

Adolescent Motherhood and Postpartum Depression

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Adolescent mothers undergo unique personal and social challenges that may contribute to postpartum functioning. In this exploratory investigation completed within a risk and resilience framework, 149 adolescent mothers, ages 15 to 19, who participated in school-based teen parents' programs, completed measures of parental stress (social isolation and role restriction), maternal competence, weight/shape concerns, and depression. The sample was quite diverse, and no ethnic differences in base rate levels of the variables were detected. Regression analyses indicated that social isolation, maternal competence, and weight/shape concerns predicted unique variance associated with depression level. The findings are discussed in light of future work and the continued need to inform prevention and treatment programs for young mothers.

The transition to motherhood is a pivotal time of psychological, developmental, and biological change in a mother's life (Deutsch, Ruble, Fleming, Brooks-Gunn, & Stangor, 1988; Devine, Bove, & Olson, 2000; Jennings & Edmundson, 1980; Zabielski, 1994). New mothers often experience multiple stressors, including decreased financial resources, physical exhaustion, task overload, role restriction and confusion, social isolation, and depressive symptoms (Uno, Florsheim, & Uchino, 1998; Webster-Stratton, 1990). Studies have shown that one out of four adult women in the postpartum period experiences some form of emotional distress (Alexander & Higgins, 1993; Hopkins, Marcus, & Campbell, 1984; Pierce, Strauman, & Vandell, 1999).

This time period and its associated demands may be especially difficult for adolescent mothers. Adolescence is already highlighted by attempts to establish identity, to develop individuation, and to assert emotional autonomy from the family of origin while still remaining connected (Larson, Richards, Moneta, & Holmbeck, 1996; Steinberg & Silk, 2002). However, young mothers must also integrate their life roles (adolescent/teenager, daughter, student, partner) with their maternal role. In doing so, they face role conflict, restriction, and confusion. Developing confidence and a belief in one's ability to parent effectively is also a difficult and stressful task adolescent mothers encounter. The emotional distress associated with the adjustment to parenthood is amplified for these individuals, who may be less prepared to meet the financial responsibilities and the interpersonal challenges of parenting (e.g.,

Brooks-Gunn & Chase-Lansdale, 1995; Schinke, Barth, Gilchrist, & Maxwell, 1986).

From a theoretical perspective, there is no specific theory of postpartum depression in adolescent mothers. There are, however, indications of the how the processes of postpartum depression and adolescent motherhood overlap. From the literature on depressed adult women, it is understood that postpartum depression has multiple etiologies, including biological factors (e.g., gonadal and thyroid hormones), psychosocial factors (e.g., stress, relationship dissatisfaction, poor social support), and a history of depressive symptoms during pregnancy (Chrisler & Johnston-Robledo, 2002; DaCosta, Larouche, Dritsa, & Brender, 2000; Sichel, 2000). Similarly, most theorists also acknowledge that adolescent depression is due to a number of different etiological factors. For example, Hammen and Rudolph (2003) developed a multifactorial, transactional model of adolescent depression that takes into account biological and genetic features, family experiences, cognitive processes, interpersonal competence, and stress. Many psychosocial risk factors (such as stress, poor body image, and parent-adolescent conflict) have been implicated in the development of depression during adolescence (Hammen & Rudolph, 2003).

Overall, the research literature on postpartum depression in adults, depression in adolescents, and normative developmental processes all point to the need to investigate adolescent motherhood within a risk and resilience framework (Hetherington, 1997). This study examines interrelations among the following variables: weight/shape concerns, depressive symptoms, parenting stress (role restriction and social isolation), and maternal competency. Each of these areas is briefly reviewed in the following.

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Overview of Problem and Depression in Adolescent Mothers

Approximately 1 million adolescents become pregnant each year (Oyserman, Radin, & Saltz, 1994; Pianta, Lopez-Hernandez, & Ferguson, 1997). Estimates also indicate that 19% of Caucasian women and 40% of African American women will become pregnant by the age of 18 (Furstenberg, Brooks-Gunn, & Chase-Lansdale, 1989). Of note, approximately 500,000 babies are born to adolescent mothers each year (Pianta et al., 1997). These figures place the United States at one of the highest rates of pregnancy and births for adolescent mothers among industrialized countries (Singh & Darroch, 2000).

Studies of young mothers indicate that they commonly experience depression. Several surveys have found rates of depressive symptoms to range from 28% to 67% (Colleta, 1983; Deal & Holt, 1998; Reis, 1988). Troutman and Cutrona (1990) found that 6% of adolescent mothers included in their study met criteria for major depression. Depression may even be more common among young mothers than older mothers (Deal & Holt, 1998; Reis, 1989). Deal and Holt found that adolescent mothers were twice as likely as adult mothers to be depressed. Depressed adolescent mothers are also at greater risk for depression in adulthood (Brown, Adams, & Kellen, 1981; Deal & Holt, 1998; Horwitz, Bruce, Hoff, Harley, & Jekel, 1996).

Weight and Appearance Issues

Research has shown that, on average, approximately 2.2 pounds are retained after each pregnancy (Harris, Ellison, & Clement, 1999; Institute of Medicine, 1990; Lederman, 1993; Williamson et al., 1994). However, 10% to 30% of new mothers experience weight retention of 10 pounds or more (Harris & Ellison, 1997; Harris et al., 1999; Schauburger, Rooney, & Brimer, 1992). In fact, the National Task Force on Prevention and Treatment of Obesity (1994) has declared childbearing a critical period for major weight gain. The postpartum period is also a vulnerable time for weight/shape concerns (Carter, Baker, & Brownell, 2000; Gruis, 1977; Walker, 1999). Hiser (1987) found that 75% of recent adult mothers were concerned about their weight, and Walker (1998) found that 50% had feelings of mild dissatisfaction to distress about their weight. Harris et al. found that 51% of new adult mothers surveyed had actively tried to lose weight after childbirth, whereas Baker, Carter, Cohen, and Brownell (1999) noted that 70% were trying to lose weight at 4 months postpartum.

Unfortunately, the findings linking body image and weight concerns to the postpartum period are limited to

examinations of adult mothers; to date, no study has evaluated adolescent mothers. Importantly, body image dissatisfaction and eating problems might be expected to exist for young mothers. The period from puberty through late adolescence is a critical time for the formation of body image, and a wealth of research findings suggest that approximately 40% to 60% of young girls express dissatisfaction with some aspect of their appearance (Thompson & Smolak, 2001). Peer, parental, and media influences converge during this time period to create a critical time for appearance self-evaluation (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Thompson & Stice, 2001).

Maternal Competency

Maternal competency plays a central role in a mother's adaptation to motherhood (Gross, Conrad, Fogg, & Wothke, 1994; Pond & Kemp, 1992). Competency is similar to self-efficacy in that it pertains to one's confidence or belief that she can perform certain behaviors effectively (Bandura, 1989). Adult mothers consistently rate that it is difficult to achieve confidence in parenting (Kline, Martin, & Deyo, 1998). Low competency may even be a greater concern for adolescent mothers. Young mothers often report being criticized about their parenting skills and receiving unwanted advice on how to raise their children (Pasley, Langfield, & Kreutzer, 1993; Schinke et al., 1986).

Social Support

Research suggests that young mothers encounter significantly more challenges but have fewer resources and less social support than adult mothers (Passino et al., 1993). Lack of social support may exacerbate other problems typically encountered by adolescent mothers such as role conflict and restriction, attenuated educational achievement, underemployment, school changes, unstable relationships with the child's father, difficulties due to dependence on their families, and physical health problems for themselves and their babies (Gee & Rhodes, 2003; Miller, Miceli, Whitman, & Borkowski, 1996; Pasley et al., 1993; Wiemann, Berenson, Wagner, & Landwehr, 1996). Low social support, parenting stress, depression, and inadequate coping responses may lead to abusive parenting practices (Kurtz & Derevensky, 1994; Reis, 1989). Children of young mothers are at greater risk for maltreatment than children of adult mothers (Dukewich, Borkowski, & Whitman, 1996; Klerman, 1993). Research has shown that 36% to 51% of all abused children are raised by young mothers (Bolton, 1990). Bolton asserted that stressors such as social isolation,

poor understanding of child development, and poverty may provide the foundation for the development of abusive parenting behaviors.

Summary

A review of the literature related to the postpartum period proposes a number of important areas of interest: body image and weight issues, depressive symptoms, maternal competency, and social isolation and restriction. These areas of interest appear to be interrelated; however, there have been no studies conducted to date that have investigated the relations among these variables in adolescent mothers. Moreover, the limited studies that have been conducted using these variables typically have considerable methodological flaws and weaknesses. For example, most studies investigating adolescent mothers have small sample sizes and do not include power analyses to ensure the adequacy of the sample size for the specific analyses conducted. In particular, the relations among depression, body image dissatisfaction, and eating disturbance are of paramount interest given the findings of a strong connection among these variables for adolescent girls who have not yet had children. Given the intense pressure on young girls to approximate the thin ideal promulgated by the media, parents, and peers (e.g., Thompson & Stice, 2001), in all likelihood the postpartum period is one associated with internalized pressures to recapture the prepartum appearance in a timely fashion. Evaluating variables highly pertinent to this age group (weight concerns and body dissatisfaction), along with indexes traditionally investigated in the prediction of depression (maternal competency, social isolation) may yield important findings with clinical and preventive implications.

Method

Participants

Participants were 194 adolescent mothers, ages 15 to 19 years old, 3 months to 12 months postpartum. Data from 45 members of this sample were not used for various reasons, including (a) the individual was currently pregnant, (b) the individual had more than one child, (c) the individual did not seem to understand how to complete questionnaires, or (d) the child was adopted. Therefore, the final sample was composed of 149 participants. The participants attended teen parent programs in the greater Tampa Bay, Florida, and Twin Cities, Minnesota, area school systems. Fifteen teen parent programs were asked to participate in the study based on their location proximity to the researchers. Of those programs, the following seven agreed to participate: Citrus County, Orange County, Pasco County, and Polk County school systems in Florida as well as the Chaska County school system, North Saint Paul Family Learning Center, and the 622 School District in Minnesota. A power analysis based on a four-predictor multiple regression indicated that the sample size was sufficient for detecting a medium effect size with an alpha set at .05 and a power of .80 (Cohen, 1992).

The mean age of the sample was 17 years old ($SD = 1.03$). See Table 1 for ethnicity, marital status, and primary caregiver demographic information. Results from univariate analysis and t tests indicated that there were no significant age differences among the site locations, $F(1, 6) = .821, p = .555$, or between states, $t(147) = -1.88, p = .063$. There were also no significant differences in the age of the children, based on site locations, $F(1, 6) = .535, p = .781$, or state $t(147) = .315, p = .575$. Seventy-seven (52%) of the children were between the ages of 2 and 6 months, whereas 72 (48%) of the children were between the ages of 7 and 12 months,

Table 1. Maternal Demographic Information^a

	All Ages (%)	Mothers of 2- to 6-Month-Olds (%)	Mothers of 7- to 12-Month-Olds (%)
Ethnicity			
Caucasian	46		
African American	32		
Hispanic	19		
Asian	1		
Other ^b	1		
Marital status			
Single	80	84	74
Married	11	9	13
Other	9	7	13
Primary caregiver of child			
Self	76	70	82
Teen mom's grandmother	18	21	14
Teen mom's mother	3	5	0
Other ^c	3	6	4

^a $N = 149$. ^bTwo biracial and one Native American. ^cFor example, day care, baby's father.

which allowed for a comparison of these two groups on certain variables (see Table 1).

A chi-square analysis revealed a significant difference regarding the racial or ethnic background of participants in Florida and Minnesota, $\chi^2(4) = 38.86, p < .0001$. There were significantly more African American and Hispanic mothers who participated in the study in Florida than in Minnesota.

The great majority of the participants (83%) reported spending more than 50% of the time during a given week taking care of their children. These findings hold true when examined specifically for mothers of 2- to 6-month-olds ($M = 83\%, SD = 17.7$) and for mothers of 7- to 12-month-olds ($M = 83\%, SD = 18.7$).

Measures

Edinburgh Postnatal Depression Scale (EPDS).

The EPDS (Cox, Holden, & Sagovsky, 1987) was specifically developed to assess current depressive symptoms in women during the year after childbirth. The EPDS focuses on the psychological rather than the somatic aspects of depression because the somatic features of depression are highly comparable to the somatic side effects of raising an infant, including sleep disturbance, fatigue, and decreased libido. The EPDS assesses the intensity of depressive symptoms present within the previous 7 days and takes less than 5 min to complete. The EPDS is a reliable measure that is valid throughout the 1st year postpartum (Cox et al., 1987; Matthey, Barnett, Ungerer, & Waters, 2000). A Cronbach's α of .87 and split-half reliability of .88 have been found (Cox et al., 1987). The EPDS was normed in adult mothers (Cox et al., 1987); therefore, the measure's threshold for clinical levels of depression may be different for adolescent mothers. In this study, a Cronbach's α of .83 was obtained.

Parenting Stress Index—Third Edition. The Parenting Stress Index (Abidin, 1995) is a 101-item 5-point Likert scale assessing various aspects of parenting stress. The scale is comprised of three domains of stressors: the child domain, the parent domain, and the life stress domain. There are seven subscales on the parent domain: Depression, Attachment, Restriction Imposed by Parental Role, Sense of Competence, Social Isolation, Relationship with Spouse/Significant Other, and Parental Health. The alpha for the parent domain is .93, and the test-retest coefficient was found to be .96 (Abidin, 1995). In this study, three subscales from the Parenting Stress Index were used. The seven-item Role Restriction subscale is an index of how the individual feels that parenthood has restricted one's ability to handle multiple life roles. An alpha of .81 was obtained for this sample. The six-item Social Isolation subscale reflects feelings of isolation resulting from parental demands. In this

study, the alpha for the Social Isolation subscale was .71. The Competence subscale was used as an indicator of maternal self-efficacy. Eleven of the 13 items on the subscale were used; two items were excluded that asked about educational level (how many years of education completed). In this study, the 11-item subscale obtained an alpha of .81.

Eating Disorder Inventory: Body Dissatisfaction and Drive for Thinness subscales.

Two of the nine subscales of the Eating Disorder Inventory (Garner, 1991) employed are often used to measure a dimension of eating and weight concerns reflective of body dissatisfaction, fear of weight gain, and pursuit of thinness (Stewart & Williamson, 2004). The Body Dissatisfaction scale contains nine items that measure satisfaction with specific body sites, including the waist, thighs, and buttocks. Cronbach's alpha of .82 was found for this sample. The Drive for Thinness scale contains seven items and had a Cronbach's alpha of .87 for this sample. The composite score of these two scales were used for this investigation.

Procedure

Seven teen parent programs in the greater Tampa Bay and St. Paul–Minneapolis areas gave permission to have students participate in the study. Prior to the study, the researcher contacted the teen parent program teachers. The teachers were told about the study and given the opportunity to ask questions.

In all teen parent programs, adolescent mothers who were 18 years or older were given adult consent forms to complete the day of the data collection. Adolescent mothers under 18 years of age were given parental consent forms to be reviewed and signed by their parents. The adolescent mothers were given an assent form to sign the day of the data collection. All adolescent mothers were given a release form to sign if they agreed to release their names so that they could be contacted in the future for a follow-up study.

Four different questionnaire packet types were created by placing the questionnaires in four different orders to allow for an assessment of an order effect. Participants were randomly given one of the four questionnaire packets to complete. The first author or a research assistant met with the adolescent mothers to administer the questionnaires. The participants were advised to ask any questions they had concerning the proper completion of the measures. Participants were asked to return all the forms to the experimenter after completion. After all the participants completed the measures, they were given an educational form that included information relevant to the study and instructions on how to contact the experimenter. A brief discussion about parenting and child development followed. The discussion involved reviewing gross

Table 2. Ethnicity Analyses for All Variables

	Caucasian		African American		Hispanic		<i>df</i>	<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
EPDS	9.65	5.40	9.23	5.65	9.11	4.61	2, 143	.076	.989
PSI-RR	21.43	6.13	21.65	6.13	23.14	7.31	2, 143	.805	.449
PSI-SI	14.60	4.28	13.94	4.18	13.64	5.51	2, 143	.566	.569
PSI-C	23.52	7.06	24.60	6.99	23.04	6.40	2, 143	.553	.576
EDI	14.22	6.10	13.79	5.80	14.78	6.66	2, 143	.607	.547

Note: EPDS = Edinburgh Postnatal Depression Scale; PSI-RR = Parenting Stress Index–Role Restriction subscale; PSI-SI = Parenting Stress Index–Social Isolation subscale; PSI-C = Parenting Stress Index–Competence subscale; EDI = Eating Disorder Inventory, Body Dissatisfaction subscale and Drive for Thinness subscale.

* $p < .05$.

motor, fine motor, language, and cognitive developmental milestones. Participants were given contact information of parenting and mental health support services in the greater Tampa Bay and Twin Cities areas. It was emphasized that mothers who felt they were experiencing depressive symptoms or parenting stress should talk with someone about their negative feelings such as a counselor, teacher, parent, or friend.

Results

Preliminary Analyses

Several preliminary tests were conducted to determine if there were differences on the measures of depression, weight/shape concerns, parental stress, role restriction, or competency for the following variables.

Order of questionnaires. A 1×4 analysis of variance revealed no significant order effects for any of the dependent measures.

Site analyses. *T* tests indicated that there was only one significant site effect, reflecting a finding that Floridian mothers had a higher level of weight/shape disturbance than Minnesota mothers. Because only one of the five dependent variables had a difference by site, and depression level did not differ by site, all other analyses were based on the pooled data from Florida and Minnesota.

Ethnicity. A one-way analysis of variance revealed no significant differences between Caucasian, African American, and Hispanic samples on any of the dependent measures (see Table 2).

Early versus late postpartum. *T* test analyses were performed to determine if there were significant differences between mothers of 2- to 6-month-olds and mothers of 7- to 12-month-olds on the demographic variables and dependent measures. The results of the *t* test analyses for the dependent measures indicated that

there were no significant effects. Because of the importance of the age postpartum variable for deciding to collapse participants into one sample for analyses, we also evaluated several demographic variables. There were no significant differences between the mothers of 2- to 6-month-olds and mothers of 7- to 12-month-olds on age, hours spent working per week, time spent caring for child per week, or body mass index. Because of the lack of significant differences between the two groups, all subsequent analyses were based on the pooled data from the participants with children ages 2 to 6 and 7 to 12 months.

Dependent Measures

Exploratory correlational analyses were performed to examine the relations among the dependent variables and several demographic variables, including age of the mother, months postpartum, percentage of time spent taking care of the child, amount of work hours, and amount of weight gain during pregnancy. Only one of the 25 correlations was significant. Weight gain during pregnancy was positively related to weight/shape disturbance ($r = .21$).¹ An evaluation of the depression measure (EPDS) revealed that 29% of the sample reported levels of depression that met the criteria of a score of 13 and above that has been used to indicate clinical distress in adult samples (Cox et al., 1987).

Correlations among the primary measures of interest are contained in Table 3. The majority of the correlations were significant, indicating a mild to moderate degree of shared variance for the measures we wished to use as predictor and criterion variables in regres-

¹Given the length of time of the postpartum period under investigation in this study (2 to 12 months), it would have been interesting to relate the time enrolled in the teen parent program to current depression level. Unfortunately, this information was not collected. However, in conversations with administrators, it was revealed that there is a broad range of specific times postpartum wherein mothers enroll; therefore it is not the case that mothers with an older child had been in the program longer and had perhaps benefited more from the experience. In fact, the child's age was correlated only .05 with level of depression of the mother.

sions. For instance, social isolation, which might have been problematic due to its overlap with depression, shared 32.5% variance with depression. No other predictor shared more than 17% variance (i.e., role restriction) with depression. Additionally, none of the predictors shared more than 36% variance in common with each other (i.e., role restriction, maternal competency).

The predictor measures were also formally examined for possible multicollinearity and curvilinear relations, issues that were examined by looking at the zero-order correlations, variance inflation factor values, tolerance values, and condition indexes (Pedhazur, 1997). Curvilinear relations were examined to verify if the model would be better explained in terms of a nonlinear relation between the variables by taking the variables to successive powers and testing if the nonlinear model provided a better fit for the data. These findings did not indicate a problem with multicollinearity. The variance inflation factor values were well below the traditional cutoff value of 10 (Pedhazur, 1997): Role Restriction = 1.88, Social Isolation = 1.68, Competence = 1.65, Body Dissatisfaction/Drive for Thinness = 1.09. Additional collinearity analyses explored the tolerance of each of the dependent measures. The SPSS program used for analyses had a default tolerance of .0001. The tolerance values for each dependent measure were well above the .0001 cutoff value: Role Restriction = .53, Social Isolation = .69, Competence = .61, Body Dissatisfaction/Drive for Thinness = .91.

There was no theoretical basis to justify a hierarchical regression (Pedhazur, 1997), therefore a standard multiple regression analysis was conducted, regressing role restriction, social isolation, maternal self-efficacy, and weight/shape disturbance onto depression level. The full model accounted for 38% of the variance associated with depressive symptoms, $F(4, 143) = 22.40, p < .001$. Significant predictors were: social isolation ($\beta = .44, p < .001$), weight/shape disturbance ($\beta = .20, p = .004$), and maternal self-efficacy ($\beta = .168, p = .047$).

Discussion

This study examined the relations among depression, role restriction, social isolation, maternal self-efficacy, and weight/shape disturbance in adolescent mothers. Results indicated that social isolation, weight/shape disturbance, and maternal self-efficacy predicted significant variance associated with depression. These results add to the knowledge base about risk and resilience factors related to adolescent motherhood (Hetherington, 1997).

Overall, these results suggest that the first year postpartum is a challenging period for adolescent mothers, regardless of their ethnic background. Moreover, many adolescent mothers confront this difficult time with limited psychological and social resources

(Becker, 1987; Kurtz & Derevenksy, 1994). As such, they appear to experience a substantial amount of emotional distress (Kurtz & Derevenksy, 1994). Our findings indicate that the specific types of stressors connected to depression consist of weight/shape concerns, social isolation, and maternal self-efficacy.

We also found that 29% of the sample had clinical levels of depressive symptoms based on an adult measure of postpartum depression. This finding is similar to the higher estimates of depression prevalence in adult mothers. Studies have found that from 10% to 34% of adult mothers report clinical levels of depressive symptoms (Kline et al., 1998; Walker, 1997). Alarming, studies with adult mothers have shown that high levels of depressive symptoms negatively affect mother–infant interactions as well as infant cognitive, emotional, and social development (Carter et al., 2000). In addition, depressed adolescent mothers are at greater risk for depression in adulthood (Deal & Holt, 1998; Horowitz et al., 1996).

Overall, this study suggests that adolescent mothers are at risk for a number of problems. From a risk and resilience perspective, adolescent mothers are at increased risk for psychological problems due to a number of factors, including their postpartum status (Chrisler & Johnston-Robledo, 2002) and their developmental status (Grotevant, 1998). The significant finds related to social isolation, maternal competence, and weight/shape concerns are consistent with the vulnerable nature of adolescent mothers given the confluence of psychosocial and biological factors in adolescence. Given that adolescence is a period of vulnerability related to body image disturbance (Thompson & Stice, 2001) and depression (Hammen & Rudolph, 2003), it is particularly important to explore preventive interventions with adolescent mothers.

There are several limitations to this study. First, all participants were recruited from school-based teen parent programs. It is possible that these adolescent mothers may be more invested in being a parent as a function of their voluntary participation in the teen parent program. Therefore, the generalizability of the results to samples of adolescent mothers not involved in teen parent programs remains to be demonstrated. A second limitation of this study was the use of the EPDS with adolescent mothers. Because the EPDS was normed in adult mothers (Cox et al., 1987), the measure's threshold for clinical levels of depression may be different for adolescent mothers.

It is important to acknowledge that other contextual factors that were not assessed in this study (such as the adolescent's relationship with the baby's father, the adolescent's relationship with her own parents, the infant's temperament) have been found to be related to maternal depression. Specifically, conflict with the baby's father, conflict with the baby's grandmother,

Table 3. Correlations Among Dependent Measures

	EPDS	PSI-RR	PSI-SI	PSI-C	EDI
EPDS	(.83)	.38**	.57**	.41**	.29**
PSI-RR	—	(.81)	.59**	.60**	.10
PSI-SI	—	—	(.71)	.50**	.19*
PSI-C	—	—	—	(.81)	.18*
EDI	—	—	—	—	(.82)

Note: EPDS = Edinburgh Postnatal Depression Scale; PSI-RR = Parenting Stress Index–Role Restriction subscale; PSI-SI = Parenting Stress Index–Social Isolation subscale; PSI-C = Parenting Stress Index–Competence subscale; EDI = Eating Disorder Inventory. Numbers in parentheses represent scale reliabilities (alpha) obtained in the current study.

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

and difficult infant temperament are all related to higher levels of postpartum depression (DaCosta et al., 2000; Field, 2002; Hetherington, 1997; Kalil, Spencer, Spieker, & Gilchrist, 1998; Phares, Duhig, & Watkins, 2002). Thus, these factors should be investigated in future research on adolescent postpartum depression. Given that adult fathers have also shown patterns of postpartum depression (Matthey et al., 2000), it would also be interesting to investigate postpartum depression in adolescent fathers.

Clearly, these findings are limited by the cross-sectional nature of the design. However, as noted by Kazdin (2003), such designs “have generated provocative findings, theories, and further research” (p. 236) and are indicated prior to the selection of more expensive and timely prospective work. It seems appropriate and timely to move forward to a prospective examination of the findings from this study. Research in the future should also further examine body image dissatisfaction and eating disturbance in adolescent mothers as well as pregnant adolescents. Additional research should include a prospective analysis of these variables. It would be interesting to determine the time course of the connection between depression and other variables. For instance, it is not known if depression is an antecedent or consequence of social isolation, weight/shape problems, low efficacy, or a combination of these. Also, future research should attempt to determine if there are factors that protect adolescent mothers from experiencing clinical levels of depressive symptoms. Interestingly, these findings indicate that one avenue of prevention might be a body image intervention during pregnancy designed to prepare the individual for body-related changes and concerns that accompany the early months postpartum.

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