

Objective and Self-Perceived Resources as Predictors of Depression Among Urban and Non-Urban Adolescent Mothers

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Received: 22 September 2005 / Accepted: 10 November 2005 / Published online: 22 July 2006
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Abstract Pregnant and parenting adolescents often cope with a lack of resources as they struggle to negotiate the tasks of motherhood and adolescence. Previous research has determined that young mothers have an increased rate of depression when compared to older mothers. In this study, self-perceived resource adequacy, education, income, age, and environment (urban vs. non-urban) were investigated as predictors of depression at approximately 14 and 36 months after birth in adolescent mothers ($N = 523$). Self-perceived resources accounted for significant variance in depression at 14 and 36 months while controlling for education and income. However, education and income were not significant predictors while controlling for self-perceived resources. Age and environment did not predict depression. Researchers would

be wise to focus on a young woman's view of her situation, as it appears that self-perceived resources play an important role in predicting depression.

Keywords Adolescent parenthood · Depression · Perceptions · Urban · Rural

Teen pregnancy continues to be a societal concern in the United States. Overall, between 750,000 and one million teenagers become pregnant every year (Blake and Bentov, 2001; Whitman *et al.*, 2001). The stress of pregnancy and parenting may overwhelm a young woman and deplete her resources, leaving little energy for the development of positive role identity, stabilization of self-concept, enhancement of self-esteem, and other adolescent developmental tasks (Erikson, 1963; McCarthy and Hoge, 1982; O'Malley and Bachman, 1983; Smith Battle and Leonard, 1998). It is no surprise that teen mothers are prone to depression, as adolescents and mothers are both at risk for depression.

There are many factors that may affect a teen mother's likelihood of developing depressive symptoms. Various resources are related to depression (Colletta, 1983; Hudson *et al.*, 2000; Turner *et al.*, 2000). Resources can be either identified objectively, such as income or educational level, or perceived by the individual on a more personal level, such as someone to talk to, time to be with children, and time to stay in shape and looking nice. Both categories of resources may impact mental health, with a teen mother's perception of her situation accounting for variance in depression beyond what objective resource measures can predict. Traditional socioeconomic status measures, such as income and education, may not adequately represent opportunities available to teen mothers. Similar levels of income and education may have different meanings for teen mothers from different backgrounds, and therefore, the inclusion of broader measures has

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been suggested (Henly, 1993). A teen mother's perception of whether her needs are being met may provide additional information that could benefit interventionists and case managers in offering services, as well as provide an important measure for research that takes into account the participant's perspective.

There is a relationship between early childbearing and lower educational attainment. Adolescent women who have children are more likely to drop out of school and obtain a lower degree of education (Furstenberg, 1976; Jones *et al.*, 1999; Scott-Jones and Turner, 1990). In addition to being a correlate of teen motherhood, education has also been shown to moderate the relationship between teen motherhood and depression. Less educated teen mothers may have fewer depression symptoms than more educated teen mothers (Colletta, 1983).

Motherhood may be overwhelming for young women who must cope with physical, social, and psychological adolescent development along with tending to the needs of a child (Adams and Kocik, 1997; Stevenson *et al.*, 1999). One could argue that a teen mother who has accomplished more developmental tasks would be more prepared for parenting than a teen mother who is just beginning to negotiate her adolescence. Indeed, research has suggested that younger teen mothers are more likely to be depressed than older teen mothers (Colletta, 1983; Deal and Holt, 1988; Reis, 1988; Promodoris *et al.*, 1994).

Many people have an image of teen pregnancy as primarily an urban rather than a non-urban phenomenon. However, research has revealed that the proportion of births to teenagers is higher in non-urban than urban areas in some regions of the U.S., particularly among African-American teens (Bennett *et al.*, 1997). A teen who gives birth may be judged more harshly in a conservative, homogenous small community rather than in a large city, and be less likely to seek mental health services when needed (Bush and Carty, 1994; Elliot and Larson, 2004). In addition, conditions such as loneliness and social isolation, which may be more common to teen mothers in non-urban environments, are related to depression (Hudson *et al.*, 2000; Kessler, 1997).

Although depression among adolescent mothers has been the focus of many studies, some teen mothers have positive views of motherhood, optimistic feelings about their futures, and a belief that their life has been affected by mothering in an overwhelmingly positive way (Arenson, 1994; Smith Battle, 1995; Smith Battle and Leonard, 1998). This demonstrates the tremendous heterogeneity in the mental health outcomes of teen mothers. Identifying teen mothers at greatest risk for depression is a goal for case managers, as intervention services may be necessary to help young mothers with chronic depression (Campbell *et al.*, 1995). Improving the ability of case managers to target these mothers and refer them to ser-

vices soon after the birth is important, as mothers who are still depressed six months after birth have children with poor developmental outcomes (Field, 1992).

The purpose of this study was to identify predictors of depression among adolescent mothers in urban and non-urban settings. Four hypotheses were tested: (1) Teen mothers with fewer self-perceived resources will have more symptoms of depression than teen mothers with greater self-perceived resources while controlling for objective resources, (2) Teen mothers with fewer objective resources (education and income) will have more symptoms of depression than teen mothers with greater objective resources while controlling for self-perceived resources, (3) Younger teen mothers will be more depressed than older teen mothers while controlling for resources, and (4) Non-urban teen mothers will be more depressed than urban teen mothers while controlling for ethnicity.

Method

National Early Head Start Research and Evaluation Project

This study uses data collected as part of the National Early Head Start Research and Evaluation Project. It is a cross-site national study conducted by Mathematica Policy Research, Inc. and Columbia University's Center for Children and Families and Teachers College, in collaboration with the Early Head Start Research Consortium. Funding came from the Administration on Children, Youth, and Families (ACYF).

The data come from 17 sites around the country in Early Head Start (EHS) programs. Applicants for the Early Head Start Research and Evaluation Project were families who applied for Early Head Start services and then were screened to decide if they qualified for the program. Each site was allowed to determine its own criteria with income (using the federal poverty guidelines) as one factor in determining eligibility. A family's unique needs were also taken into account, as Head Start guidelines allow children who do not meet low-income criteria to participate if they may be benefited by the program (Administration on Children, Youth, and Families, 2002).

Research sites were required to recruit twice as many families as would be included in the program. Some sites placed an emphasis on recruiting certain groups, such as teenage mothers. Once families were selected as eligible for EHS, they were randomly assigned to either the program or control group. Control group families could not receive Early Head Start services until their child was three years of age, when the child would be old enough for a Head Start program, but could seek other community services on their own. There were 1,513 families assigned to the program group and 1,488 to the control group. Basic characteristics of the two

groups, such as income, age and education of the mother, and ethnicity, did not differ. Combined analysis of both groups showed that 48% of mothers had not completed high school, 35% were receiving welfare, and 39% had a male present in the household (for more details, see Administration on Children, Youth, and Families, 2002)

At enrollment in the EHS study, parents provided demographic information and information about their child's health and development. Parents and children were then assessed at approximately 6, 15, and 26 months after enrollment. Birthday-related assessments also were conducted at approximately 14, 24, and 36 months after birth. Response rates overall were similar between the program and control group. These rates ranged from 72.2% to 81.6% for the assessments from which these data came. Families received a small stipend for their participation in each part of the EHS study (Administration on Children, Youth, and Families, 2002).

Participants

Only teen mothers (ages 12–18) from the original EHS dataset were included in this study. Initially, 779 mothers fit this criterion. Data from enrollment and the 6-month assessment were used as predictor variables. In addition, the depression measures at 14 and 36 months after the birth of the child were outcome variables. Participants who had complete (75% or more) data on both the family resource and depression measures used in this study ($n = 523$; 67%) did not differ statistically from participants who did not have complete data in age, ethnicity, income, education, and receipt of public housing, WIC, AFDC, and food stamps. All 17 EHS research sites were represented in this study. Table 1 shows demographic information for the sample.

Measures

Demographics

At the start of the study, demographic data were collected for each family. These data included age of mother, education of mother, health status of mother and child, income, ethnicity, and living situation.

Environment

The Rural-Urban Continuum Code (Ricketts *et al.*, 1998; see also Butler and Beale, 1993) was used to classify each teen mother's home address at the start of the study. The *RUCCs* classify all counties into one of nine categories, with 1 being the most urban and 9 being the most non-urban. In some analyses, the *RUCC* was used as a dichotomous variable, with teen mothers in urban settings ($RUCC = 1$) being compared

Table 1 Descriptive statistics ($N = 523$)

	Mean (SD)	<i>N</i> (%)
Age	16.83 (1.60)	
Under 16		76 (14.5%)
16		111 (21.2%)
17		163 (31.3%)
18		173 (33.1%)
Highest level of education		
Less than 9th grade		62 (11.9%)
9th grade		108 (20.7%)
10th grade		108 (20.7%)
11th grade		117 (22.4%)
12th grade		108 (20.7%)
Beyond high school		20 (3.8%)
Ethnicity		
African-American		250 (47.8%)
European-American		144 (27.5%)
Mexican/Chicano		77 (14.7%)
Other		29 (5.5%)
Marital status		
Single		392 (75.0%)
Cohabiting		60 (11.5%)
Married		50 (9.6%)
Divorced/Separated		21 (4.0%)
Depression 14 months	14.94 (10.06)	
Mild depression (16–20)		78 (14.9%)
Moderate depression (21–25)		52 (9.9%)
Severe depression (26 +)		58 (11.1%)
Depression 36 months	7.95 (6.30)	

Note. There are not established cut-offs for the 12 item scale used at 36 months.

to teen mothers in non-urban settings ($RUCC = 2-9$). In hierarchical linear modeling, *RUCC* was used as a continuous variable.

Resources

Self-perceived resources

The Family Resource Scale (FRS; Dunst and Leet, 1987) was used as an assessment of the teen mother's perception of available resources across a range of areas approximately six months after initial assessment. The measure consists of 30 items and uses a 5-point Likert-type response format. Responses range from *not at all adequate* to *almost always adequate*. A response of *does not apply* is also permissible. Items represent money (e.g., money to save), basic needs (e.g., enough clothes for your family), time for self (e.g., time to get enough rest or sleep), and time for family (e.g., time to be with your child/children; Van Horn *et al.*, 2001). The scale has been shown to be reliable and valid for use with low-income families (Kelley *et al.*, 2000). Cronbach's alpha in the present study was .82.

Objective resources

Objective resources were measured at enrollment by gross family income and education level of the mother. Each teen mother was asked her gross family income. Participants were able to define their own family based on the following working definition: “A family is composed of: (1) a pregnant woman or (2) 2 or more people who (a) reside together in the same household; and (b) are related either by blood, marriage, adoption, or commitment. A child’s biological or adoptive parent or other focal adult who resides outside of the household may also be included.” Because the teen mother may have defined her family differently than it was defined by the site for eligibility purposes, the income specified here may have not been the same income that qualified the family for Early Head Start.

Options for education level included no school completed, less than 4th grade, 5th through 8th grade, 9th grade, 10th grade, 11th grade, 12th grade (no diploma), graduated high school, some college, associate degree, bachelor’s degree, master’s degree, and doctorate degree. In this sample, the highest level of education obtained by a participant was “some college.”

Depression

The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), a self-report measure designed for the general population, was used to assess depressive symptoms in mothers approximately 14 and 36 months after the birth of their child. The 20-item long-form was used at 14 months. Depression at 36 months was assessed using a short-form of 12 items. Respondents indicate how many times per week they experienced each item, using a scale ranging from *rare or none of the time* to *most or all of the time*. The internal consistency for the 20-item measure has been shown to be .85 for the general population (Radloff, 1977) and good validity and reliability have been established for adolescents (Klein *et al.*, 2005; Roberts *et al.*, 1991). More specifically, the scale

has been validated with adolescent mothers (Colletta, 1983; Wilcox *et al.*, 1998). Because the CES-D is a state rather than trait measure, test-retest reliabilities are moderate, ranging from .32 to .54 across a range of 3 to 12 months for the 20 item measure (Radloff, 1977). The range of possible scores on the long-form is 0 to 60, while the possible range on the short-form is 0 to 36. Higher scores indicate more depressive symptomology. On the long-form, 26 serves as a cut-off for severe depression; however, no cut-offs have been established for the short-form used in this study. Cronbach’s alpha for the long form was .85, while Cronbach’s alpha for the short form was .80.

Results

Descriptive statistics for education and depression are displayed in Table 1. The EHS program and comparison groups were compared on key variables in this study. Program and comparison groups did not show significant differences on depression at 14 months [$F(1, 521) = .09, p = .76$], depression at 36 months [$F(1, 521) = .26, p = .61$], self-perceived resources [$F(1, 521) = 1.30, p = .25$], education [$F(1, 521) = .14, p = .71$], or income [$F(1, 521) = .04, p = .84$]. Zero-order correlations for education, income, age, self-perceived resources, 14-month depression, 36-month depression, and family RUCC are displayed in Table 2. Depression measures were negatively related to self-perceived resources, indicating that teen mothers who felt their resources were more adequate were less depressed at 14 and 36 months than teen mothers who felt their resources were less adequate. Depression at 14 months, but not at 36 months, was related to education, with less educated teen mothers being more depressed than more educated teen mothers. As indicated by a positive correlation for self-perceived resources and education, more educated teen mothers were more likely to indicate that their resources were more adequate than less educated teen mothers. Younger teen mothers were from more urban environments than older teen mothers, and teen

Table 2 Zero-order correlations of predictor and outcome variables

	Education	Income	Age	Self-perceived resources	14 mo. Dep.	36 mo. Dep.
Education						
Income	.02					
Age	.44**	-.01				
Self-perceived resources	.12**	.02	.00			
14 mo. Dep.	-.09*	-.02	.02	-.32**		
36 mo. Dep.	.03	-.04	-.01	-.19**	.50**	
RUCC	.07	-.04	.12**	.17**	.00	.04

* $p < .05$.

** $p < .01$.

Table 3 Effects of objective resources, self-perceived resources, and age on depression at 14 months

	Std. Beta	<i>t</i>
Age	.05	1.17
Income	-.02	-.37
Education	-.08	-1.75
Self-perceived resources	-.31	-7.26**

***p* < .01.

mothers from more non-urban settings were more likely than teen mothers from more urban settings to perceive their resources as adequate.

In order to test for the effects of self-perceived resources, objective resources, and age on depression, depression at 14 months was regressed on education, income, age, and self-perceived resources, $F(4, 518) = 15.20, p < .01$ (Table 3). This regression accounted for 10.5% of the variance in depression at 14 months. In this model, the only significant predictor was self-perceived resources. When education, income, and age were controlled, self-perceived resource adequacy was negatively related to depression at 14 months. Teen mothers with a higher level of self-perceived resources were less depressed than were other teen mothers. Possible interactions (self-perceived resources*education, self-perceived resources*income, education*income) were then added to the model. None of these interactions were significant predictors of depression at 14 months.

A regression model was estimated with depression at 36 months as an outcome variable and education, income, age, self-perceived resources, and depression at 14 months as predictors, $F(5, 517) = 34.24, p < .01$ (Table 4). Depression at 14 months was added to the model to determine if the other predictor variables explained any variance beyond that explained by 14-month depression. The regression predicted 25% of variance in depression, and depression at 14 months significantly predicted depression at 36 months. However, no other predictors were significant.

Interactions (self-perceived resources*education, self-perceived resources*income, education*income) were added to the regression. Depression at 14 months remained significant. Education had a significant negative relationship with depression in this model, and self-perceived resources was also significant in the predicted direction. However, the interaction of self-perceived resources and education was significant. In order to reduce problems with multicollinearity, this model was estimated again after deleting interaction terms that were not significant (self-perceived resources*education, education*income). Depression at 14 months, education, self-perceived resources, and the interaction term of self-perceived resources and education remained significant.

Further investigation revealed that the interaction for self-perceived resources and education was disordinal, indicating the main effects for self-perceived resources and education were qualified by the interaction. In other words, the main effects, although statistically significant, should be interpreted carefully. For teen mothers with lower levels of self-perceived resources, more educated mothers were more depressed than less educated mothers at 36 months. For teen mothers with higher levels of self-perceived resources, the relationship between education and depression was as predicted, as more educated mothers were less depressed than less educated mothers.

Depression at 14 months was regressed on education, income, self-perceived resources, family RUCC, and ethnicity in order to test the effects of urban/non-urban status on depression (Table 5). Ethnicity was dummy-coded with African-American as the reference group, as it contained the most observations in the sample. Next, interaction terms (urban/non-urban*education, urban/non-urban*income, urban/non-urban*self-perceived resources, and urban/non-urban*ethnicity) were added. The model was estimated again for depression at 36 months.

About 11% of the variance in teen mothers' depression at 14 months was accounted for by this model, $F(7, 515) = 9.33, p < .001$ (Table 5). The only statistically significant predictor

Table 4 Effects of objective resources, self-perceived resources, and age on depression at 36 months

	Std. Beta	<i>t</i>	Std. Beta	<i>t</i>	Std. Beta	<i>t</i>
Age	-.03	.48	-.03	-.69	-.03	-.76
Income	-.02	-.62	-.01	-.02	.02	-.62
Education	.03	.77	.58	2.42*	.58	2.49*
Self-perceived resources	-.04	-.92	.38	2.20*	.34	2.09*
14 month dep	.49	12.01**	.49	12.10**	.49	12.19**
Self-perceived resources*education			-.74	-2.45*	-.71	-2.83*
Self-perceived resources*income			-.16	-.73		
Education*income			.14	.78		

**p* < .05.

***p* < .01.

Table 5 Effects of objective resources, self-perceived resources, ethnicity, and environment on depression at 14 months

	Std. Beta	<i>t</i>
Education	-.07	-1.70
Income	.02	.37
Self-perceived resources	-.32	-7.63**
European-American	.06	1.23
Hispanic	-.03	-.74
Other	.05	1.07
RUCC	.03	.70

** $p < .01$.

was self-perceived resources, as teen mothers who perceived themselves as having more resources were less depressed than other teen mothers. Urban/non-urban status was not related to depression. The addition of the interaction terms did not predict additional variance, and none of the interaction terms were significant.

Only 5% of variance in depression at 36 months was accounted for by the predictor variables in the regression model, $F(7, 515) = 3.76, p < .01$ (Table 6). Self-perceived resources was negatively related to depression. No other variables were statistically significant. Again, urban/non-urban status was not related to depression. The interaction terms did not predict additional variance in depression at 36 months.

Hierarchical linear models were estimated with depression at 14 months as the outcome variable and self-perceived resources, education, age, income, and time lapsed between measuring self-perceived resources and 14 month depression as predictors. The mean RUCC for families at each site was calculated, and this variable was used as a level two predictor. The intraclass correlation was .04, indicating the proportion of variance between sites. Therefore, 96% of variance was at the individual level. Of the 4% of variance at the between site level, the proportion of variance accounted for by the site RUCC was not significant. Hierarchical linear models were also estimated with 36 month depression as the outcome and self-perceived resources, education, age, income,

Table 6 Effects of objective resources, self-perceived resources, ethnicity, and environment on depression at 36 months

	Std. Beta	<i>t</i>
Education	-.03	-.64
Income	-.00	-.05
Self-perceived resources	-.20	-4.54**
European-American	.05	.92
Hispanic	-.06	-1.40
Other	-.04	-.98
Family RUCC	.04	.78

** $p < .01$.

14 month depression, and time lapsed between measuring self-perceived resources and 36 month depression as predictors. Only 3% of variance was at the between sites level, and the proportion of this variance accounted for by the site RUCC was not significant.

The sample of urban teen mothers ($n = 266$) consisted of 34 European-American, 143 African-American, 48 Mexican/Chicano, and 41 "other." The sample of non-urban teen mothers ($n = 257$) consisted of 114 European-American, 97 African-American, 37 Mexican/Chicano, and 9 "other." A chi-square test determined that ethnicity and environment (urban vs. non-urban) were related, $\chi^2 (3 df) > 73.83, p < .01$. In other words, the frequency of ethnicities varied significantly by environment. European-American teen mothers were more likely to reside in non-urban than urban settings.

A univariate analysis of variance was performed with urban/non-urban, marital status (single, married, cohabitation, widowed/separated/divorced), and ethnicity (European-American, African-American, Mexican/Chicano, other) as predictor variables and depression at 14 months as the outcome variable. This model predicted 6.0% of the variance in 14 month depression. The interaction for urban/non-urban, marital status, and ethnicity was not significant, $F(5, 487) = .68, p = .63$. The interactions for marital status and ethnicity [$F(7, 487) = 1.47, p = .17$], marital status and urban/non-urban [$F(2, 487) = 1.81, p = .17$], and urban/non-urban and ethnicity [$F(3, 487) = .58, p = .63$] also were not significant. Ethnicity was not a significant predictor of depression, $F(3, 487) = .51, p = .67$. The urban/non-urban variable was a significant predictor, $F(1, 487) = 5.83, p = .016$, as non-urban teen mothers were more depressed than urban teen mothers. Marital status was not significant, $F(3, 487) = .61, p = .61$.

This analysis was repeated with depression at 36 months as the outcome variable, and 5.9% of the variance in depression was explained. The interaction for urban/non-urban, marital status, and ethnicity was not significant, $F(6, 487) = 1.05, p = .39$. The interactions for marital status and ethnicity [$F(7, 487) = .62, p = .72$], marital status and urban/non-urban [$F(2, 487) = 1.63, p = .20$], and urban/non-urban and ethnicity [$F(3, 487) = 1.59, p = .19$] were not significant. Also, ethnicity [$F(3, 487) = .44, p = .72$], marital status [$F(3, 487) = .70, p = .55$], and the urban/non-urban variable [$F(1, 487) = 3.03, p = .08$] were not significant predictors of depression at 36 months.

Discussion

We predicted that self-perceived resources would be negatively related to depression while controlling for objective measures of resources. Self-perceived resources predicted

depression at 14 when education and income were controlled. At 36 months, the main effect for self-perceived resources was significant but qualified by the interaction for self-perceived resources and education. We also hypothesized that objective measures of resources would predict depression while controlling for self-perceived resources; that teen mothers with fewer objective resources would have more symptoms of depression than teen mothers with more objective resources. Income was unrelated to depression. The lack of significance of income may be indicative that a teen's family income does not represent all the monetary resources she has available. Perhaps there are other people in her life (e.g. boyfriend's family, grandparents) who are willing to provide financial support to help her and her child(ren) meet their needs. This factor would most likely not be represented in an income variable, but would be reflected in a measure of self-perceived resource adequacy.

At 36 months, there was an interaction for education and self-perceived resources. For teen mothers who perceived their resources more positively, education was negatively related to depression. Surprisingly, for teen mothers who perceived their resources more negatively, education was positively related to depression. Perhaps young women who see their situation in a more positive light view their education as an asset. These teen mothers may be able to see their education as a resource which will serve to enhance their life and the life of their child. In addition, they perceive themselves as having more resources, which may help them use their education.

However, adolescent mothers with a high level of education and a low level of self-perceived resources showed more depressive symptoms than mothers with a low level of education and a low level of self-perceived resources. These young mothers, who do not perceive their situation positively, may be depressed because they see their education as a waste. They may not feel they have the resources to use their education in a positive way. Perhaps the higher level of education of these adolescents makes them feel as though they were really going places—if they became pregnant. They may have had higher hopes for their future than other young women, and therefore, became more depressed as teen mothers.

In addition, we hypothesized that age would be negatively related to depression and that non-urban teens would be more depressed than urban teens. Neither of these predictions was supported by our results. Although previous research (Colletta, 1983; Deal and Holt, 1988; Reis, 1988; Promodoris *et al.*, 1994) has suggested that younger teen mothers are more depressed than older teen mothers, very young teen mothers may be somewhat “sheltered” from the realities that they are not ready to face, as they are likely to be able to live with their own parents and continue in their “adolescent role” (Spieker and Bensley, 1994). Older teens may be more likely

than younger teens to understand the sacrifices of parenting (Spear, 2001).

Although we did not find differences in depression levels between urban and non-urban teen mothers, the inclusion of both urban and non-urban teen mothers can be considered a strength of this study. In fact, the Early Head Start Research and Evaluation Project was designed to represent urban and rural areas, and sites were chosen accordingly. The sample represents teen mothers from diverse environments, but the results may not generalize to higher-income adolescent mothers because of the EHS qualification guidelines.

Despite the strengths of this study, it has several limitations. Income may be dynamic and unstable for teen mothers, varying from month to month or even week to week due to changing job situations and also changing (and often tumultuous) relationships with family and partners. However, income was measured at only one point. In addition, some of the items included on the measure of self-perceived resource adequacy represent perceptions of more concrete resources, such as clothing and heating, in addition to more subjective resources, such as someone to talk to and time to spend with friends. Although some people would define adequacy of a tangible resource differently because they have varied standards for resources such as clothing, the actual extent of the availability and presence of the resource is certainly related to the perception of the resource. Therefore, perceptions are not independent of a person's reality. Objective resources contribute to self-perceived resource adequacy when using a measure such as the FRS.

The link between perceptions of resources and depression is likely bi-directional. A positive outlook could ward off future depressive symptoms, but someone who is depressed is likely to perceive her situation negatively. Teen pregnancy and parenthood are stress-provoking; however, the actual pregnancy and parenthood may not be the initial causes of depression. Obviously, a selection bias is present for teen parenthood. Adolescents who become mothers differ from other teens in many ways, and they may be more prone to depression beforehand. In fact, research (Kosunen *et al.*, 2003) has suggested that adolescents who are depressed have an increased number of sexual partners and may be less likely to use contraception. If it is true that depressed teens have more partners and are less likely to use contraception, this would provide evidence that depressed adolescents are more likely to become pregnant than non-depressed adolescents. Perhaps depression predisposes teenagers to becoming parents, or at least to conceiving a child.

Although rates of teen pregnancy have declined in recent years in the U.S. (Alan Guttmacher Institute, 1999), the depression rates among low-income teen mothers in this sample suggests that adolescent childbearing is certainly not a social issue that has been “solved.” Even if there are fewer teen

mothers, the likelihood of depression among young women who become parents begs for attention, as maternal depression is not an issue only affecting a mother. Children of depressed mothers are likely to experience many negative consequences, such as attention-deficit disorder, conduct disorder, academic difficulties, social problems, and attachment disorders (Beardslee *et al.*, 1983; Dumas, 1986; Friedlander *et al.*, 1986; Lyons-Ruth *et al.*, 1997; NICHD, 1999; Webster-Stratton and Hammond, 1988).

Among the teen mothers in this study, perceptions of resource adequacy were important predictors of depression. This is a key finding, as those working with parenting adolescents should be focused not only on the objective resources that they perceive professionally but the more subjective resources as perceived by the young woman. Asking a teen mother how much money she has and who provides childcare may not be enough. According to this research, asking questions such as “Do you feel you have enough money for savings?” and “Do you feel you have childcare that meets your needs?” may be at least as important as using a standard checklist to define the resources of teen mothers. Case managers may find that gaining insight into a teen’s perceptions of resources will allow for identification of teen mothers who are at risk for depression, and early intervention to decrease mental health problems may improve long-term family and child outcomes.

The literature on adolescent parenthood would be richened by the use of measures that include teen mothers’ perceptions and the examination of the impact of perceptions on outcomes. Exploring the perceptions of specific groups of resources (e.g., money, time) in future studies may allow for determination of which factors account for the most variance in depression. In addition, it would be useful to tease apart the causal relationship between self-perceived resources and depression by assessing both among teen mothers at several points in time. If a young women’s perceptions of her strengths impacts her level of depression at a later point, it may be useful to create interventions focused on increasing an adolescent mother’s positive thoughts regarding her situation.

Acknowledgements The findings reported here are based on research conducted as part of the national Early Head Start Research and Evaluation Project funded by the Administration for Children and Families (ACF), U.S. Department of Health and Human Services under contract 105-95-1936 to Mathematica Policy Research, Princeton, NJ, and Columbia University’s Center for Children and Families, Teachers College, in conjunction with the Early Head Start Research Consortium. The Consortium consists of representatives from 17 programs participating in the evaluation, 15 local research teams, the evaluation contractors, and ACF. Research institutions in the Consortium include ACF (Rachel Chazan Cohen, Judith Jerald, Esther Kresh, Helen Raikes, Louisa Tarullo); Catholic University of America (Michaela Farber, Harriet Liebow, Nancy Taylor, Elizabeth Timberlake, Shavaun Wall); Columbia University (Lisa Berlin, Christy Brady-Smith,

Jeanne Brooks-Gunn, Allison Sidle Fuligni); Harvard University (Catherine Ayoub, Barbara Alexander Pan, Catherine Snow); Iowa State University (Dee Draper, Gayle Luze, Carla Peterson); Mathematica Policy Research (Kimberly Boller, Jill Constantine, Ellen Eliason Kisker, John M. Love, Diane Paulsell, Christine Ross, Peter Schochet, Cheri Vogel, Welmoet van Kammen); Medical University of South Carolina (Richard Faldowski, Gui-Young Hong, Susan Pickrel); Michigan State University (Hiram Fitzgerald, Tom Reischl, Rachel Schiffman); New York University (Mark Spellmann, Catherine Tamis-LeMonda); University of Arkansas (Robert Bradley, Richard Clubb, Andrea Hart, Mark Swanson, Leanne Whiteside-Mansell); University of California, Los Angeles (Carolee Howes, Claire Hamilton); University of Colorado Health Sciences Center (Robert Emde, Jon Korfmacher, JoAnn Robinson, Paul Spicer, Norman Watt); University of Kansas (Jane Atwater, Judith Carta, Jean Ann Summers); University of Missouri-Columbia (Mark Fine, Jean Ispa, Kathy Thornburg); University of Pittsburgh (Beth Green, Carol McAllister, Robert McCall); University of Washington School of Education (Eduardo Armijo, Joseph Stowitschek); University of Washington School of Nursing (Kathryn Barnard, Susan Spieker), and Utah State University (Lisa Boyce, Gina Cook, Catherine Callow-Heusser, Lori Roggman).

The content of this publication does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The authors wish to thank Mack Shelley, K.A.S. Wickrama, Dee Draper, and Carla Peterson for their help with this project.

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