Poverty and Adolescent Mental Health: The Role of Maternal Psychological Resources

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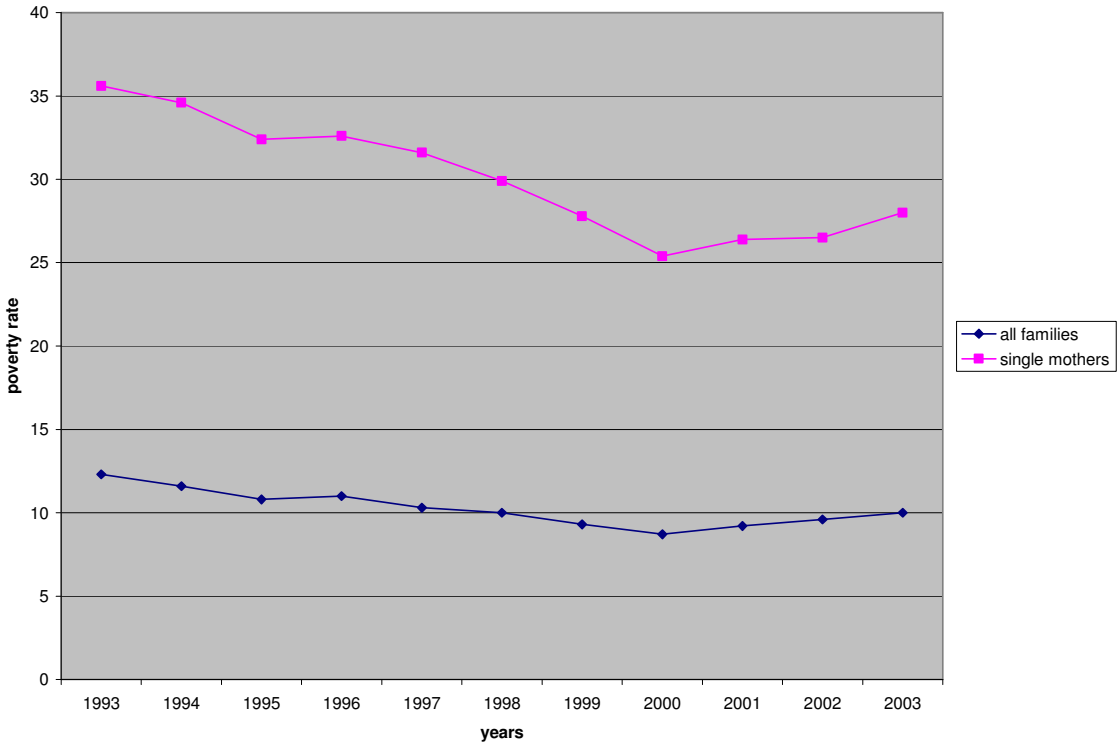
The number of households with children living in poverty declined steadily throughout the 1990s, and began climbing again in 2000 (US Census 2003a; see Figure 1). Although poverty rates remain lower than they were throughout most of the 90's, increasing numbers of families are living in poverty and, at present, approximately 11.5 percent of children under the age of 18 live in poverty among all family types and (US Census 2003) . Evidence suggests that while increases in maternal employment during the 1990s contributed to the decline in poverty, racial disparities in the number of families with children in poverty remain unmitigated (Moffitt 2002). Although some of the more striking shifts in poverty rates occurred for African American children, much of the change was likely the result of movement out of the most severely poor category into nearly poor status. Qualitatively, these shifts probably do not indicate a change or decline in ecological or contextual risks for low-income youth (Lichter, Qian, and Crowley 2005). Risks associated with poverty affecting the transition to adulthood and the assimilation into the mainstream economy (Feinstein and Brynner 2004) operate through childhood, adolescence, and into adulthood with important implications for childrearing across generations.

This study explores the effect of poverty duration on adolescents' internalized and externalized behavioral problems using the National Longitudinal Survey of Youth. Adolescents who experience poverty are more likely to engage in drug and alcohol use at earlier ages, initiate sexual activity earlier (Brooks-Gunn and Furstenberg 1989), have increased mental health problems, and lower levels of academic achievement (Duncan and Brooks-Gunn 1997; Haveman and Wolfe 1994; Duncan, Brooks-Gunn, and Klebanov 1994). Although adolescents spend most of their time in the company of their peers, families continue to play an important role in their lives. Important familial factors that

work in the lives of adolescents include maternal behavior and mental health; both of which can be affected by economic hardship, which in turn may lead to reduced adolescent well-being (McLoyd 1990). These factors must be taken into account when seeking to understand how poverty affects adolescent outcomes as well as the contexts in which parent well-being is most likely to be associated with low levels of psychological resources.

Previous literature has found a strong relationship between low socioeconomic status and psychological well-being. Those in poverty have a higher prevalence of psychological distress and disorders than people from higher income strata (Miech, et al. 1999; Dowhrend et al. 1992; Liem and Liem 1978; Kessler and Cleary 1980; Mirowsky and Ross 1989). Among women in poverty, there is support for a significant association between economic hardship and welfare receipt and reports of psychological distress (Ensminger 1995) due to such issues as chronic burdens including economic hardship, being the sole childrearing adult in a household, poor health, increased sense of powerlessness, and more depressive symptoms (Dohrewend and Dohrewend 1981; Liem and Liem 1978; Mirowsky and Ross 1983; Wheaton 1989). The strong relationship between poverty and maternal well-being is explored here in order to assess whether income or poverty itself is the strongest predictor of maternal psychological resources among this sample or does the effect of poverty work through other measured contextual items including marital status, level of education, or age at the birth of her first child.

Figure 1. U.S. Census Poverty Rates from 1993-2003 for all Families and Single Mother Families



This study builds on a body of research studying the familial aspects that influence mental health indicators of low-income youth by examining the pathways through which poverty impacts adolescent depression, anxiety, and social withdrawal. By exploring the mediational influences of maternal psychological well-being on the relationship between poverty duration and adolescent socioemotional outcomes of low-income youth, this study seeks to further elaborate the relationship between the family and adolescent experiences. This study is organized around the following set of questions: (1) How does the duration of time spent in poverty influence early adolescent mental health indicators? (2a) Do maternal depressive symptoms and sense of mastery mediate the impact of poverty on young adolescent mental health (2b) and to the extent that maternal mental health mediates poverty, what role does the mother's mental health play in buffering or exacerbating these

outcomes? Finally, (3) to what degree does poverty predict mother's depressive symptoms and sense of mastery?

Poverty Experiences and Adolescent Outcomes

Experiencing persistent poverty over time can have adverse effects at all developmental stages. Prior research utilizing the life course perspective argues that experiencing sudden economic loss due to job loss or other major transitions can lead to a restructuring of financial resources and relationships (Elder and Caspi 1988), however persistent poverty has been most consistently linked to child socioemotional well-being (Duncan, Brooks-Gunn, and Klebanov 1994; McLeod and Shanahan 1993; Korenman, S., J. Miller, and J. Sjaastad 1995). The changes in the family due to economic strain, including arbitrary parenting behaviors, are linked to externalized behaviors in boys and internalized behaviors in girls (McLoyd 1998; Elder 1999). In McLoyd's discussion of poverty's influence on child and adolescent well-being, she argues that poverty and economic loss adversely affect children's socioemotional functioning through their impact on the parents' behavior towards their children (1990; 1998). She argues that the major mediator between economic hardship and parenting behavior is parental psychological distress stemming from negative events, chronic undesirable events, or the absence of or disruption to marital bonds. Poverty diminishes the ability of parents to provide supportive, consistent behavior, and involved parenting, and may render parents more vulnerable to debilitating effects of life events (1990). Combined, the additive factors associated with experiencing poverty, can have a cumulative deleterious impact on youth living in low income households.

The cumulative challenges associated with poverty are illustrated through the cumulative risk model that addresses the pathways through which poverty impacts youth. The coexistence of family factors contributes to the increased negative risk of negative

outcomes for adolescent from low-income households. The presence of maternal mental illness, large family size, or severe family discord by themselves do not necessarily increase the likelihood of negative outcomes, but when two or more factors are present together, the risk increases dramatically (Rutter1974). This suggests that as the number of risk factors increase among children and adolescents, the strength of the association between these factors and substantial declines in psychological adjustment and performance increase. These risk factors include parents' employment and educational status, family size, maternal mental health, unsafe living environment, and parenting behaviors (Sameroff, Seifer, and Bartko 1997; Stiffman, Haldey-Ives, D. Elze, Johnson, and Dore 1999).

Maternal Psychological Resources

Maternal mental health is an important factor in explaining the outcomes of poor youths. There is a negative relationship between socioeconomic status and psychological distress and mental disorders (Miech, Caspi, Moffitt, Wright, and Silva 1999). Persons continuously living in poverty are exposed to frustration- producing experiences (Liem and Liem 1978) and deal with an "unremitting succession of negative life events" (p.318). These events, including eviction and physical and mental illness, may exist in the broader context of chronically stressful life conditions that families face constantly, such as inadequate housing and unsafe neighborhoods (McLoyd 1990). In addition, mental health disorders dramatically decrease the likelihood of poor mothers to obtain and sustain employment (Jayakody and Stauffer 2000). The various stressors in the lives of low-income mothers such as inflexible work hours, attempting to pool together adequate financial resources, and difficulty with child care arrangements associated with mental health problems, have been linked to involuntary and voluntary declines in supportive behavior on the part of the mother (Whitbeck et al. 1991; McLoyd, Jayratne, Ceballo, and Borquez 1994).

Researchers have found significant correlates to individual's sense of mastery or control over their lives. These correlates include income, education, employment, race, and age (Ross and Sastry 1999). Mastery is defined by Pearlin and Schooler (1978) as the extent to which the individual regards his or her life chances as being under their own control in contrast to being fatalistically ruled. Pearlin and Schooler suggest that when individuals experience life strains and stressors in specific roles, including being a breadwinner, a parent, and a spouse, they must engage in coping strategies. These strategies include psychological resources. These psychological resources are characteristics that individuals draw on to cope with external obstacles in their environments and they include self-esteem, self-denigration, and mastery.

Experiencing stressful life events and/or chronic strains can lead to adverse effects on self-concept, including mastery (Pearlin, Menaghan, Lieberman, and Mullan 1981). When mastery is diminished, individuals are left especially vulnerable to symptoms of stress, including depression. Research has also shown that SES is another factor that is positively related to sense of mastery or sense of control over self and one's environment (Mirowsky and Ross 1983) and is specifically related to education, job status, family income, and a decrease in a sense of powerlessness (Ross and Mirowsky 1983; Wheaton 1980). A sense of mastery or control mediates the influence of SES on emotional distress in the form of depression and anxiety. Feelings of distress tend to be elevated among people who feel that they have little influence over the events that occur in their lives (Mirowsky and Sastry 1999). Feeling a lack of control over one's life can lead to demoralization, and reduce an individual's will to actively solve problems. These issues of psychological influences on behavior are demonstrated in research that focuses on the mediating impact of maternal

behaviors and well-being on the relationship between poverty and youth outcomes (McLoyd 1990).

Mothers who are depressed tend to be less attentive to their children, alternate between disengagement and intrusiveness, and show lower reciprocity (McLoyd 1990). They also tend to demonstrate negative affect towards their children (Luthar 1999; McBride, Schoppe, and Rane 2002). The relationship between psychological distress and socioeconomic status is especially strong among single mothers, whether their status is due to never being married or experiencing divorce (McLoyd 1990). Single mothers are at great risk for anxiety, depression, and health problems (Compas and Williams 1990) and these risks are intensified by being poor and living alone with their children (Guttentag, Salasin and Belle 1980; McLoyd 1990; Kellam, Ensminger, and Turner 1977).

Several studies have tested the effects of poverty and economic hardship on youth internalizing problems and externalizing symptoms, and how those effects are mediated by parenting behavior and mental health. Lempers, Clark-Lempers, and Simons (1989) found that economic hardship directly affected adolescents' feelings of loneliness and depression. In addition the study also demonstrated that economic hardship indirectly affected both feelings of loneliness and depression through less parental nurturance and more inconsistent discipline. Overall, economic hardship indirectly affected adolescent delinquency through inconsistent parental discipline. In another study conducted by Bolger, Patterson, Thompson, and Kupersmidt (1995), the effects of chronic economic hardship were tested over time. The study was conducted using the Charlottesville Longitudinal Study on three cohorts of children ages eight, nine, and ten years, respectively. They found that children who were in families experiencing persistent economic hardship had greater difficulties with peer relationships, more conduct problems at school, and lower self-esteem than children

who experienced poverty intermittently. These results, however, were mediated by teacher's reports of how involved the mother was in her child's educational development.

In several studies testing the effects of persistent poverty on internalized and externalized outcomes, the child outcomes were measured through late childhood and early adolescence from ages 10 to 14 (McLeod and Owens 2004; McLeod and Nonnemaker 2000; McLeod and Shanahan 1996; 1993) and support the argument that persistent poverty is mediated by parental mental health and parenting behavior. McLeod and Shanahan (1993) used the National Longitudinal Survey of Youth to test the effects of poverty duration on young children's internalized problems and externalized behaviors. In their earlier study, they measured the effect of poverty duration on children who were ages 4 to 8 in 1986, finding that persistent poverty significantly predicted internalized problems, but current poverty predicted externalized behavior. McLeod and Shanahan (1996) used growth curve models to test the effects of poverty on children's mental health and behavioral trajectories. The study reported that maternal warmth and physical punishment explained the effect of current poverty on child mental health, but not the effects of persistent poverty. They also found that the relationship between poverty, parenting behavior, and child outcomes did not vary by race. McLeod and Shanahan established that prior poverty experiences had higher levels of depression and antisocial behavior in the outcome year. They also suggested that rates of an increase in antisocial behavior were higher for children with histories of persistent poverty relative to those children who experienced intermittent poverty.

McLeod and Nonnemaker (2000) also utilized the National Longitudinal Survey of Youth and tested the difference by race of persistent poverty and current poverty on children's internalized and externalized problems. The children in the sample were between the ages of 4 and 9 years old and separate analyses were run on white, African American, and

Latino children. The analyses included maternal background behavior and characteristics and mediators that included neighborhood problems, mother's psychological resources, and characteristics of the home environment. The results of the study demonstrated that persistent poverty had stronger effects on child problems for white children relative to African American children. They suggested that the effect of poverty was explained by its relationship to delinquency and current marital status for white mothers. The strongest mediators among all the contextual variables were mother's early self-esteem, mastery, neighborhood problems, and cognitive resources provided by the mothers in the study.

Previous studies examining the effects of poverty on youth outcomes suggest that poverty has an ongoing effect throughout childhood and adolescence. Economic loss and persistent hardship play an important role in increasing behavioral and mental health problems among adolescents. Perspectives created by Elder and his colleagues and also by McLoyd emphasize the importance of studying family processes in the lives of poor families. Elder's research emphasizes the impact of economic loss on family interaction and adolescent well-being (Elder 1999; Elder and Caspi 1988), while McLoyd's model focuses on the importance of persistent poverty's effect on child outcomes and its mediation by maternal behavior and family processes (McLoyd 1998; McLoyd 1990). Because of the strong association between mental health and SES, maternal mental health also plays an important role in predicting adolescent behavioral problems.

Parenting is likely to be a behavioral manifestation of psychological resources including mastery and sense of control, self-esteem, and depressive symptoms. These symptoms directly and indirectly impact adolescents' later outcomes. This study will contribute to the prior research by addressing to what extent maternal psychological resources mediate the relationship between poverty duration and adolescent socioemotional

outcomes by utilizing structural equation modeling and exploring which factors play the strongest roles in maternal depression and mastery. In addition this study will take the process a step further by assessing how strongly poverty duration predicts maternal depression and mastery. I hypothesize (1) that poverty duration will increase adolescent depression and anxiety and increase peer problems, but this relationship will be mediated by mothers' levels of depression and mastery. (2) It is expected that African American adolescents are more adversely affected by poverty as they are more likely to be in stressful physical environments with numerous additional stressors indicative of living in poor, urban, socially isolated environments (Dubow, Edwards, and Ippolito 1997) that lead to more externalized behavioral problems, but are more likely to have families that develop adaptive coping strategies buffering children from internalizing emotional problems. (3) Finally, I expect to find that poverty is the strongest predictor of maternal depression and mastery.

Sample

The data for this study comes from the National Longitudinal Survey of Youth (NLSY) collected by The Center for Human Resource Research (CHRR) at the Ohio State University. NLSY data collection began in 1979 with an original sample of more than 12,600 respondents between the ages of 14 and 21. The survey includes extensive information on employment, education, training, and family experiences and, beginning in 1982, this survey also included information about pregnancy, postnatal fertility, and childcare experiences of the female respondents. The NLSY sample also included an oversample of African Americans and low-income families. In 1986, the survey began biennial assessments of the children born to NLSY79 mothers.

Child variables included cognitive skills, temperament, motor and social development, behavior problems, perceived competence, and the quality of home

environment (CHRR 2000). The child assessments administered to NLSY families include 1) *The Mother Supplement,* 2) the *Child Supplement,* and 3) the *Child Self-Administered Supplement* (for children ages 10 and over). The instruments were administered to children of mothers in the original NLSY79 cohort under 15 years old. The *Mother Supplement* completed by mothers of the children assessed, include items from the Home Observation Measurement of the Environment (HOME), items on child's temperament, motor and social development, behavioral problems using the Behavioral Problems Index (BPI), and information on school and family background. The *Child Supplement* records information from the mother on child health and background along with responses from children to assessment items, and interviewer observations of the child's home environment. This supplement included, in addition to items previously mentioned, the Self-Perception Profile for Children (SPPC), Peabody Individual Achievement Test (PIAT) Math, and PIAT Reading Recognition and Comprehension.

For the purpose of this analysis, the sample from the NLSY includes 1265 African American, Hispanic, and Caucasian children ages 10-14 at the time of their assessment in 1998. Maternal background and assessments were compiled into a separate data set from child assessment files. The Center for Human Resource Research includes mother and child identification in each data set in order to provide the ability to merge the data sets together. Because this study measures both child and maternal background characteristics, the NLSY79 data files were merged with the NLSY Children and Young Adult Files by matched mother and child identification codes.

Measures

Dependent Measures

The Behavioral Problems Index *(BPI)* developed by Zill and Peterson (1986) is

employed to measure internalized and externalized behavioral outcomes. The BPI was administered to the mothers of children ages four to fourteen in the sample using a battery of 28 questions. The battery includes five subscales, three of which measure external factors and two of which measure internal factors. This study drew on items to create two latent variables: (1) depression and anxiety and (2) peer problems and social withdrawal. As the items for both factors are limited categorical, rather than assuming item-level normality, Samejima's graded response model is used to conduct non-linear factor analysis which assumes that the underlying distributions of depression and anxiety and peer problems are normal in the population (du Toit 2003).

The depression and anxiety construct was comprised of six items and tested for model fit using Confirmatory Factor Analysis (CFA). The items included questions such as: "The child is sad, unhappy, or depressed" and "The child is high-strung, tense, and nervous" with responses ranging from 3 for often true to 1 for never true. BPI items were originally coded as 1 for often true, 2 for sometimes true, and 3 never true. All BPI items were reverse coded to provide more meaningful results in the analyses. These measures together demonstrated a strong model fit (CFI =.990, TLI = .988 and RMSEA= .055).

Peer Problems and Social Withdrawal also included six items that assessed child social interaction with items such as "Child is withdrawn" and "Child has trouble getting along with other children." The model fit was acceptable for this factor (CFI =.969, TLI = .969 and RMSEA= .065), indicating that the proposed Confirmatory Factor Analysis accurately captures the covariance structure among the items.

Latent Maternal Measures

Mother's psychological resources are potential mediating variables between economic hardship and adolescent mental health, but they also serve as an outcome of

interest in addressing how a mother's poverty experiences and background impact her mental health. The Center for Epidemiologic Studies Depression Scale (CES-D) is one of the measures that address mother's mental health available on the NLSY (alpha=.84). The scale, which is self-reported by the mother, was designed to measure current levels of depressive symptomatology (Radloff 1977) and it was administered biennially beginning in 1992. It consists of a battery of six items that ask about symptoms related to stress such as trouble concentrating, feelings of depression, and sleeplessness. The mother is asked how often she experiences each of these feelings over the course of a week. The responses are coded 1 for "none to 1-2 times daily", 2 for "occasionally/3-4 times daily," and 3 for "most of the time/5 to 7 days." The scores are then summed to compute a total score of depressive symptoms in 1992. The confirmatory model using these items fit the model well (CFI =.983, TLI = .973 and RMSEA= .055).

The mastery scale (alpha =.77) created by Pearlin and Schooler (1978) is used to measure the extent to which the mother feels she has control over events in her life. This was also measured in 1992. The items include respondent's feelings of helplessness in solving problems in her life, the respondent's responses to whether she is capable of changing important things in her life, and the respondent's answers about whether there are ways for her to solve problems in her life. The mother's responses are coded 1 for "strongly disagree/disagree" and 2 for "agree/strongly agree." Together these items exhibit a covariance structure consonant with theoretical expectations (CFI =.979, TLI = .955 and RMSEA= .060).

Independent Measures

Poverty status was measured using a dichotomous scale. Every year, the NLSY determines the poverty status of the household based on data provided by the U.S. Census on income and family composition (Center for Human Resource Research 1996). For every year from 1979 to 1998, if the household was below the poverty line, the adolescent was coded as 1 for the "in poverty" classification. If they fall above the poverty line, they are coded as 0 for "not in poverty." The duration of poverty status is calculated as the proportion of years reported in poverty status. Poverty duration includes all years of poverty status reported from the birth of the child (1984-1988) to 1998.

Child background characteristics used in this study included age, gender, and race and are treated as dichotomous control variables. The child's age at the time of their most recent assessment is controlled and counted in number of years. Sex has two response categories and is coded 0 for male and 1 for female. Race in the full sample analyses is used as a control variable where white adolescents are the reference category and black and Hispanic adolescents are included in the analyses.

Mother's cognitive ability, level of education, and age at first child's birth are strong predictors of child cognitive ability and behavioral outcomes (Jencks and Phillips 1998; Duncan and Brooks-Gunn 1997; Parcel and Menaghan 1994; Guo and Harris 2000). Mother's cognitive ability is measured by the Armed Forces Qualification Test (AFQT), which was administered to NLSY mothers in 1980. Mother's educational attainment is measured by the number of years of schooling completed by the mother by the time the child's assessment is administered. Mother's age (in years) at the child's birth was controlled due to the large portion of mothers in the NLSY who were adolescent when they had their children.

Family structure plays an important role in the developmental outcomes of children and adolescents (McLanahan and Sandefur 1994). In this study, family structure is controlled for by creating three marital status categories. In the NLSY, marital status was originally coded using five categories: married, single, separated, divorced, and widowed. For the purpose of this study, arrays were created to construct three variables that were defined as always married, never married, and marital transition. In each of the categories a formula was used to score a 0 or 1 according to the respondent's answers to the question at multiple time points. In the "never married" category, if a mother marks being single in every year of data collection she was given a score of 1. If she answered in any other category she was given a score of 0. The same logic was used for the remaining categories. For the marital transition variable, if a mother scores divorced, widowed, or separated in any given year of data collection she receives a score of 1. If she answers married or single for all survey years she receives a score of 0. The "always married" variable is omitted from the regression analyses because the third category would be a linear combination of the other two variables.

Also maternal emotional support is controlled in order to take into account parenting behavior. The Home Observation Measurement of the Environment (HOME) assesses the quality of the child's home environment. The Emotional support measures explore maternal interactions with the child and whether she displays certain behaviors with the child. These behaviors include whether the mother encourages the child to contribute to conversation, types of punishment the mother uses with her child, and so on. The behaviors were then assigned values and summed to give a total score on emotional support where the higher the score, the more supportive the mother's behavior.

Results

Descriptive Analysis

Table 1 provides the demographic depiction of the sample included in this study. It is important to keep in mind that this sample is derived from an overall sample where there is an oversample of African Americans and low-income respondents. This is evident with the large disparity between their poverty experiences where African Americans and Hispanics spend on average 41 percent and 29 percent of their lives respectively in poverty while Caucasians spend 14 percent of their lives in poverty on average. The differences in the sample are also evident in other background characteristics including marital status and educational attributes. Twenty six percent of African American mothers in this sample have never been married while 6 percent of Hispanic mothers and 3 percent of Caucasian mothers have never been married. In addition, 76 percent of white mothers and 67 percent of Hispanic mothers in the sample were married compared to 39 percent of African American mothers. The largest education disparity is illustrated in the AFQT scores where on average African American mothers and Hispanic mothers had almost half the scores of the Caucasian mothers. Finally, African American mothers and Hispanic mothers in the sample on average have children at a younger age than white mothers in the sample.

Table 1. Descriptive Statistics (N=1226)

	Total	African American	Hispanic	Caucasian
N	1226	356	253	617
Independent Variables				
Adolescent Variables	**Mean (SD)**			
African American	0.29			
Hispanic	0.21			
White	0.50			
Female	0.50	0.52	0.44	0.51
child age	12.05	12.06	11.97	12.08
	(1.26)	(1.22)	(1.29)	(1.28)
Mother Variables				
Poverty Duration	0.25	0.41	0.29	0.13
	(.323)	(0.357)	(0.339)	(.236)
Married**	0.63	0.39	0.67	0.76
Never Married	0.11	0.26	0.06	0.03
Divorced	0.26	0.35	0.24	0.20
Years of Schooling	12.81	12.86	11.97	13.14
	(3.30)	(4.68)	(2.98)	(2.24)
AFQT Score	37.38	20.25	27.00	52.04
	(27.76)	(17.11)	(22.61)	(27.04)
Age at First Birth	22.39	21.12	22.13	23.25
	(3.26)	(3.31)	(3.29)	(2.95)
Emotional Support to Child	112.30	102.31	115.01	117.01
	(19.11)	(20.37)	(18.92)	(16.05)

*White adolescents are the omitted category

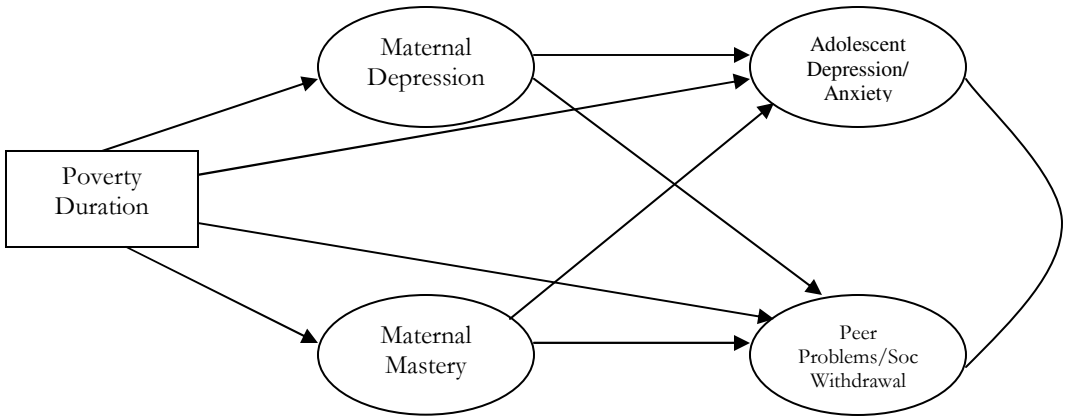
**Always married is the omitted category

Multivariate Analysis

Figure 1 illustrates the conceptual path model reported in Tables 2a, 2b, and 3. The models in Tables 2a and 2b estimate the relationship between the dependent latent variables, depression and anxiety (Table 2a) and Peer Problems and Social Withdrawal (Table 2b), on mothers depression and mastery, the duration of time spent in poverty, and child and mother backgrounds characteristics. Total, direct, and indirect effects were estimated in both sets of models. It should be noted that there is an average of 1.4 children per mother in the sample indicating nesting within families. In order to account for the non-independence of observations due to clustering, all previous and subsequent SEM analyses adjust standard errors and estimates of model fit using robust estimators (Munthén and Munthén 2004; these analyses use the M*plus* v3.12 x 'type=complex' analysis). The variances

of all latent variables in the models are fixed to 1 so that coefficients represent the expected standard deviation difference in the outcome for a one-unit change in the independent variable, and so that regressions amongst latent variables are fully-standardized (i.e., effect-sizes).

Figure 1. Conceptual Path Model



The initial main effects model controls for race and gender with significant effects for Peer Problems/Social Withdrawal. Being African American significantly increases the amount of peer problems as well being male.[1] Once poverty, maternal depression, mastery, and background variables are controlled, gender remains significant with boys still having significantly higher scores than girls. This is not unexpected as boys are more likely to demonstrate externalized behavioral problems than girls on measures of socioemotional

[1] In further analysis, an interaction between race and gender was included that rendered the main effects insignificant, but had no significant interaction effect. Because the interaction was not significant it was removed from the model.

outcomes (McLoyd 1999). In the following models, the analyses provide support for the hypothesis that poverty duration will adversely affect adolescents until the adjustment for maternal depression and mastery is made.

Table 2a. Estimated Effects of Adolescent Race, Child Sex, Poverty Duration, Maternal Depression, Mastery, and Background Variables on Adolescent Peer Problems/Social Withdrawal (N=1175)

Dependent Variable/ Independent Variable	Model 1	Model 2	Model 3	Model 4
PeerSoc/ Black	0.291(0.096)*	0.117(0.098)	0.123(0.103)	0.020(0.123)
PeerSoc/Hispanic	0.070(0.106)	-0.054(0.109)	-0.056(0.115)	-0.063(0.126)
PeerSoc/ Sex	-0.163(0.077)*	-0.188(0.078)*	-0.198(0.082)*	-0.178(0.087)*
PeerSoc/Poverty Duration		0.738(0.129)*	0.775(0.135)*	0.561(0.175)*
PeerSoc/Depression			0.160(0.045)*	0.143(0.043)*
PeerSoc/Mastery			-0.242(0.048)*	-0.248(0.046)*
PeerSoc/Never Married				-0.327(.169)
PeerSoc/Divorced				0.038(0.109)
PeerSoc/Years of Schooling				-0.015(0.015)
PeerSoc/AFQT				0.001(0.002)
PeerSoc/Age at First Birth				-0.028(0.016)
PeerSoc/Supportive Parenting				-0.012(0.003)*
PeerSoc/Child Age				0.036(0.035)
Latent R-square	0.022	0.069	0.154	0.191

Increased poverty duration has a very strong positive correlation with both adolescent peer problems/withdrawal and depression/anxiety. These relationships are no longer statistically significant and the coefficients decline dramatically in magnitude with the introduction of maternal depression and mastery. Mother's increase in depression increases adolescent depression/anxiety and peer problems/withdrawal. Mothers with low levels of mastery increase adolescent depression/anxiety and peer problems/withdrawal. These latent variables explain much of the variance in Model 3 for Tables 2a and 2b (9% and 8% respectively). The effects remain true in the full models where maternal background characteristics and behavior are introduced into the model.

In Model 4, the only additional variable that has a significant association is the emotional support variable. Supportive parenting decreases the levels of depression/anxiety and peer problems/withdrawal scores although it explains very little of the variance in the full models for Table 2a and 2b (4% and 3% respectively). The magnitudes of maternal

depression and mastery remain high, increasing both depression/anxiety and peer problems by one standard deviation for every unit increase in depression and decrease in mastery.[2]

The analyses in tables 2a and 2b set out to estimate the effects of poverty duration, maternal depression and mastery on adolescent outcomes. The models supported the hypotheses that maternal depression and mastery for both dependent outcomes increase depression/anxiety and peer problems/social withdrawal scores for adolescents. Within this model, the pathway through which poverty impacts adolescent outcomes is mostly explained maternal psychological resources. These findings suggest that mother's psychological resources are a mechanism through which poverty duration effects adolescent well-being.[3]

Table 2b. Estimated Effects of Adolescent Race, Child Sex, Poverty Duration, Maternal Depression, Mastery, and Background Variables on Adolescent Depression and Anxiety (N=1175)

Dependent Variable/ Independent Variable	Model 1	Model 2	Model 3	Model 4
DepAnx/ Black	-0.095(0.093)	-0.105(0.087)	-0.099(0.097)	-0.202(0.113)
DepAnx/Hispanic	0.006(0.093)	0.013(0.090)	0.007(0.098)	0.009(0.109)
DepAnx/ Sex	-0.045(0.070)	-0.057(0.065)	-0.047(0.073)	-0.044(0.075)
DepAnx/Poverty		0.467(0.121)*	0.489(0.128)*	0.258(0.157)
DepAnx/Depression			0.154(0.044)*	0.146(0.042)*
DepAnx/Mastery			-0.243(0.046)*	-0.254(0.043)*
DepAnx/Never Married				-0.042(0.158)
DepAnx/Divorced				0.107(0.102)
DepAnx/Years of Schooling				-0.009(0.013)
DepAnx/AFQT				0.001(0.002)
DepAnx/Age at First Birth				-0.014(0.015)
DepAnx/Supportive Parenting				-0.011(0.003)*
DepAnx/Child Age				0.025(0.030)
Latent R-square	0.001	0.020	0.108	0.140

[2]Latent variables in the model are standardized with respect to the dependent variable.

[3] Interaction terms for poverty duration*depressive symptoms and poverty duration*mastery were tested to assess the extent that maternal psychological resources behave as buffers to the deleterious effects of poverty, but no significant interaction was found and thus, was removed from the model.

Effects of Poverty on Mother's Depression and Mastery

Table 3 takes an additional step in assessing what the strongest predictors of maternal depression and mastery are in the model. The model estimates the effects of poverty duration and other maternal characteristics on mother's psychological outcomes. The models show evidence that poverty duration is the strongest predictor of maternal depression and mastery. The longer mothers spend in poverty, the higher their scores on depressive symptoms and the lower their score on mastery. Even after adjusting for all other maternal characteristics, poverty duration retained a strong association—the strongest in the model. The only other significant predictor of maternal depressive symptoms was mother's AFQT scores. Mothers who scored higher on the AFQT scores have lower levels of depressive symptoms. In contrast, for maternal mastery, in addition to the significant effect of poverty duration on maternal mastery, being African American increased mother's sense of mastery as did her years of schooling and AFQT scores. In addition, there is a positive association between mother's age at the birth of her first child.

Table 3. Estimated Effects of Poverty Duration and Maternal Background Characteristics On Mother's Depression and Mastery

Independent/ Dependent Variable	Model 1	Model 2
Depression/PovDur	0.822(0.127)*	0.490(0.155)*
Depression/Black		-0.127(0.115)
Depression/Hispanic		-0.150(0.102)
Depression/Sex		-0.073(0.065)
Depression/Never Married		0.079(0.156)
Depression/Divorced		0.106(0.094)
Depression/Years of School		0.015(0.020)
Depression/AFQT		-0.007(0.002)*
Depression/Age at First Birth		-0.018(0.013)
Mastery/PovDur	-0.978(0.127)*	-0.652(0.157)*
Mastery/Black		0.224(0.109)*
Mastery/Hispanic		0.178(0.108)
Mastery/Sex		0.038(0.065)
Mastery/Never Married		-0.082(0.147)
Mastery/Divorced		0.058(0.094)
Mastery/Years of School		0.041(0.015)*
Mastery/AFQT		0.005(0.002)*
Mastery/Age at First Birth		0.026(0.013)*
Latent R-Square for Depression	0.066	0.095
Latent R-Square for Mastery	0.091	0.138

Discussion

The direct effect of poverty duration on youth behavioral problems was consistent with previous studies that tested the relationship between persistent poverty and later outcomes of children and adolescents. These studies found that children who were persistently poor scored higher on internalizing problems such as depression and anxiety (Bolger, Thompson, and Kupersmidt 1995). Although poverty duration is significantly associated with increased behavioral difficulties and decreases in socioemotional outcomes, several studies found that current poverty is a stronger predictor of externalized behavioral problems, because it is an immediate reaction to stress brought on by economic hardship (Bolger et al. 1995; McLeod and Shanahan 1993). As found in previous research, poverty duration explained away the race differences in adolescent behavioral problems (Goosby 2003).

The findings of this study are also consistent with the literature suggesting that maternal well-being and familial processes mediate the effect of poverty on adolescent behavioral and socioemotional outcomes. Maternal mental health consistently helps to explain the effects of poverty on both white and African American adolescents, replicating the findings of McLeod and Nonnemaker (2000). Interestingly, the findings of this study demonstrate that the affect of maternal psychological resources on adolescent outcomes are not explained by maternal background characteristics or the level of emotional support she provides for her children. The emotional support variable does explain a significant portion of effect of maternal depression and mastery. This is consistent with findings that mothers who are in good mental health engage in adaptive coping behaviors that buffer their children from the detrimental effects of economic hardship (Pearlin and Schooler 1978; Taylor and Roberts 1995).

In exploring the strongest predictors of maternal depressive symptoms and mastery, it was found that increased poverty duration was positively associated with depressive symptoms and decreased mother's feelings of mastery. This finding is supported by previous research findings that economic strain and hardship are highly correlated with maternal psychological well-being (Taylor and Roberts 1995; McLoyd 1990). Moreover, the analyses demonstrated that for the mastery outcome, being African American increases sense of mastery. This finding suggests that African American mothers my have developed more coping strategies when experiencing poverty. In this sample, on average, African American mothers spend more time in poverty than Caucasian mothers which reflects the trends of African Americans being disproportionately represented and more persistently living in poverty. However, African American women may be less likely to be socially isolated and may have kinship support in their community (McAdoo 1997). This in turn may lead to

African American mothers feeling that they have more control over their lives due to the additional supports of adaptive strategies through others who may help with care giving. There were no significant findings for Hispanics in the sample, which may be indicative of one of the limitations of the sample which combined all groups of Hispanics in the sample without attention to ethnic differences between groups. The differences in the characteristics of poverty experiences among African American and Caucasian mothers suggests the importance of additional contextual factors that could play a role in the lives of low income families.

This study does have a limitation in how maternal depression and mastery were measured. Maternal mental health outcomes, including depressive symptoms and mastery, were measured at a single point in time. Depressive symptomatology has been shown to be cyclical (Pearlin and Schooler 1978) or more likely to surface more than once, I have assumed that there may be a lag in the effects of depressive symptoms or that mothers who score high on depressive symptoms are more likely to score high again later. The only way to truly test this assumption is to measure maternal mental health at more than one point in time. This also leads to issue of causality with regard maternal mental health and family context effects. Although this limits the generality of the study, the magnitude of the effects measured in the analysis suggest support Pearlin's cyclical depression model, and, as stated above, coincide with prior research although further research is needed containing additional waves of mental health data in order for causality to be established.

The cumulative exposure model posed by Vonnie McLoyd, stating that constant strain of the ongoing exposure to poverty has detrimental effects on both parents and their children (McLoyd 1998). Such exposure is typically associated with living in areas that have a high concentration of poverty and living in areas that lack institutional resources and

support. In addition, on an individual level, people who are in poverty for extended periods of time may experience higher levels of stress and mental and physical health problems, which in turn influences their ability to parent effectively. This argument is supported by the body of research finding that among low income and some minority population's reports of depression and post traumatic stress disorder (PTSD) are especially high. Among single mothers, over a 12-month period, the prevalence of mental health disorders fall between one- third and one-half (Meisel and Chandler 2002). With such a high prevalence of risk factors in this population, continued research is needed as well as interventions to improve the well-being of not only poor adolescents, but their mothers also.

In summary, the findings indicate that persistent poverty has deleterious effects on adolescent socioemotional problems. Adolescents who engage in problematic behavior in addition to being in poverty, generally, do not have the access to structural resources available to buffer these problems. As a result, increased behavioral problems have more dire consequences for their later outcomes, including employment opportunities, school completion, and family formation. This study also demonstrates that maternal psychological resources play an important role in the lives of adolescents. The analyses also suggest that with improved mental health, mothers can serve as a buffer to the strains and stressors associated with poverty. By increasing access to mental health resources for poor mothers, creating more effective treatments, and providing information, youth well-being among children with low-income mothers, could improve. Further, by alleviating economic strain for families in poverty there can be changes in the economic and psychological well-being of families and youth.

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