

THESIS

PROTECTIVE FACTORS FOR TEEN MOTHERS: RELATIONS AMONG SOCIAL
SUPPORT, PSYCHOLOGICAL RESOURCES, AND CHILD-REARING PRACTICES

Submitted by

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ABSTRACT

PROTECTIVE FACTORS FOR TEEN MOTHERS: RELATIONS AMONG SOCIAL SUPPORT, PSYCHOLOGICAL RESOURCES, AND CHILD-REARING PRACTICES

Teen mothers face increased challenges when rearing children, largely influenced by development as an adolescent and the support networks they have available to them. Based on two theories of parental and adolescent development, measures of well-being including self-efficacy, depression, and future orientation are mechanisms that can be altered by support networks, and function as protective factors for functional parenting. This study of 344 teen mothers tests the hypotheses that teen mothers who have more supportive primary social networks have greater confidence in parenting abilities, less propensity towards depression, and a more optimistic sense of the future. Results indicate that relations of support functions (intimacy and support satisfaction) and nurturant child rearing practices are partially mediated by self-efficacy and fully mediated by depression. These findings emphasize the importance of supportive characteristics in support networks for teen mothers and parental well-being, both of which may foster the development of non-coercive parenting.

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TEEN MOTHERHOOD AND RESILIENCE

The purpose of the current study is to understand processes that might help teen mothers develop as competent parents. Predictors of capable functioning, specifically resilience, for parents are personal psychological resources, including self-efficacy and future orientation, and sources of support that buffer stress (Belsky, 1984). Because teen motherhood is a social problem that has an increased risk of negative outcomes (e.g., Fergusson & Woolard, 1999) and emotional distress (Milan et al., 2004), the current study is vital to understanding what mechanisms promote positive parenting outcomes for teen mothers.

Minimal literature addresses mechanisms of resilience for teen mothers. Resilience refers to processes in place when risk is present that produce outcomes similar to or better than outcomes when risk is not present (Masten, Best & Garmezy, 1990). When people demonstrate resilience, they adequately adapt to adversity despite the negative outcomes commonly associated with such risks (Cowan, Cowan & Schulz, 1996). Little research demonstrates specific resilience mechanisms associated with positive child-rearing practices of teen mothers. Considering that an estimated 18% of females in the United States will become teen mothers (Perper & Manlove, 2009), understanding the mechanisms that help young mothers succeed is a necessary gap in literature to fill. As well, effective programs for high-risk groups typically are based on an understanding of protective mechanisms (Werner & Smith, 1992), which as yet are not well documented for adolescent mothers (Beers & Hollo, 2009).

Developmental theorists Belsky, Cooley and Harter provide the foundational basis regarding necessary mechanisms for competent development as a parent and an adolescent. Belsky's (1984) model of parenting provides insights as to the primary mechanisms that result in successful parenting. Two core processes in this model are the internal psychological resources

of the parent (such as maturity, self-efficacy, depression, and sense of future goals) and systems of social support; both processes influence successful functioning as a parent. Internal psychological resources for adolescents include identity development, and vary depending on the environment of the adolescent (Meeus, 2011). Adolescents with positive family/support functioning tend to experience less identity confusion, whereas chaotic family functioning appears to be mutually exclusive with identity confusion (Schwartz, Mason, Pantin & Szapoczik, 2009). Therefore, it is important to examine mechanisms of social support that lead to identity development, which is an important mechanism of parenting (Belsky) as well as an important outcome of late adolescence.

According to the theory of the looking glass self (Cooley, 1902), one important function of social networks, especially in adolescence, is to provide feedback about one's self-image, including self-identity and self-competence (Harter, Stocker, & Robinson, 1996). A synthesis of this insight about the origins of self-image in adolescence with Belsky's (1984) assertion about the importance of social networks to effective parenting leads to my proposition that teen mothers' primary social network shapes their parental psychological resources, including self-efficacy, future orientation, and risk of depression. These factors are also important in developing teen mothers' child-rearing practices. Democratic control in child rearing will be used in this study as an indicator of adjustment to the stressors related to being an adolescent and a parent. The selection of competent rearing as the relevant outcome is consistent with theories of resilience (e.g., Luthar, Cicchetti & Becker, 2000; Masten & Coatsworth, 1998) that assert that competence or adjustment must be assessed in terms of the particular risk factors, as well as stage-relevant functioning.

It is important to examine protective factors that promote optimal parental functioning. In the sections that follow, I will examine key, documented challenges of teen mothers and what influences favorable outcomes. Based on Belsky's (1984) domains of parenting model and Harter et al.'s (1986) theory of the looking glass self-orientation of adolescents, I argue that teen mothers' support networks shape their perception of parental self-efficacy, risk of depression, and future orientation, which ultimately influences their child-rearing practices.

Challenges of Teen Motherhood

Regardless of age or circumstance, parenting is a challenge. Teen mothers are faced with multiple obstacles to effective child rearing. Among these risk factors are higher levels of mental health disorders, lower levels of educational attainment, increased levels of economic disparities, and employment difficulties (Boden, Fergusson & Horwood, 2008). Teenage mothers are at increased risk of developing mental health problems (i.e., depression and anxiety), because pregnancy and parenting can lead to emotional distress, which results in the pregnancy being constituted as a stressful life event (Garber, Keiley, & Martin, 2002). Teens who become pregnant are also more likely to have experienced poverty, academic difficulties, and sexual abuse, risks that increase the likelihood of emotional distress (Coley & Chase-Lansdale, 1998). This results in increased emotional challenges for teen mothers (Milan et al., 2004) such as symptoms of depression, anxiety and hostility.

Teen mothers also experience increased levels of economic stress (Moffit & the E-Risk Study Team, 2002), with child care support being one of the most critical supports a teen mother can receive due to its influence on educational and financial attainment (Mollborn, 2007). In one longitudinal study of mothers, 59% of women who were mothers by the age of 18 had achieved no educational qualifications (i.e., a high school or college diploma) by the age of 25 (Boden et

al., 2008). Although teen motherhood is stressful, greater developmental maturity and nonmaternal support can serve as protective factors against negative effects (Kramer & Lancaster, 2010). These protective factors are the focus of Belsky's (1984) process model of parenting.

A Process Model of Parenting

Belsky (1984) developed a process model of parenting that identified influences on successful parenting; these processes also are determinants of child maltreatment. The three domains identified are the personal psychological resources of parents, characteristics of the child, and contextual sources of stress and support. Belsky argued that contextual parenting supports are not as important as parents' internal and psychological resources in relation to effective rearing. Dynamics of marital relations, social networks, and jobs influence parents' well-being, and thus influence their parental functioning. Such aspects of internal resources include self-efficacy and maturity in regard to identity. Belsky's model emphasized that mature and psychologically healthy parents have developed a feeling of competency, or self-efficacy, in their parenting abilities, often influenced by their marital relations and emotional as well as material supports. Although some teen mothers have marital support (Mollborn, 2007), many rely on their families of origin for resources, including emotional support, that bolster their parental self-efficacy (McDermott & Graham, 2005).

Self-efficacy. Parental self-efficacy is defined by one's belief in the competency of performance in their role as a parent (Coleman & Karraker, 1998). Bandura asserted that self-efficacy is important in developing the motivation and perceived competency that someone is able to complete a given task. When motivation is present, a greater effort to overcome the challenges necessary for completing a task successfully is achieved (Bandura, 1977, 1982).

According to Bandura, self-efficacy is attained through four types of influence. The first is through performance attainments, where a task is performed successfully. This results in a competence that the task can be completed again. For teen mothers, an example of this would be changing a diaper for the first time, thus increasing the importance of pre-natal classes that teach mothers skills before they are experiencing it with a live infant (Koehn, 2002).

The next three types of self-efficacy attainment largely depend on interactions with others (Bandura, 1982). The vicarious experience of observing the performance of others involves observing or hearing about someone else completing the task. Individuals may feel a sense of hope that they may be able to complete the task. This is expanded on by the third level of influence, which is verbal persuasion and allied types of social influences that assert that one possesses certain capacities of efficacy. This is particularly applicable to teen mothers: If the support network offers the vicarious experience of performing the task, but then does not provide verbal assurance of efficacy (e.g., by questioning the young mother's skills), teen mothers are likely to feel less competent if not a failure (Beers & Hollo, 2009). The final source of influence is the individual's own physiological status to judge their own capability, strength, and vulnerability in being able to complete the task.

For typically aged mothers, being confident in the ability to parent is critical to enduring the challenges with which they are faced, which often take a great deal of energy and persistence (Teti, O'Connel, & Reiner, 1999). One's self-efficacy determines how much someone will persist; individuals with limited self-competence are more likely to give up in the face of challenges or setbacks (Bandura, 1982). Challenging daily activities such as soothing a crying baby, consistency with parenting techniques, disciplining effectively, and daily schedules are all

influenced by one's perception of whether or not what they are doing is correct or effective (Teti et al., 1999).

Parental self-efficacy has been found to be affected by close attachment figures and the regard they hold for that individual. The more positive the regard the support figure has for the parent, the more likely she is to have high self-efficacy (Klaw, Rhodes & Fitzgerald, 2003). How these support figures influence parents' self-efficacy affects their ability to perceive themselves as a competent parent, which is critical in explaining parents' child-rearing practices (MacPhee, Fritz, & Miller-Heyl, 1996). If parents develop self-efficacy through vicarious observations and verbal and allied social influences who believe in their competence (Bandura, 1982), then one would expect that the quality and degrees of social support provided to an at-risk group such as teen mothers would be especially important to their functioning in terms of self-efficacy and child-rearing practices.

Depression. Maternal depression is associated with negative cognitive and socio-emotional outcomes in young children (Downey & Coyne, 1990; Goodman & Gotlib, 1999). Depression in mothers and its effects on children is often measured by maternal sensitivity (Campbell, Matestic, Stauffenberg, Mohan, & Kirchner, 2007), and can be exhibited as hostility and irritability as well as critical, punitive, and rejecting interactions with children (Coyne, Downey & Boergers, 1996). The effects of maternal depression on children often vary depending on the severity of depression (Campbell et al., 2007). Economic stress has been largely linked to depression, and has been found to diminish the benefit of social support (Gjesfjeld, Greeno, Kim & Anderson, 2010). Maternal conflict has also been linked to maternal depression and poor socio-emotional outcomes in children (Downey & Coyne, 1990). Little research is available on the effects of support networks on maternal depression, particularly for

teen mothers. Bandura argued that teen mothers who have low levels of self-efficacy are at risk of experiencing increased anxiety and depression (Bandura, 1982). In general, teen mothers are at an increased risk of depression due to multiple risk factors in their life. This includes financial challenges, work, and school obligations (Garber et al., 2002), and the integration of the potentially unexpected role as a mother along with other life roles (Birkeland, Thompson, & Phares, 2005).

Depressive symptoms can negatively affect teen mothers' functioning at work and school, as well as the relationship with her child and others (Clemmens, 2003). Teen mothers often are not referred and do not receive mental health evaluation and/or treatment when exhibiting depressive symptoms (Logan & King, 2001). Other documented challenges of teen mothers receiving treatment include access to and knowledge of resources, the stigma associated with mental health treatment (Komiya, Good, & Sherrod, 2000), and lack of education regarding the prevalence of postpartum depression (Logsdon, Hines-Martin & Rakestraw, 2009).

Postpartum depression and/or emotional distress affects approximately one out of four adult women (Moses-Kolko & Roth, 2004; Hopkins, Marcus, & Campbell, 1984). Thus, it is not surprising that teen mothers, who are experiencing motherhood at a nonnormative time in their life, would also experience depression at a higher rate than for other women. It is estimated that half of all teen mothers experience symptoms of depression during the early postpartum period (Miller, 1998). Specifically, a study done by Logsdon (2008) found that 47% of teen mothers experienced significant symptoms of depression at 4-6 weeks postpartum, and the depressive symptoms were still exhibited at 12 months postpartum.

Children of depressed teen mothers are at an increased risk for adverse outcomes, largely because of the lack of responsiveness a depressed mother exhibits, and the inability to handle

difficult parenting situations (Carter, Garrity-Rokous, Chazen-Cohen, Little & Briggs-Gowan, 2001; Middleton, Scott, & Renk, 2009). Maternal depression also relates to the sense of self-efficacy a teen mother has when it comes to being able to cope with the challenges of teen motherhood. This holds large implications for intervention programs supporting teen mothers, highlighting the necessity of normalizing the challenges involved with depression many mothers experience and expanding teen mothers' access to resources (Logsdon et al., 2009).

Additionally, because teen mothers tend to reach out to peers or their support system before talking to a health care provider (Logsdon, Usui, Foltz & Rakestraw, 2009), education of adolescent mothers' support networks is also needed.

Social support and teen mothers' functioning. A second component of Belsky's (1984) process model is social support. Support for parents is a multidimensional construct that includes emotional support, instrumental assistance, and social expectations (e.g., Mitchell & Trickett, 1980; Powell, 1980). Belsky defined social support by three components, including emotional support, instrumental assistance, and social expectations.

Emotional support provides parents with love and acceptance from others through explicit statements of caring and considerate actions. When a support network offers emotional support, the size of the network matters little compared to the quality of the support received and whether or not it meets the parents' needs (Unger & Powell, 1980). Tightly knit social networks have been shown to be positively correlated with parents' self-efficacy and ability to discern their own child's individual differences and parenting needs (Abernethy, 1973). However, the effectiveness of the support network also needs to be examined in regard to parents receiving the support they need. A goodness-of-fit model relates to whether or not support networks provide

positive support that fosters self-efficacy as opposed to support that is intrusive, critical, or unwanted by the mother, which undermines self-efficacy (French, Rodgers, & Cobb, 1974).

Instrumental assistance involves help with routine tasks such as childcare, or advice and information regarding child-rearing methods. For teen mothers, avenues of community support have also been shown to bolster teen mothers' level of competency. Home visits providing adolescent mothers with education regarding their child's development have also been an avenue of support shown to increase positive child-rearing practices (Hammond-Ratzlaff & Fulton, 2001).

Lastly, social expectations provide parents with guidelines for what is or is not appropriate behavior. For teen mothers, this often involves challenging the social disapproval often perceived from others (McDonald et al., 2008). McDonald also found that social supports for teen mothers are related to their social and emotional well-being, including impulsivity and problem solving.

The role of social support in teen mothers' lives often is examined in relation to their sense of competence, or self-efficacy. The majority of literature emphasizes the role of self-efficacy for typically aged mothers. Teen mothers lie outside what is considered 'normal' parenthood (Trad, 1995), and thus often must rely on two resources to which they have the most access: their families and own personal capacities (McDermott et al., 2005). Belsky argued that for on-time parents, the marital partner is the primary support in terms of effects on a mother's parental functioning. Although in the past it was more common for teen mothers to marry young, the majority of adolescent mothers currently remain unmarried when their child is born (Boonstra, 2002) and are often not co-residing with their significant other (Florsheim & Smith,

2005). Thus, a potentially important source of social support – the spouse – is typically absent for adolescent mothers.

Overall, teen mothers living with family or close friends have higher levels of social support, educational achievement, self-efficacy, and problem-solving abilities (McDonnell et al., 2008). Mothers of teen mothers can play a significant role when the teen and child reside with them. Supports such as housing, child care, and parenting support are beneficial to a teen mother, especially within the first 24 months of their child's life, and can improve teen mothers' adjustment to parenting (Oberlander, Shebl, Magder & Black, 2009). However, the mother of a teen mother can be intrusive by acting as her grandchild's parent, resulting in the teen mother developing low parental self-efficacy (Culp, Culp, Noland, & Anderson, 2006). Additionally, teen parents need to remain primary in parenting and child care (Beers et al., 2009). When a teen mother has a less supportive relationship with their mother, the teen mother is more likely to leave the home, resulting in decreased financial and educational support and uncertainty for the future (Oberlander et al., 2009). Thus, teen mothers may face a situation where too little support from her own parents may compromise her competence as a parent and emerging adult, but too intrusive support may also undermine her autonomy and effective rearing.

Literature on teen mothers' support systems, specifically who lies within said support system, is limited. Further understanding of the dynamics of social supports holds implications for strengthening services and supports for teen mothers (Beers & Hollo, 2009). The current study helps to fill this gap in literature by documenting both the sources of support for teen mothers and the adequacy of support they receive.

Emotional support and social expectations are two aspects of social support described by Belsky (1984). These types of support influence not only teen mothers' mental health and

parental competence (Ensor & Hughes, 2010); they might also be implicated in another process that is important to a teen mother's development, future orientation (Breen & McLean, 2010). The quality of the emotional support may influence teen mothers' hopes for the future as well as their view of themselves as having a productive future (Beers & Hollo, 2009). In addition, social expectations may influence teen mothers' ability to see what their expected future will be in terms of possible selves (Oyserman & James, 2009).

Future Orientation and Implications for Adolescent Mothers

The looking glass self-orientation model states that adolescents' perception of self is primarily influenced by their peers and support networks (Harter et al., 1996). The model, influenced by Cooley (1902), emphasizes that social networks essentially shape self-worth and self-concept, which also relates to a sense of competence. Harter et al. argues that adolescents require the approval of others in order to approve of themselves (1996). Based on the approval gained from peers, adolescences form understanding of themselves, their abilities, and their future. Thus, the mirror in which they gaze is the looking glass, and greatly influences formation of identity and self (Harter et al., 1996), and who they will become in the future.

Future orientation is defined as the image one has about one's future (Seginer, 2008). The looking-glass orientation for adolescents emphasizes that peers act as the primary influences for approval and support when shaping the image of who one will become (Harter et al., 1996). While peers continue to be a part of the support network when a teen becomes a mother, immediate family tends to be the primary support resource. However, peers often remain a strong source of emotional support (Beers & Hollo, 2009), particularly those who can offer a positive example of who can assist them in achieving educational goals (Klaw et al., 2003).

Support networks can provide a sense of future orientation for an adolescent, because they can see that someone may have done it already.

In relation to adolescents' definition of who they will become, there is a difference between what teens view as their ideal selves and who they fear becoming. A qualitative study by Klaw (2008) found that teen mothers have an idealized hope for themselves as a middle class adult with a good home, in loving relationships, and in professional careers. However, there was a contradiction between this future orientation and current life circumstances (i.e. education level, income, availability of resources, etc). Research revealed the development of the teen mothers' future orientation was fostered by social support. This included family members, peers, and community members. Specifically, many teen mothers felt inspired by older female mentors who were able to achieve a professional career, despite having been a teen mother (Klaw, 2008). In relation to the model of the looking glass self, teen mothers are able to see in their peers their possible selves of the future.

Identity and self-concept involve one's view of one's current situation and who one identifies as in the present. Possible selves, or the self one believes he/she may become in the near or distal future allows for exploration of potential positive and negative future outcomes (Oyserman & James, 2009; Markus & Nurius, 1986). Discussion and exploration of teen mothers' fears and hopes of the future is important in developing understanding of what is to come (Benson, 2004). Reflection and processing of past experiences, particularly teen mothers, develops a sense of self throughout time. Teen mothers often report that becoming a mother provided them the opportunity to end criminal behavior (Carroll, Houghton, Wood, Perkins & Bower, 2007) and provided a new opportunity for the development of identity.

The importance of future orientation to teen mothers' healthy development has not been studied in depth. Current research of future orientation focuses primarily on adolescence, particularly when coming from challenging circumstances (Seginer, 2008). More research is needed on how a realistic sense of future orientation for teen mothers might contribute to parental functioning. The majority of literature on teen motherhood and future orientation focuses on the importance of narrative development to make meaning of the past and the future (Breen & McLean, 2010; Klaw et al., 2003). A limitation of qualitative research is the difficulty of finding patterns of relations among variables, such as how future orientation is related to other protective factors. The present study meets a need for a qualitative examination of future orientation for teen parents, and how it is fostered by support networks to buffer poor parenting outcomes.

The Present Study

From a resilience standpoint, success for teen mothers is often defined as the avoidance of risk commonly associated with teen motherhood, including increased risks of poverty, low educational achievement, and abuse and neglect (Breen & McLean, 2010). Prior research has focused significantly on external resources that influence the role support networks can play in the prevention of teen motherhood (Beers & Hollo, 2009) because of the understanding of such risks. Minimal research has focused on how support networks influence the internal capacities that are necessary for teen mothers to exhibit effective child rearing practices and avoid negative outcomes. The present study examines three mechanisms (parental self-efficacy, depression and future orientation) that research has indicated are important for positive parent functioning and normative adolescent development. I will explore the level to which teen mothers' emotional and instrumental needs, which are essential for the development of future orientation, emotional

well-being, and self-efficacy, are being met by their primary social network. Based on these protective factors established in the literature, nurturant child-rearing practices will also be evaluated. It appears that no prior studies have tested depression and self-efficacy as mediators of the relation between social support and child-rearing practice. There is sufficient research evidence that depression and self-efficacy are related to social support (Bandura, 1982; Beers & Hollo, 2009; Belsky, 1984; French et al., 1974; Hammond-Ratzlaff & Fulton, 2001; McDonald et al., 2008) and parenting (Belsky; Bandura; Coyne et al., 1996; Klaw et al., 2003; MacPhee et al., 2003). Therefore, depression and self-efficacy may mediate the association between social support and nurturant child rearing practices. Due to the lack of quantitative research linking future orientation to parenting, a hypothesis about mediation will not be offered, but exploratory analysis will be conducted to see if there is a relationship.

The aim of the current study is to examine how the characteristics of the primary support networks of teen parents relates to how they see themselves as parents, their emotional well-being and how they see their future. I hypothesize that teen mothers' who have more supportive social networks have greater confidence in their parenting abilities (high efficacy), lower rates of depressive symptoms, and a more optimistic sense of the future. The second hypothesis is that these protective factors – high levels of support, high self-efficacy, high emotional wellbeing and a positive future orientation – correlate with positive rearing practices. Assuming the first and second hypotheses is supported, a third hypothesis is proposed which is that protective factors (self efficacy and depression) mediate the association of variables of social support and coercive child-rearing outcomes practices.

METHOD

Participants

Teen mothers ($N = 344$) from three sites in the Rocky Mountain region were included as participants in this study. Communities include a Native American reservation, a multiethnic city of approximately 300,000, and a rural multiethnic county. Recruitment for the study involved participants being referred through TANF administrators, school systems, health and addiction agencies, teen life centers, and other community agencies. Requirements for participation involved meeting one of two eligibility criteria. The first was that teen mothers or their families had to be eligible for any state or federal means-tested benefit, such as Food Stamps, Medicaid, or free school lunches. The second criterion was that the family income had to be at or below 150% of the federal poverty level. Once participants were identified as meeting one of the two criteria, they could be enrolled in the study. Because recruitment occurred at any place which might yield participants and all eligible participants were enrolled in the study, the current sample is considered a sample of convenience.

All participants were younger than age 20 when they entered the study ($M = 17.54$ years) and each was the primary individual rearing her child. The majority (93.5%) of mothers had one child, and the average age of the child was almost 6 months old. The age of teen mothers' children varied from newborn to 3½ years. Mothers had completed an average of 10.32 years of education and 18% had earned a diploma, GED, or vocational certificate. Teen mothers who did work (22.4%) had a part time job of approximately 28 hours a week and earned an average of \$6.50 per hour. At the time of participation, 17.6% of teen mothers lived in a nuclear family with their biological parents; 28.2% lived with their single mother and siblings; 30.6% coresided with their partner and parent(s); 18% lived only with their partner; and the remainder either lived

alone or with another relative. Ethnic composition included 149 Native American, 58 Hispanic, 111 nonHispanic White, and 26 other or mixed identify teen mother. No ethnic differences in maternal age, child age, or educational attainment were noted.

A sample of 344 provides a power of .97 for bivariate correlations of $r = .20$, which would be a small/medium effect size. If four social network variables were used to predict self-efficacy or future orientation, a sample this size would provide a power of 1.00 for a medium effect size of $R^2 = .13$ in multiple regression analyses.

Measures

Five measures were used from the baseline survey. All were reviewed for readability and cultural competence by human services professionals who were familiar with or members of the local ethnic groups.

Self-efficacy. Global self-efficacy was measured by the Pearlin Mastery Scale (Pearlin, Menaghan, Lieberman & Mullan, 1981). The Pearlin Mastery Scale measures a person's sense of control over what may be viewed as problems in one's life. It is a 7-item measure, with items rated from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher scores indicating a higher degree of mastery orientation. The scale has internal reliabilities greater than .85 and is stable over time ($r = .44$). This scale is inversely correlated with the Rotter's Locus of Control Scale, $r = -.45$, and the Hopelessness Scale, $r = -.61$ (Shek & Lai, 2001), demonstrating concurrent validity. Changes in economic strain were found to be inversely related to changes in mastery, social support, and coping. Social support and coping were positively associated with change in mastery. Lastly, changes in mastery inversely predicted change in depression. These associations are consistent with theoretical predictions of stress theory, and document construct validity of the Pearlin Mastery Scale.

Parent self-efficacy was assessed by the Self-Perceptions of the Parental Role (SPPR) scale. This is a 22-item scale that measures parental self-appraisals (MacPhee, Benson & Bullock, 1986). The 6-item Competence scale used assesses parents' perceived confidence as a parent. Each item includes two contrasting statements such as, "Some parents often worry about how they're doing as a parent BUT other parents feel confident about their parenting abilities." Parents endorse the statement that best represents their feelings, checking either *sort of true for me* or *really true for me*. The SPPR has been found to have a high internal ($\alpha = .78-.87$) and test-retest ($r = .80-.88$) reliabilities, convergent and factorial validity, and construct validity in that it is correlated with attributions for difficult child behavior, social support, punitive child-rearing practices, and sensitivity to intervention (Seybold, Fritz & MacPhee, 1991; MacPhee et al., 1986; Miller-Heyl et al, 1998).

The Pearlin Mastery Scale and the parent self-efficacy score were correlated $r = .25, p < .01$. Although this is not a large amount of overlap between the two measures of self-efficacy, the combined items on the two measures did form a reliable scale, $\alpha = .71$. Accordingly, they were combined into a single measure of self-efficacy.

Future orientation. Future orientation was measured by seven items taken from a 56-item resiliency questionnaire (WestEd, 2000) that was used to measure 17 assets, including goals and aspirations for the future. The latter items were used to measure future orientation. Sample items include *I believe that school is a waste of time; after high school, I plan to attend (or already attend) college or some other school;* and *I am good at making decision about how to manage my life*. Participants rated how true they felt the statement was to them, rating from 1 (*very true*) to 4 (*not at all true*). The alpha reliability of this scale is .49. The goals and aspirations measure is highly correlated with academic achievement (Wasonga, 2002), providing

some evidence for its construct validity. In order to determine if the reliability of this scale could be improved, the items on this measure and other baseline measures of personality and attitudes were entered into a Principal Component Analysis with varimax rotation. All but one of the future orientation items loaded on a single factor, with loadings between .288 and .721; however, three of the items had primary loadings on other factors. Item-total correlations of the six remaining items indicated no potential increase in reliability.

Social networks. The Social Network Questionnaire (SNQ; Attonucci, 1986) is a hierarchical social map where respondents place members of their social network into one of three concentric circles. Placement in the circles ranges from 1 (*less close but still important*) to 3 (*so close it is hard to imagine life without them*). The average score for this section of the SNQ represents intimacy. For the purpose of the study, individuals listed in group number 3 will be considered the primary support network. A 10-item scale is also used where participants identify which support person provides a particular function, such as emotional support, help with care-giving tasks, and parenting advice, and whether they feel judged or criticized by the support person. Scores on emotional support and instrumental support, which can range from 0% (nobody in the network provides that function) to 100% (all people in the network provide that function), are used to determine the affect and perceived type of support they receive from their primary support network. Satisfaction with the support is determined by whether or not participants wish they had more people to provide specific support functions, including dependability, advice, and someone to confide in. Several studies have found the SNQ to be valid across social class and ethnic groups (Levitt, Weber & Clark, 1986; MacPhee et al., 1996). As well, SNQ scores correlate with parent self-efficacy and rearing practices (MacPhee et al., 1996) as well as well-being (Levitt, Guacci-Franco, & Levitt, 1993; Levitt et al., 1986), and

satisfaction with support changes significantly as a result of an intervention designed to enhance social networks (Miller-Heyl et al., 1998).

In order to determine whether the measures of social support formed a single or multiple scales, a principal components analysis was performed. The variables included in the analysis were intimacy (average closeness), frequency of contact with network members, perceptions of support (seven functions related to emotional and instrumental support), intrusive support (e.g., criticism, directiveness), satisfaction with support, and density, or how many network members know each other. Two factors had an eigenvalue greater than 1, and accounted for 48.3% of variance. Factor one was identified as support functions, and included various instrumental and emotional support functions, intrusive support, and network size (negatively loaded). Thus, adolescents with smaller networks had a higher percentage of network members providing both positive and negative support. Factor 2 contained various indicators of intimacy: network density, intimacy or average closeness, and amount of contact with network members. Support satisfaction had modest ($r = -.39$ and $.46$) cross loadings on each factor, and for this as well as conceptual reasons was retained as a separate variable in the analyses.

Child-rearing practices. Parents completed two measures of child-rearing attitudes and practices. The Parent-Child Relationship Inventory short form (PCRI; Gerard, 1994) includes one scale, Limit Setting (9 items), that assesses consistent control vs. coercion. This scale contains a mixture of items on problematic child behavior (e.g., “My child is out of control much of the time;” “My child really knows how to make me mad”), parent anger (e.g., “I often lose my temper with my child”), and control (e.g., “I wish I could set firmer limits with my child”). Higher scores represent more positive attributes such as consistent, democratic control. The PCRI is uncorrelated with social desirability, is sensitive to the effects of parent education, and

correlates with other measures of child-rearing practices (Gerard).

Caregivers also completed a 10-item measure of coercion and parent-child conflict from the Behavior Checklist for Infants and Children ($\alpha = .76-.82$, MacPhee et al., 1996). The items, which are rated from 1 (*Strongly disagree*) to 4 (*Strongly agree*), focus on the child's oppositional behavior (e.g., "My child has a 'short fuse;' she/he easily becomes angry or upset") and the parent's coercive rearing practices (e.g., "I need to come down hard on my child when he/she acts up.").

Coercion and Limit Setting are correlated $r = -.51$, which is not surprising given that coercive parent-child dyads (Patterson, 2002) increase when aversive behavior by the child (e.g., tantrums, disobedience) and parent (e.g., anger, rejection, nattering), are present, including punishment that may occur. That is, the item content of both scales tapped into parent-reported aversive behavior of both child and parent that is consistent with coercive family processes. Therefore, Coercion was reverse scored and the two measures were then centered and combined into a single measure of Democratic Control. This composite has been found to significantly predict child aggression (inversely) and teacher-rated social skills (Walker & MacPhee, 2011).

Depression. Parents completed the Center for Epidemiologic Studies Depression (CES-D; Radloff, 1977) scale, a self-report state measure of depressive symptomatology. The short form used in this study is an 8-item questionnaire ($\alpha = .80$). Participants responded from 1 (*none of the time*) to 4 (*all of the time*). Detailed reviews (e.g., Devins & Orme, 1985) describe evidence for its reliability and validity.

Procedure

All measures were completed by group testing, with some individual completion due to participants' schedule. A trained data collector orally administered the paper and pencil

measures. An administration manual provided guidelines for how to administer the measures, clarification on certain items in case the teen mothers had questions, such as measures of contraction or specific ATDs. Two booklets were completed at the time of baseline and administration typically took two hours. Code numbers were written on the booklets with no other identifying information. Participants received \$30 for completing the baseline measure and had the option of participating in a DARE to be You (DTBY) workshop that provided them access to individualized case management services, transportation vouchers, a quality child education program, and additional monetary compensation.

Results

Teen Mothers' Support Networks

Prior to describing analyses related to testing the hypotheses, I will present descriptive information about the adolescent mothers' support system: Whom they included in their network, the types of support received, and how satisfied they were with that support.

When listing members of their support networks, teen mothers identified up to 20 individuals, including who the person was and how frequently they saw the person. Person 1 was who they considered themselves closest to, person 2 the next person, and so on. On average, these teen mothers listed 14 individuals in their networks. At least five or more individuals were listed in 95% of teen mom's support lists, and at least nine or more individuals were listed in 75% of teen moms support lists.

Teen mothers' mothers were the primary support person in their network, listed by 87% of participants. Other individuals frequently listed in their inner circle included their child (67%), father (46%), sister/step sister (57%), boyfriend/fiancé/partner (51%), brother/stepbrother

(46%), and a friend (35%). Figure 1 depicts the frequency of who teen mothers listed in their support networks and how these frequencies changed depending on level of closeness.

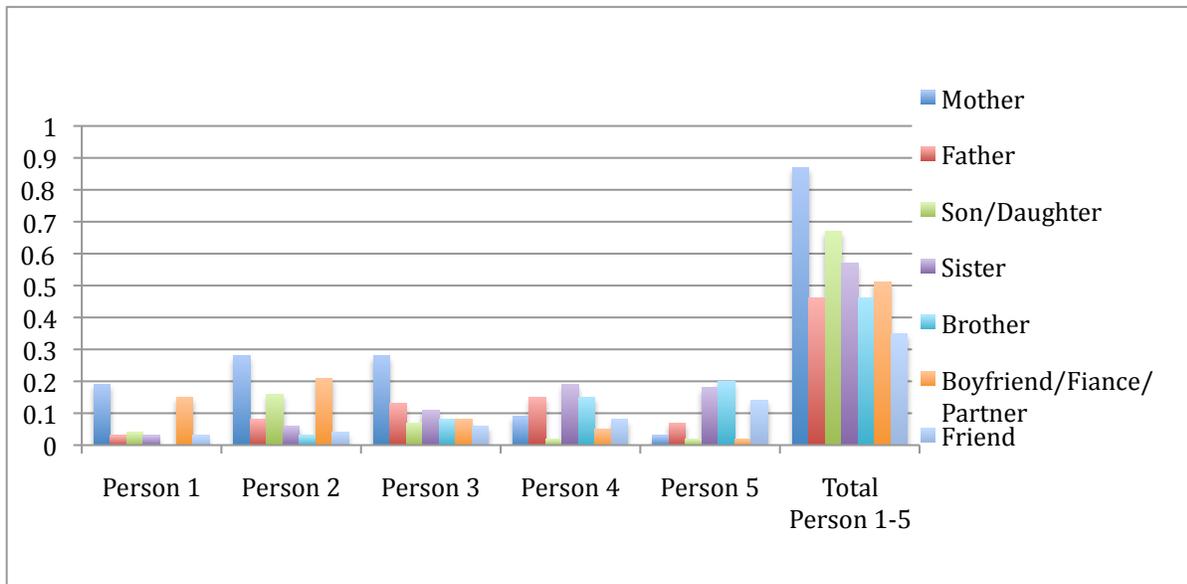


Figure 1

Graph illustrating frequency of persons identified in teen mothers' support network

Teen mothers predominantly listed family members and other informal supports in their support networks. Teen mothers included minimal formal supports, including their boss, co-worker, therapist/counselor, doctor, pastor/religious affiliation, teacher, child care provider, or some other formal support. A teacher was listed by 21 participants. Other sources of formal support were selected by no more than eight teen mothers per source of support.

Between 25% and 33% of the adolescent mothers' network members provided various emotional and instrumental forms of support (see Table 1), with more of them providing respect and relatively few being intrusive in terms of providing unwanted advice or directives. On average, half of participants were satisfied with their support. Table 2 provides further descriptive information on the type of support provided, satisfaction with support, enmeshment (identified as density), and frequency of support.

Table 1

Mean or Frequency of Facets of Social Support Networks

Support Functions	%
Are there people you confide in about things that are important	27
Are there people who reassure you when you're not sure about something?	27
Are there people who make you feel respected?	42
Are there people who you talk to when you are upset, nervous, depressed	25
Are there people whom you turn to for advice about major decision in your life?	21
Are there people who would loan you money if you needed it?	33
Are there people who would help you to care for your child on a regular basis?	26
Are there people to whom you turn to for advice about your child?	22
Are there people who tell you how to bring up your child, even though you may not ask for their advice?	17
Are there people who tell you how someone your age is "supposed" to act?	12
Satisfaction with support	% Yes
Do you wish you had more people in your network?	45
Do you wish you had more people on whom you could depend on?	61
Do you wish you had more people you could talk to or confide in?	55
Do you wish you had more people who understood you?	74
Do you wish you had more people you could get advice from?	59
Do you wish you had more people who could help out with your child?	49
Do you wish <i>fewer</i> people would tell you how you're supposed to behave?	60
Density <i>M, 4 = All</i>	1.56
Frequency of Contact <i>M, 5 = Every day</i>	4.07
Intimacy <i>M, 3 = Extremely close</i>	2.40

Mediation by Parent Self-Efficacy and Depression

Additional preliminary analyses were conducted to determine if any of five potential covariates should be included in the tests of mediation. None of the following variables were found to be correlated with the mediating or dependent variables: mother's age, number of times moved in the previous 6 months, whether the teen mother lived with a parent, and the ratio of peers to adults in the adolescent mothers' networks. However, whether the teen mother lived with her husband or partner (coded as 1; no partner = 0) was significantly, negatively related to coercive child rearing practices (see Table 2), and so was included as a covariate in all analyses.

All variables were normally distributed, and all were centered prior to the analyses. A Pearson correlation analysis was performed to examine whether supportive social networks are associated with (a) with the mediating variables of parenting self-efficacy, future orientation, and depression, as well as (b) the dependent variable, coercive parenting. One condition of mediation is that the predictor and outcome variables must be significantly correlated. As shown in Table 2, the percent of the network providing various support functions was not related to coercive parenting and therefore was removed from further consideration as a predictor in tests of mediation. However, Intimacy and support satisfaction were both negatively and significantly correlated with democratic control. A second condition of mediation is that the mediating variables must be significantly correlated with both the predictor and outcome variables. As shown in Table 2, future orientation was not significantly correlated with democratic control, therefore it cannot be considered for the mediational chain. Depression was negatively and significantly correlated with Intimacy as well as support satisfaction, and was also significantly correlated with democratic control, suggesting that it may be a mediating variable. Similarly, self-efficacy was correlated with both social support variables and democratic control. Thus, the

correlational data support the hypothesis that dimensions of support related to intimacy and support satisfaction are related to key aspects of teen mothers' well-being – self-efficacy and depression – as well as inversely to use of coercive rearing practices.

Table 2

Correlations (and Descriptive Statistics) among Adolescent Mothers' Social Support, Well-Being, and Coercive Rearing Practices

	2.	3.	4.	5.	6.	7.	8.	<i>M</i>	<i>SD</i>
1. Partner	.00	.02	-.01	-.02	-.09	-.11**	.13**	.74	.50
2. Intimacy		.11**	.13**	.11**	.04	-.09*	.12**	3.30	.36
3. Support Functions			-.12**	.04	.06	-.03	-.01	22.83	14.29
4. Support Satisfaction				.23**	.00	-.15**	.28**	2.93	2.32
5. Self-Efficacy					.37**	-.28**	.15**	3.58	.42
6. Future orientation						-.06	.07	2.90	.35
7. Depression							-.23**	1.83	.61
8. Democratic Control								2.03	.58

Note. *N* = 331-344

* *p* < .05

** *p* < .01

In the next set of analyses, mediation was tested following procedures described in Baron and Kenny (1986); whether the mother lived with a partner, coded as a dummy variable, served as a covariate in each analysis. Given that Support Functions was not significantly related to coercive rearing practices, the regression analyses focused on Intimacy and support satisfaction as the predictors. As well, future orientation was related to neither the social support variables

nor to democratic control, so the regression analyses focused on self-efficacy and depression as the mediating variables.

In each hierarchical regression, partner status was entered as the covariate in step 1, the mediating variable in step 2, and the predictor in step 3. If the predictor no longer explains significant variance once the mediator has been entered, then full mediation is supported. In instances where the beta for the predictor remained significant, the Sobel test was conducted to test for partial mediation.

The overall meditational hypothesis was tested with a series of hierarchical regressions. Four regression analyses tested the hypothesis that protective (self-efficacy) or vulnerability (depression) factors mediated the association between social support (support satisfaction and Intimacy) and democratic control. The first hierarchical regression involved support satisfaction as the predictor and self-efficacy as the mediator, and indicated partial mediation given that support satisfaction remained significant (see Table 3). The standardized beta weight was reduced from .149 without the mediator to .122 with the mediator in the equation, and the Sobel test value of 1.96 was significant, $p = .026$. The second hierarchical regression, with Intimacy as the predictor and self-efficacy as the mediator, again showed partial mediation for self-efficacy (see Table 3, right panel). The standardized beta weight was reduced from .123 without the mediator to .108 with the mediator in the equation, and the Sobel test value of 1.62 was significant, $p = .051$. Thus, the initial hypothesis that self-efficacy mediates the association of social support and intimacy with democratic control was partially supported. This partially supports the hypothesis that teen mothers with more supportive social networks have greater confidence in their parenting abilities.

The next two hierarchical regressions used the same analytical strategy as above, but with depression as the mediating variable. The third analysis found that with support satisfaction as the predictor, depression fully mediated the association between social support and coercive parenting (see Table 4). The standardized beta weight was reduced from .149 without the mediator to .098 with the mediator in the equation, and the beta weight for support satisfaction was not significant with depression entered in the previous step. The fourth hierarchical regression involved Intimacy as the predictor. In this instance, depression partially mediated the association between Intimacy and coercive rearing practices. The standardized beta weight was reduced from .123 without the mediator to .105 with the mediator in the equation, and the Sobel test value of 1.52 was marginally significant, $p = .064$. Thus, the hypothesis that depression mediates the association between social support and coercive rearing was fully supported, and the hypothesis that depression mediated the association between Intimacy and coercive rearing was partially supported.

Table 3

Hierarchical Regression to Test Self-Efficacy as a Mediator of the Relation between Social Support and Democratic Control

step & predictor	β	ΔR^2	β	ΔR^2
1. Partner	.128*	.016*	.128*	.016*
2. Self-efficacy	.152**	.023**	.152**	.023**
3. Support satisfaction	.122*	.014*		
Intimacy			.108*	.012*

Table 4

Hierarchical Regression to Test Depression as a Mediator of the Relation between Social Support and Democratic Control

step & predictor	β	ΔR^2	β	ΔR^2
1. Partner	.128*	.016*	.128*	.016*
2. Depression	.219**	.046**	.219**	.046**
3. Support satisfaction	.098	.009		
Intimacy			.10	

DISCUSSION

The current study adds to a minimal body of literature that addresses protective mechanisms for teen mothers. In support of the hypotheses, the study demonstrates that support networks may serve as a mechanism for resilience by potentially enhancing teen mothers' self-efficacy and reducing their risk of depression. This is consistent with Belsky's (1984) process model of parenting, which identifies self-efficacy and systems of support as two mechanisms that are important for successful parenting. It is also consistent with the majority of depression literature, which finds that depressive symptoms in teen mothers can compromise child-rearing practices (Carter et al.; Middleton et al., 2009).

Teen Mothers' Support Networks

The current study is one of few in the literature to collect comprehensive data about adolescent mothers' social networks. Previous studies have found that that teen mothers' support networks are primarily informal, consisting of family and friends (McDermott & Graham, 2005), and that teen mothers prefer informal supports over sources of formal support such as mental health or health care providers (Logan & King, 2001). The current study adds to the limited body of literature on who is in teen mothers' support networks. Teen mothers primarily relied on informal supports, especially close family members: their own mother, son/daughter, sister or brother, father, and their boyfriend/fiancé/partner. Friends were less often included in teen mothers' inner circle, and very few identified formal systems (e.g., teachers and mental health professionals) as a source of support.

The current study is consistent with prior studies that indicate that a teen mother's own mother is the primary source of social support for teen parents, and when co-residing, can improve teen mothers' adjustment to parenting (Oberlander et al., 2009). In the present study,

60% of teen mothers stated that they lived with their mother, and 87% listed their own mother within the inner circle of their support network. This indicates that they largely relied on their own parent for emotional and instrumental support.

Prior studies have primarily focused on the relationship a teen mother has with her own mother, and indicated that when this relationship is supportive, the mother of the teen mother can be a significant support by providing reassurance, child care, and other forms of support (Oberlander et al., 2009). However, when teen mothers have less supportive relationships with their mother, this can compromise her sense of autonomy and competence in effective child rearing (Culp et al., 2006). Less supportive relationships often are associated with increased mother-daughter conflict, a decreased sense of independence (personally and economically), diminished self-efficacy (Brooks-Gunn, 1990; Brooks-Gunn & Chase-Lansdale, 1995; Unger & Cooley, 1992), and acting as their grandchild's parent (Culp et al., 2006). These dynamics have implications for interventions with teen mothers, including the importance of providing education about the nature of support that family members can provide for the teen mother, which will be discussed in more detail below.

Prior research has also indicated that support with child care is a critical support for teen mothers so that they may be able to achieve an education, provide economically, and have moments of relief when the stress of child-rearing becomes too much (Mollborn, 2007). In the current study, 26% of teen mothers identified individuals who consistently helped with child care, and it is unknown if the other 74% did not need child care, or if their current childcare was not consistent. However, 49% indicated they wished they had more help with childcare. This indicates that although some of teen mothers are receiving adequate childcare, others may not, and receiving it may bolster future outcomes for mother and child.

Belsky (1984) argued that for on-time parents, the marital partner is the primary support in terms of effects on a mother's parental functioning. However, this is often not the case for teen mothers. Florsheim and Smith (2005) found that the majority of teen mothers do not reside with their partner; the majority of teen mothers remain unmarried after their child is born (Boonstra, 2002). In the present sample, 10% of mothers lived with their spouse. Although living with a partner was a protective factor in this study, some research indicates that there are attendant risks as well. For instance, marital conflict – regardless of the age of the mother – has been linked to maternal depression and poor socio-economic outcomes in children (Downey & Coyne, 1990). Marital functioning for adolescent parents has also been linked to efficacy in child rearing, as Florsheim and Smith found that couples who reported positive relations prenatally later used more positive parenting practices. A more nuanced understanding of teen mothers' relationship dynamics, and their relation to parental practices, would have been obtained by including measures of their marital satisfaction and conflict. Such measures would help to illuminate whether being married acts as a support for teen mothers or creates additional stress.

The current study also replicated previous research in that the size of the support network mattered little to either the quality of the support received (Unger & Powell, 1980) or to parenting processes such as self-efficacy and rearing practices (MacPhee et al., 1996). For example, teen mothers' support satisfaction was independent of the number of people in their network, and teen mothers who had a more interconnected support network, where more people within the network know each other, had higher levels of self-efficacy. This suggests that the more a teen mothers' support network knows one another, the more they may be able to be consistent in ways of supporting self-efficacy. The results are also consistent with Abernethy's

(1973) finding that the more tightly knit a social support network is, the greater parents' self-efficacy.

Social Support and Teen Mothers' Psychological Resources

Self-efficacy. Self-efficacy theory suggests that support networks influence people's sense of self-efficacy in a number of ways, including performance attainments, observation of the performance, verbal persuasion, and the ability to judge one's capacity to complete a task (Bandura, 1982, 1986). Applied to parenting, teen mothers who receive from their support network more positive regard and accurate information about child rearing would be expected to feel more competent in the parental role. In fact self-efficacy was positively correlated with measures of intimacy and support satisfaction. When adolescent mothers felt that their emotional and material needs were being met, and when they had more frequent contact with and felt closer to network members, they felt more confident about themselves as persons and as mothers. Based on theories of self, particularly the looking glass self (Cooley, 1902; Harter et al., 1996), one might conclude that the direction of effect is from supportive networks to self-appraisals. However, attachment theorists have argued that securely attached individuals are high in self-esteem and also are more skilled at recruiting support (Yates, Egeland, & Sroufe, 2003), which suggests that positive self-appraisals may enhance effective support, especially in times of stress. A longitudinal or experimental study would be required to test these competing interpretations.

The more positive regard teen mothers believe their support network has for them, the more likely they are to have a high sense of self-efficacy (Klaw et al., 2003). In the current study, 42% of teen mothers reported feeling respected by their support networks, and approximately half reported being satisfied with their support network. This indicates that

greater satisfaction with support networks may result in a greater sense of self-efficacy for teen mothers. Support figures may influence teen mothers' perceptions of themselves as a competent parent, which in turn is a key contributor to nurturing child-rearing practices (MacPhee et al., 1996).

Depression. Little research is available on the effects support networks have on maternal depression in teen mothers. Belsky's (1984) process model of parenting points to parent well-being as a critical component of effective parenting, and social support as an important contributor to parent mental health. Results from the present study support this proposition in part: Depression was significantly negatively correlated with measures of intimacy and support satisfaction. In contrast, the overall percentage of the network providing various functions was not related to depression. This result is surprising given that emotional support in the form of people to whom the mother can talk when anxious and who provide reassurance would be expected to ameliorate depression (Unger & Wandersman, 1988). Post hoc analyses did show one support function to be related to depression: the percentage of the network that provided respect, $r = -.22, p < .01$. As a whole, these findings indicate that when a teen mother is provided with support that meets her needs, especially respect, she may feel more validated, has more opportunities to talk about the stresses associated with being a teen parent, and can gain support and normalization that postpartum depression is common following the birth of a child (Logsdon, 2008).

Future orientation. The hypothesis that teen mothers with more supportive social networks have a more optimistic future orientation was not supported. Although previous studies suggest that future orientation, or the perception of who one will become, is largely shaped by one's support network (Harter et al., 1996), the current study found no significant

correlations between future orientation, measures of social support, and coercive rearing practices. One likely explanation for these null findings is the poor reliability of the measure utilized in the study. Research strongly supports the importance of future orientation in the development of adolescents' identity (Harter et al., 1996), and the role it plays in teen mothers' development of their identity as a mother (Klaw, 2008). A better measure of future orientation is needed in order to examine the relationship between future orientation, support networks, and outcomes for teen mothers and their children.

Psychological Resources and Coercive Rearing Practices

Based on Bandura's (1982, 1986) self-efficacy theory, parents who are more supported should develop the motivation and perceived competency that they can parent effectively. As well, people with a history of success on an important task are more likely to feel capable on similar tasks (Bandura, 1986; Harter, 1999), especially if they receive direct feedback on their performance (Bandura, 1986) as may happen with teen mothers who are monitored by adults in their social network. Thus, in the present study, self-efficacy was expected to be related to nurturant rearing practices. Consistent with this postulate, adolescent mothers who were more confident were less reliant on punishment, threats, and power assertion with their children. These results are similar to one previous study with teen mothers in that young mothers with high self-efficacy tended to perceive their child-rearing practices, such as providing nurturance, discipline, and consistency, as correct or effective (Teti et al., 1999).

As hypothesized, self-efficacy partially mediated the relation between social support and democratically controlled rearing practices, indicating that other factors might be involved as mediators. Such factors are potentially depression and stress, given that depression fully mediated the support-democratic control relation. Further, negative parent affect strongly

influences selection of punishment (Bugental, 1992; Dix, Ruble, & Zambarano, 1989), suggesting that “cold” cognitions such as self-efficacy may have a more indirect influence than depression. Even so, the majority of research emphasizes that self-efficacy bolsters a parent’s sense of competence and assurance that they can complete the tasks necessary to be a good parent (Teti et al., 1999).

Teen mothers are at an increased risk for developing depression due to factors of economic and educational challenges, and the unexpected role of being a mother (Birkeland et al., 2005; Garber et al., 2002). In turn, depressive symptoms due to increased stress can affect the relationship a teen mother has with her support network and child (Clemmens, 2003). In the current study, adolescent mothers who reported more symptoms of depression also were much less likely to exhibit democratic control in their rearing practices, and were more likely to employ punitive, coercive rearing practices with their young child. Furthermore, regression analysis found that depression fully mediated the association between social support and democratic control in child rearing. This indicates that when a teen mother is depressed, dependable emotional support may matter little in affecting coercive rearing practices. The parent’s affect is a proximal process (Bronfenbrenner & Morris, 2007) that likely has a more immediate influence on child rearing than distal effects such as the support system. In addition, both longitudinal and experimental studies find that parent affect, especially anger (Dix et al., 1989) and depression (Callender, Olson, Choe, & Sameroff, 2012), is strongly related to preference for punishment. Thus, emotional support may reduce the risk of mental health problems in high-risk teen mothers, but such support does not appear to buffer the effects of emotional dysregulation on coercive rearing.

These results highlight the importance of teen mothers having a supportive network prior to the transition to motherhood. For average-age mothers, a supportive spouse/partner can buffer the symptoms and effects of postpartum depression; however, anxiety about the relationship predicts increased chances of depressive symptoms (Feeney, Alexander, Noller & Hohaus, 2003). Without support, a parent who is depressed or who has difficulty regulating emotions such as anger is more likely to be authoritarian (Bugental, 1992; Bugental & Johnston, 2000).

Prior research has found that teen mothers often do not receive mental health treatment when exhibiting depressive symptoms. This limited utilization of needed services may be due to lack of referrals, not having sufficient knowledge of the mental health treatment, or the stigma that may be associated if those in their support network knew they were having treatment (Komiya et al., 2000; Logan & King, 2001). In the current study, only three individuals identified their therapist as a source of support. However, 8.4% of the sample ($n = 29$) had a CES-D score of 3 or greater, where 3 indicates symptoms of depression that are present “most of the time.” In addition, on a survey of participants’ service needs, 39 indicated that they needed psychological counseling and 32 said they received it. This may indicate that although teen mothers’ needs of mental health treatment are being met, they do not consider this as a part of their support network. Thus, the prevalence of depressive symptoms in this sample of teen mothers is similar to what has been found in prior epidemiological studies (Cantilino, Barbosa, & Petribu, 2007; Miller, 1998), and most of the teen mothers did receive the mental health services that they needed. The fact that few counselors were included in their support networks may indicate that teen mothers were not joining with their counselors and felt they may be judged or not understood (Komiya et al., 2002).

Implications

The present study has important implications for interventions for teen mothers. Several studies have found that teen mothers rely frequently on their informal support networks for emotional and instrumental needs (Logan & King, 2001; Logsdon et al., 2009). Teen mothers' usage and access to formal supports and interventions is identified as minimal (Logsdon et al., 2009; Molborn, 2007); thus, building collaborative relationships between formal and informal support networks may be needed for teen mothers. Also, addressing mental health needs and how support networks can reduce teen mothers' propensity towards depression, and thus coercive child-rearing practices, is also an area needing to be addressed. These recommendations were put into practice in a model prevention program, the Nurse Home Visitation Program (Olds, Henderson, Tatelbaum & Chamberlain, 1986).

In the Nurse Home Visitation Program, 400 pregnant low-income, unmarried, and/or teenage women were randomly assigned nurses to come into the home from pregnancy through the second year of the child's life. This intervention found that when compared to the control group, 19% of the unmarried teen mothers abused or neglected their children, but only 4% of mothers in the nurse visitation group had done so (Olds et al., 1986). This study serves as an intervention model for teen mothers that involves providing in-home support for adolescent mothers and their support networks, notably immediate family members who often are involved in caring for the teen mother's infant as well as monitoring and supporting the adolescent mother. Because teen mothers most frequently reside with members of their support network other than their spouse (Florsheim & Smith, 2005), and support networks influence outcomes for teen mothers and their children (Culp et al., 2006; Oberlander et al., 2009), intervention may be most beneficial if it is provided to all individuals who are in the best position to provide

emotional and instrumental support to the young mother. Additional research has also shown that when teen mothers live with a parent, they tend to be less authoritarian and more responsible in their child rearing. This is most likely due to the monitoring that their parent provides (King & Fullard, 1982).

It has also been suggested that education for teen mothers can start as early as prenatally, involving education about depression and how to seek treatment in childbirth education classes (Logsdon et al., 2009). Another intervention that aimed to address the issue of depression for teen mothers was to deliver a telephone-based, depression care management intervention. Although those who participated improved over time, it was a challenge for teen mothers to actually utilize the intervention due to the complex life challenges they faced (Logsdon et al., 2009).

Limitations

In addition to issues related to the measure of future orientation, another limitation of this study is its somewhat limited generalizability. One selection criterion for the current study is that all teen mothers had to be eligible for TANF, which required them to be low income. Thus, the results primarily apply to mothers with minimal self-sufficiency. Teen mothers with economic resources may have different outcomes and access to other resources. However, research has indicated that a majority of teen mothers are low income and eligible for welfare (Boden et al., 2008). Therefore, it is more likely that the participants in the present study are representative of teen mothers from an economic standpoint. Additionally, although the present sample was a diverse sample, some participants were from rural communities. In rural communities, access to formal supports such as mental health centers and hospitals is more challenging due to fewer financial resources and to distances between the teen mom and

resources, especially when transportation is not readily accessible (Roberts, Battaglia, & Epstein, 1999). Thus, access to resources may not be equivalent across communities.

There also are several limitations related to the reliance on self-reports. Although most of the measures were psychometrically sound, teen mothers may have been hesitant to be entirely honest when filling out the surveys if they thought they would be labeled a poor parent or judged for having limited support networks. Several studies have documented the stigma associated with being a teen mother (Brubaker & Wright, 2006; Yardley, 2008); therefore, it was necessary to take steps to ensure that teen mothers felt as little judgment possible. However, this is always a risk when administering self-report surveys.

It is also important to consider the cultural associations with timing of becoming a parent and how that culture views adolescent parents. In the present sample, 43% of the mothers self-identified as Native Americans, where rates of teen births are almost double that of nonHispanic and White cultures (Hamilton, Martin & Ventura, 2009). Researchers have identified this as being seen as a social problem among Native Americans (Kaufman et al., 2007). Lack of education and access to resources is largely associated with the lack of culturally competent and evaluated teen pregnancy prevention programs for Native Americans (Garwick, Rhodes, Peterson-Hickey & Hellerstedt, 2008). Little research has been done on cultural differences associated with teen motherhood, particularly for Native Americans, and is important to address when studying diverse samples.

Another limitation has to do testing mediation when measures are administered at the same time point. Researchers have noted bias when testing regression models, mainly because of multiple associations with other variables and the inability to control for baseline variables that may alter over time (Cole & Maxwell, 2003; Maxwell & Cole, 2007; West, 2011). In this

case, it would be difficult to know whether a mother is depressed because she is not getting support, or she is not getting support because she is depressed and does not know how to reach out to potential sources of support (Gayman, Turner, Cislo, & Eliassen, 2011). These competing models of causality could be resolved by conducting an intervention where mothers are treated for depression, and/or an intervention is given to mothers' support networks to increase the availability and goodness of fit of that support, as was done in the Nurse Home Visitation Program (Olds et al., 1986). Longitudinal follow-ups of such interventions would be able to determine whether alterations in social support and/or depression would promote more effective child rearing and, in turn, contribute to more positive child outcomes (for an example, see Callender et al., 2012).

However, the current study had much strength that contributes to the applicability of the results. First, the sample size was quite large and as well was representative of the population being studied (i.e., low-income teen mothers). Second, the majority of measures used in this study had sound reliability and validity, and were easily understood by participants. Because of the length of the survey, much information was able to be captured in a short period of time, and because teen mothers had an incentive to complete the survey accurately and fully (i.e., a monetary incentive and access to services and formal supports), their propensity to report accurately was strengthened.

The current study adds to a needed body of literature regarding teen mothers' support networks and mechanisms of resilience needed to promote positive outcomes for teen mothers and their children. Support networks can provide teen mothers with affirmation that helps them to develop their self-identity (Harter, 1999) and competence so they may be able to cope with the stressors of being a parent and developing as an adolescent. Social support also bolsters

psychological well-being, which is critical to competent child rearing (Belsky, 1984). My study, as well as interventions that target important proximal processes such as depression and self-efficacy, provides insights as to how the field might incorporate protective factors into programs for high-risk mothers. Although this study does have limitations, the results are consistent with theory and previous research, suggesting that social support's relation to child-rearing practices may be mediated by psychological resources. With this, it is necessary that research be continued to better understand support mechanisms for teen mothers, and be applied to interventions which support not only the teen mother herself, but her entire support network.

REFERENCES

- Abernethy, V. (1973). Social network and response to the maternal role. *International Journal of Sociology in the Family*, 3, 86-92.
- Antonucci, T. C. (1986). Social support networks: a hierarchical mapping technique. *Generations*, 10(2), 10-12.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215. doi: 10.1037/0033-295X.84.2.191
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147. doi: 10.1037/0003-066X.37.2.122
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182. doi: 10.1037/0022-3514.51.6.1173
- Belsky, J. (1984). The determinants of parenting: a process model. *Child Development*, 55, 83-96. doi: 10.1111/1467-8624.ep7405453
- Beers, L. S., & Hollo, R. (2009). Approaching the adolescent headed family: a review of teen parenting. *Current Problems in Pediatric Adolescent Health Care*, 39, 219-233. doi: 10.1016/j.cppeds.2009.09.001
- Benson, M. (2004). After the adolescent pregnancy: parents, teens and families. *Child and Adolescent Social Work Journal*, 21, 435-455. doi: 10.1023/B:CASW.0000043358.16174.c6
- Birkeland, J., Thompson, J. K., & Phares, V. (2005). Adolescent motherhood and postpartum depression. *Journal of Clinical Child and Adolescent Psychology*, 34(2), 292-300. doi: 10.1207/s15374424jccp3402_8
- Boden, J., Fergusson, D., & Horwood, J. (2008). Early motherhood and subsequent life outcomes. *Journal of Child Psychology and Psychiatry*, 49, 151-160. doi: 10.1111/j.1469-7610.2007.01830.X
- Boonstra, H. (2002, February). Teen Pregnancy: Trends And Lessons Learned [Special Analysis Report]. *The Guttmacher Report on Public Policy*, pp.7-10.
- Breen, A., & McLean, K., Eds. (2010). Constructing resilience: adolescent motherhood and the process of self-transformation. In McLean, K. C., & Pasupathi, M. (Eds), *Narrative development in adolescence* (pp. 151-168). New York: Springer.

- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon (Series Ed.) & R. M. Lerner, R. M. (Vol. Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (pp. 993-1029). New York: Wiley.
- Brooks-Gunn, J. (1990). Promoting healthy development in young children: What educational interventions work? In D. E. Rogers, & E. Ginzberg (Eds), *Improving the life chances of children at risk* (pp. 125-145). Boulder, Co: Westview Press.
- Brooks-Gunn, J., & Chase-Lansdale, P. L. (1995). Adolescent parenthood. In M. H. Bornstein (Ed.), *Handbook of parenting, vol 3* (pp. 113 – 149). Mahwah, NJ: Lawrence Erlbaum Associates.
- Brubaker, S. J., & Wright, C. (2006). Identity transformation and family care giving: narratives of African American teen mothers. *Journal of Marriage and Family*, *68*, 1214-1228.
- Bugental, D. B. (1992). Affective and cognitive processes within threat-oriented family systems. In I. E. Sigel, A. V. McGillicuddy-DeLisi, & J. J. Goodnow (Eds.), *Parental belief systems* (2nd ed.) (pp. 219-248). Hillsdale, NJ: Erlbaum.
- Bugental, D. B., & Johnston, C. (2000). Parental and child cognitions in the context of the family. *Annual Review of Psychology*, *51*, 315-344. doi: 10.1146/annurev.psych.51.1.315
- Callender, K. A., Olson, S. L., Choe, D. E., & Sameroff, A. J. (2012). The effects of parental depressive symptoms, appraisals, and physical punishment on later child externalizing behavior. *Journal of Abnormal Child Psychology*, *40*, 471-483.
- Campbell, S., Matestic, P., Stauffenberg, C., Mohan, R., & Kirchner, T. (2007). Trajectories of maternal depressive symptoms, maternal sensitivity, and children's functioning at school entry. *Developmental Psychology*, *43*, 1201-1215. doi: 10.1037/0012-1649.43.5.1202
- Cantilino, A., Barbosa, E. M., Petribu, K. (2007). Postpartum depression in adolescents in Brazil: an issue of concern. *Archives of Women's Mental Health*, *10*(6), 1434-1816. doi: 10.1007/s00737-007-0206-8
- Carroll, A., Houghton, S., Wood, R., Perkins, C. & Bower, J. (2007). Multidimensional self-concept: age and gender differences in Australian high school students involved in delinquent activities. *School Psychology International*, *28*, 237-256. doi: 10.1177/0143034307078106
- Carter, A. S., Garrity-Rokous, F. E., Chazen-Cohen, R., Little, C., & Briggs-Gowan, M. J. (2001). Maternal depression and comorbidity: Predicting early parenting, attachment security, and toddler social-emotional problems and competencies. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*, 18-26. doi: 10.1097/00004583-200101000-00012

- Clemmens, D. (2003). Adolescent motherhood: a meta-synthesis of qualitative studies. *MCN The American Journal of Maternal Child Nursing*, 28, 93-99. doi: 10.1111/j.1365-2648.2005.03380.X
- Cole, D. A., & Maxwell, S. E. (2003). Testing meditational models with longitudinal data: questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, 112, 558-577. doi: 10.1037/0021-843X.112.4.558
- Coleman, L. P., & Karraker, K. H., (1998). Self-efficacy and parenting quality: findings and future applications. *Developmental Review*, 18, 47-85.
- Coley, R. L., & Chase-Lansdale, P. L. (1998). Adolescent pregnancy and parenthood: recent evidence and future directions. *American Psychologist*, 53, 152-166. doi: 10.1037/0003-066X.53.2.152
- Cooley, C. H. (1902). *Human nature and the social order*. New York: Scribner's.
- Cowan, P. A., Cowan, C. P., & Schulz. (1996). Thinking about risk and resilience in families. In E. M. Herington & E. A. Blechman (Eds) *Stress, coping and resiliency in children and families* (pp. 1-38). Hillsdale, NJ: Erlbaum.
- Coyne, J. C., Downey, G., & Boergers, J. (1996). Depression in families: A systems perspective. In D. Cicchetti, et al. (Eds.), *Developmental perspectives on depression* (pp. 211-249). Rochester, NY: University of Rochester
- Culp, A., Culp, R., Noland, D., & Anderson, J. (2006). Stress, marital satisfaction and child care provisions by mothers of adolescent mothers: considerations to make when providing services. *Children and Youth Services Review*, 28, 673-81. doi: 10.1016/j.childyouth.2005.06.009
- Devins, G. M., & Orme, C. M. (1985). Center for Epidemiologic Studies Depression scale. In D. J. Keyser & R. C. Sweetland (Eds.), *Test critiques* (Vol. 2). Kansas City, MO: Westport.
- Dix, T. H., Ruble, D. N., & Zambarano, R. J. (1989). Mothers' implicit theories of discipline: Child effects, parent effects, and the attribution process. *Child Development*, 60, 1373-1391.
- Downey, G., & Coyne, J. C. (1990). Children of depressed parents: an integrative review. *Psychological Bulletin*, 108, 50-76. doi: 10.1037/0033-2909.108.1.50
- Ensor, R., & Hughes, C. (2010). With a little help from my friends: maternal social support, via parenting, promotes willingness to share in preschoolers born to young mothers. *Infant and Child Development*, 19, 127-141. doi: 10.1002/icd.643
- Feeney, J., Alexander, R., Noller, P., & Hohaus, L. (2003). Attachment insecurity, depression, and the transition to parenthood. *Personal Relationships*, 10, 475-493. doi: 1350-4126/02

- Ferguson, D. M., & Woolard, L. J. (1999). Maternal age and educational and psychosocial outcomes in early adulthood. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *40*, 479-489. doi: 10.1111/1469-7610.00464
- Florsheim, P., Smith, A. (2005). Expectant adolescent couples' relations and subsequent parenting behavior. *Infant Mental Health Journal*, *26*, 533-548. doi: 10.1002/imhj.20076
- French, J., Rodgers, W., & Cobb, (1974). Adjustment in person-environment fit. In G. Cochlo, D. Hamberg, & J. Adams (Eds.), *Coping and adaptation* (pp. 316-333). New York: Basic.
- Garber, J., Keiley, M. K., & Martin, N. C. (2002). Developmental trajectories of adolescents' depressive symptoms: predictors of change. *Journal of Consulting and Clinical Psychology*, *70*, 79-95. doi: 10.1037/0022-006X.70.1.79
- Garwick, A. W., Rhodes, K. L., Peterson-Hickey, M., & Hellerstedt, W. L. 2008. Native teen voices: adolescent pregnancy prevention recommendations. *Journal of Adolescent Mental Health*, *42*, 81-88. Doi: 10.1016/j.jadohealth.2007.08.004
- Gayman, M. D., Turner, J. R., Cislo, A. M., & Eliassen, A. H. (2011). Early adolescent family experiences and perceived social support in young adulthood. *The Journal of Early Adolescence*, *31*, 880-908. doi: 10.1177/0272431610376247
- Gerard, A. B. (1994). *The Parent-Child Relationship Inventory: Manual*. Los Angeles, CA: Western Psychological Services.
- Gjesfjeld, C. D., Greeno, C. G., Kim, K. H., & Anderson, C. M. (2010). Economic stress, social support and maternal depression: is social support deterioration occurring? *Social Work Research*, *34*, 135-143. doi: 10.1093/swr/34.3.135
- Goodman, S. H. & Gotlib, I. H. (1999). Risk for psychopathology in children of depressed mothers: a developmental model for understanding mechanisms of transmission. *Psychological Review*, *106*, 458-490. doi: 10.1037/0033-295X.106.3.458
- Hamilton, B. E., Martin, J. A., & Ventura, S. J. (2009). Births: preliminary data for 2007. *National Vital Statistics Reports*, *57*, 1-23.
- Hammond-Ratzlaff, A., & Fulton, A. (2001). Knowledge gained by mothers enrolled in a home visitation program. *Adolescence*, *36*, 435-446.
- Harter, S. (1999). *The construction of the self: A developmental perspective*. New York: Guilford.

- Harter, E., Stocker, C., & Robinson, N. (1996). The perceived directionality of the link between approval and self-worth: the liabilities of a looking glass self-orientation among young adolescents. *Journal of Research on Adolescence, 6*, 285-308.
- Hopkins, J., Marcus, M., & Campbell, S. B. (1984). Postpartum depression: a critical review. *Psychological Bulletin, 95*, 498-515. doi: 1984-23239-001
- Kaufman, C. E., Desserich, J., Big Cross, C. K., Holy Rock, B., Keane, E., & Mitchel, C. M. (2007). Culture, context, and sexual risk among northern plains American Indian youth. *Social Science and Medicine, 64*, 2152-2164. doi: 10.1016/j.socscimed.2007.02.003
- King, T., & Fullard, W. (1982). Teenage mothers and their infants: new findings on the home environment. *Journal of Adolescence, 5*, 333-346. doi: 10.1016/S0140-1971(82)80003-1
- Klaw, E. (2008). Understanding urban adolescent mothers' visions of the future in terms of possible selves. *Journal of Human Behavior in the Social Environment, 18*, 441. doi: 10.1080/10911350802486767
- Klaw, E. L., Rhodes, J. E., & Fitzgerald, L. F. (2003). Natural mentors in the lives of African American adolescent mothers: tracking relationships over time. *Journal of Youth and Adolescence, 32*, 223-232. doi: 10-0047-2891/03/0600-223/0
- Koehn, M. L. (2002). Childbirth education outcomes: an integrative review of the literature. *The Journal of Perinatal Education, 11*, 10-19. doi: 10.1624/105812402X88795
- Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college student's attitudes toward seeking psychological help. *Journal of Counseling Psychology, 47*, 138-143. doi: 10.1037/AJ022-0167.47.1.138
- Kramer, K. L., & Lancaster, J. B. (2010). Teen motherhood in a cross-cultural perspective. *Annals of Human Biology, 37*, 613-628. doi: 10.3109/03014460903563434
- Levitt, M. J., Guacci-Franco, N., & Levitt, J. L. (1993). Convoys of social support in childhood and early adolescence: Structure and function. *Developmental Psychology, 29*, 811-818. doi: 10.1037/0012-1649.29.5.811
- Levitt, M. J., Weber, R. A., & Clark, M. C. (1986). Social network relationships as sources of maternal support and well-being. *Developmental Psychology, 22*, 310-316. doi: 10.1037/0012-1649.22.3.310
- Logan, D. E., & King, C. A. (2001). Help seeking among depressed adolescents: a review of the literature and directions for future research. *Clinical Psychologist Science and Practice, 8*, 319-333.
- Logsdon, M. C. (2008). Maternal role functioning in adolescents at 12 months postpartum. *Women's Health Care: A Practical Guide for Nurse Practitioners, 7*, 27-32.

- Logsdon, M. C., Hines-Martin, V., & Rakestraw, V. (2009). Barriers to depression treatment in low-income, unmarried, adolescent mothers in a southern, urban area of the United States. *Issues in Mental Health Nursing, 30*, 451-455. doi: 10.1080/01612840902722187
- Logsdon, M. C., Usui, W., Foltz, M. P., & Rakestraw, V. (2009). Intention to seek mental health treatment in adolescent mothers and a comparison group of adolescent girls. *Archives of Psychiatric Nursing, 23*, 129-142.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: a critical evaluation and guidelines for future work. *Child Development, 71*, 543-562.
- MacPhee, D., Benson, J., & Bullock, D. (1986, April). *Influences on maternal self-perceptions*. Paper presented at the biennial International Conference in Infant Studies, Los Angeles.
- MacPhee, D., Fritz, J., & Miller-Heyl, J. (1996). Ethnic variations in personal social networks and parenting. *Child Development, 67*, 3278-3295. doi: 10.1111/j.1467-8624.1996.tb01914.x
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist, 41*, 954-969.
- Masten, A. S., Best, K., & Garmezy, N. (1990). Resilience and development: contributions from the study of children who overcome adversity. *Development and Psychopathology, 2*, 425-444.
- Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: lessons from research on successful children. *American Psychologist, 53*, 205-220. doi: 10.1037/0003-066X.53.2.205
- Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods, 12*, 23-44. doi: 10.1037/1082-989.12.1.23
- McDermott, E. & Graham, H. (2005). Resilient young mothering: social inequalities, late modernity and the 'problem' of 'teenage' motherhood. *Journal of Youth Studies, 8*, 59-79. doi: 10.1080/13676260500063702
- McDonald, L., Conrad, T., Fairlough, A., Fletcher, J., Green, L., Moore, L., & Lepps, B. (2008). An evaluation of a group work intervention for teenage mothers and their families. *Child and Family Social Work, 14*, 45-57. doi: 10.1111/j.1365-2206.2008.00580.x
- Meeus, W. (2011). The study of adolescent identity formation, 2000-2010: a review of longitudinal research. *Journal of Research on Adolescence, 21*, 75-94. doi: 10.1111/j.1532-7795.2010.00716.x

- Middleton, M., Scott, S. L., & Renk, K. (2009). Parental depression, parenting behaviors, and behavior problems in young children. *Infant and Child Development, 18*, 323-336. doi: 10.1002/icd.598
- Milan, S., Ickovics, J., Kershaw, T., Lewis, J., Mead, C., & Ethier, K. (2004). Prevalence, course and predictors of emotional distress in pregnant and parenting adolescents. *Journal of Consulting and Clinical Psychology, 72*, 328-340. doi: 10.1037/0022-006x.72.2.328
- Miller, L. (1998). Depression among pregnant adolescents. *Psychiatric Services, 49*, 970- 971
- Miller-Heyl, J., MacPhee, D., & Fritz, J. (1998). DARE to be You: A family-support, early prevention program. *Journal of Primary Prevention, 18*, 257-285. doi: 10.1023/A:1024602927381
- Mitchell, R., & Trickett, E. (1980). Task force report: social networks as mediators of social support. *Community Mental Health Journal, 16*, 27-44.
- Moffitt, T., & the E-Risk Study Team. (2002). Teen-aged mothers in contemporary Britain. *Journal of Child Psychology and Psychiatry, 43*, 727-742.
- Mollborn, S. (2007). Making the best out of a bad situation: maternal resources and teenage parenthood. *Journal of Marriage and Family, 69*, 92-104. doi: 10.1111/j.1741-3737.2006.00347.x
- Moses-Kolko, E. L., & Roth, E. K. (2004). Antepartum and postpartum depression: healthy mom, healthy baby. *Journal of the American Medical Women's Association, 59*, 181-191.
- Oberlander, S. E., Shebl, F. M., Madger, L. S., & Black, M. M. (2009). Adolescent mothers leaving multigenerational households. *Journal of Clinical Child and Adolescent Psychology, 38*, 92-104. doi: 10.1080/15374410802575321
- Olds, D. L., Henderson, C. R., Tatelbaum, R., & Chamberlain, R. (1986). Preventing child abuse and neglect: A randomized trial of nurse home visitation. *Pediatrics, 78*, 65-78.
- Oyserman, D., & James, L. (2009). Possible selves: From content to process. In K. Markman, W. M. P. Klein, & J. A. Suhr (Eds.), *The handbook of imagination and mental stimulation* (pp. 373-394). NY: Psychology Press.
- Patterson, G. R. (2002). The early development of coercive family process. In J. B. Reid, G. R. Patterson, & J. Snyder (Eds.), *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention* (pp. 25-44). Washington, DC: American Psychological Association.
- Pearlin, L., Menaghan, E., Lieberman, M., & Mullan, J. (1981). The stress process. *Journal of Health and Social Behavior, 22*, 337-356. doi: 10.2307/2136676

- Perper, K., & Manlove, J. (2009). Estimated percentage of females who will become teen mothers: differences across states. *Child Trends Research Brief*, 9, 1-4.
- Powell, D. (1980). Personal social networks as a focus for primary prevention of child maltreatment. *Infant Mental Health Journal*, 1, 232-239. 10.1002/1097-0355(198024)1:4<232::AID-IMHJ2280010406>3.0.CO;2-F
- Radloff, L. S. (1977). The CES-D scale: a new self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.
- Roberts, L. W., Battaglia, J., & Epstein, R. S. (1999). Frontier ethics: mental health care needs and ethical dilemmas in rural communities. *Psychiatric Services*, 50, 497-503.
- Schwartz, S., Mason, C., Pantin, H., & Szapoczik, J. (2009). Longitudinal relationships between family functioning and identity development in Hispanic adolescents: Continuity and change. *Journal of Early Adolescence*, 29, 177-211. doi: 10.1177/0272431608317605
- Seginer, R. (2008). Future orientation in times of threat and challenge: how resilient adolescents construct their future. *International Journal of Behavioral Development*, 32, 272-282. doi: 10.1177/0165025408090970.
- Seybold, J., Fritz, J., & MacPhee, D. (1991). Social support and the perceptions of mothers with delayed children. *Journal of Community Psychology*, 19, 29-36.
- Shek, D. T., & Lai, K. Y. (2001). The Chinese version of the self-report family inventory: reliability and validity. *The American Journal of Family Therapy*, 29, 207-220. doi: 10.1080/019261801750424325
- Teti, D. M., O'Connell, M. A., & Reiner, C. D. (1999). Parental sensitivity, parental depression, and child health: the mediating role of parental self-efficacy. *Early Development and Parenting*, 5, 237-250. doi: 10.1002/(scl)1099-0917(199612)5:4<237
- Trad, P. V. (1995). Mental health of adolescent mothers. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 130-142. doi: 10.1097/00004583-199502000-00008
- Unger, D., & Cooley, M. (1992). Partner and grandmother contact in Black and White teen parent families. *Journal of Adolescent Health*, 13, 546-552. doi:10.1016/1054-139X
- Unger, D., & Powell, D. (1980). Supporting families under stress: the role of social networks. *Family Relations*, 29, 566-574.
- Unger, D., & Wandersman, L. (1988). The relationship of family and partner support to the adjustment of adolescent mothers. *Child Development*, 59, 1056-1060.

- Walker, A. K., & MacPhee, D. (2011). How home gets to school: parental support and control strategies predict children's school readiness. *Early Childhood Research Quarterly, 26*, 355-364. doi: 10.1016/j.ecresq.2011.02.001
- Wasonga, T. (2002). Gender effects on perceptions of external assets, development of resilience and academic achievement: perpetuation theory approach. *Gender Issues, 20*, 43-54. doi: 10.1007/s12147-002-0022-4
- Werner, E., & Smith, R. (1992). *Overcoming the odds: High risk children from birth to adulthood*. Ithica, NY: Cornell University Press.
- West, S. (2011). Editorial: Introduction to the special section on causal inference in cross sectional and longitudinal meditational models. *Multivariate Behavioral Research, 46*, 812-815. doi: 10.1080/00273171.2011.606710
- WestEd. California Healthy Kids Survey. "Resilience Module Report." California USD. Spring 20
- Yardley, E. (2008). Teenage mothers' experiences of stigma. *Journal of Youth Studies, 11*, 671-684. doi: 10.1080/13676260802392940
- Yates, T. M., Egeland, B., & Sroufe, L. A. (2003). Rethinking resilience: A developmental process perspective. In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities* (pp. 243-266). New York: Cambridge University.