.597	0.392	1.375
R^2 *Change*	0.003	0.001	0.002
df_2	130	126	124
p	0.441	0.532	0.243
Friend			
F Change	0.090	0.001	0.200
R^2 *Change*	0.001	0.159	0.000
df_2	129	125	123
p	0.764	0.690	0.655
Family			
F Change	0.423	0.118	0.455
R^2 *Change*	0.002	0.523	0.001
df_2	130	126	124
p	0.517	0.731	0.501

Note. ***p<0.05**; analyses conducted controlling for total parenting behavior frequency