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Parental Assets

A Pathway to Positive Child Educational Outcomes

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Parental Assets: A Pathway to Positive Child Educational Outcomes

A growing body of evidence suggests parental assets have positive effects on children's well-being. Using 2004 data from the Survey of Income and Program Participation, this study tests the effect of parental asset holding on child educational outcomes, and explores whether this relationship is mediated by parental involvement and expectations. Results indicate that assets are a significant predictor of all child academic outcomes of our study, however income is not a significant predictor for school outcomes when controlling for assets. The mediation analyses show the effect of assets on school outcomes is mediated by two of the three parenting measures: parental expectations and the number of parent-child breakfast days per week. Implications for policy and practice are included.

Key words: *assets, child outcomes, parental involvement, parental expectations, income*

Introduction

A large body of research has established that family income influences a variety of child outcomes related to school performance (Duncan & Brooks-Dunn, 1997; Gershoff, 2003; Costello, Compton, Keeler, & Angold, 2003; Morris & Gennetian, 2003). However, recent research has suggested that financial asset holding or wealth can also impact a child's academic outcomes (Conley, 2001; Mayer, 1997; Williams, 2003; Zhan, 2006; Zhan & Sherraden, 2003). This argument has important implications because households with children are more likely to experience asset poverty, which is described as a household having insufficient assets or net worth to maintain itself at a poverty-level income for three months (Haveman & Wolff, 2005).

Assets, defined as the total amount of an individual's accumulated wealth held at a given time, offer resources that create opportunities for investment in long-term economic and social well-being (Sherraden, 2005). Therefore, assets may be particularly important for families because they provide stability, offer a cushion in difficult times, and improve future orientation.

Although there is some evidence that has suggested parental asset holding is important for children, less is known about the pathway through which assets impact child outcomes. One possible pathway that wealth and asset ownership may influence children's education is by improving parental attitudes and practices. By analyzing a nationally representative data set, this article examined the pathway through which parental asset holdings affect child academic outcomes as well as the possible mediating effects of parental expectations and parental involvement.

Literature Review

Assets and Children's School Outcomes

Over the course of the past ten years, policy makers, scholars, and social researchers have begun to give more attention to household net worth and asset holding as important indicators of a

household's financial security and economic status. Furthermore, when considering the economic resources available to a household, some scholars in this field have differentiated between income stream and assets (Oliver & Shapiro, 1995; Sherraden, 1991; Wolff, 1995). For example, Sherraden (1991) distinguished assets from income flow by noting the importance of assets in providing economic security and a cushion for unpredictable events such as a job layoff, job loss, or prolonged illness that can create economic stress and financial stress for a family. In addition to buffering economic stress, and perhaps more importantly, assets may serve as a catalyst to change the way people regard their lives, their future, and their positions and roles in their communities, as well as expanding the range of opportunities available to these households (Oliver & Shapiro, 1995; Sherraden, 1991). A growing body of empirical studies have tested the independent effects of assets (i.e., independent from effects of income) on the well-being of households, and the research findings have been consistently positive (Page-Adams & Sherraden, 1997; Scanlon & Page-Adams, 2001). One finding from previous research that is of particular relevance to this study was that the cushioning effect of assets held by parents may enhance their children's well-being by buffering the negative effects of unplanned income loss. In addition, asset holding has shown greater stability across generations than income. Of all the forms of parental influence on children, financial assets may be the easiest to transmit (Sherraden, 1991).

In addition, findings from a substantial number of empirical studies have supported the distinct impact of household assets as independent from the influence of income on children's educational outcomes (Conley, 2001; Mayer, 1997; Williams, 2003; Zhan, 2006; Zhan & Sherraden, 2003). Some of these studies reported that after controlling for household income and other measures of socioeconomic background, net worth was positively related to educational performance (e.g., test scores) and achievement (e.g., postsecondary schooling) of children (Conley, 2001; Williams, 2003; Zhan, 2006). The impact of different types of asset holding (home ownership, savings accounts, stock/IRA account) on children's education also has been examined. For example, Zhan and Sherraden (2003) found that low-income single mothers' home ownership was positively related to their children's grade point average. In addition, children of mothers with more savings were more likely to graduate from high school. Interestingly, these researchers also found that the income was not related to children's education when assets were included in the equation. Other studies have specifically examined the impact of homeownership on children's educational attainment, and have indicated that children were more likely to graduate from high school if they lived in households where parents were homeowners (e.g., Aaronson, 2000; Green & White, 1997; Kane, 1994; Rossi & Weber, 1996).

Assets and Parental Expectations & Parental Involvement

In addition to its economic impact, several theorists and empirical evidence have also suggested that asset building produces an attitudinal and behavioral change in families (DiPasquale & Glaeser, 1999; Rossi & Weber, 1996; Scanlon, 2001; Sherraden, 1991; Shobe & Page-Adams, 2001; Yadama & Sherraden, 1996). Sherraden (1991) indicated that assets may change the most fundamental ways that people think about their lives and, thus, help to foster a personal orientation toward the future. This hypothesis has been supported by findings from other empirical studies; for example, Yadama and Sherraden (1996), found that both home values and savings demonstrated positive links with families' attitudes including prudent behaviors, efficacy, social connectedness, and effort. Other studies that examined the effect of assets on the attitudes of single mothers have shown a positive relationship between assets and single mothers' educational advancement and increased participation

in job training activities (Zhan, 2006), and increased work hours (Cho, 2001; Zhan, 2006) of single mothers. In addition, self-report surveys of Individual Development Accounts participants have indicated that these asset holders were more likely to plan for their children's education after joining the IDA program (McBride, Lombe, & Beverly, 2003).

Further, empirical evidence has also suggested that asset building and wealth accumulation may ultimately improve children's education through the positive influence on parental attitudes and behaviors. More specifically, compared to parents without assets, parents with assets have been shown to perceive a brighter future for their children and were more likely to have positive parental attitudes and behaviors. In turn, these positive parental attitudes may help improve children's educational attainment (Zhan & Sherraden, 2003). In other words, parental attitudes and practices may mediate the relations between assets and children's school outcomes. In an analysis of a sample of single mothers obtained from the National Survey of Families and Households, Zhan and Sherraden (2003) examined the relationships among assets, parental expectations, and children's educational achievements among single-mother families. These researchers found that parental expectations partially mediated the relationship between assets (i.e., home ownership and savings) and children's educational achievement. Similarly, in a recent analysis of a sample obtained from the National Longitudinal Survey of Youth that included different types of households Zhan (2006), found that parent expectations acted as a partial mediator between net worth and children's education achievement measured by reading and math scores. This study further examined the possible mediating effects of parenting activities on the relationship of parental assets and children's education. Although the study findings demonstrated that net worth was positively related to parental involvement in children's school activities, parental involvement was not a mediating factor for the positive relationship between net worth and children's testing scores. In addition, this study found that net worth was not related to parental supervision of children's homework. Elliot (2007) analyzed the 2002 Panel Study of Income Dynamics (PSID) and the Child Development Supplement to the PSID, and found that one special form of assets accumulation—parent savings for a child's college education—was associated with parental expectations of children's education, regardless of race or socioeconomic status.

Study Purpose

As seen from our review of the literature, studies have examined the impact of parental assets on children's educational outcomes and the mediating effects of parental expectations. Although these studies utilized different national data sets, their findings are quite consistent. However, the research needs to further explore the relationship between assets and parental involvement, and the possible mediating effects of parental involvement on the relationship between assets and children's education. Studies have found weaker relationships between assets and parenting behaviors, and between parenting behaviors and children's educational outcomes than expected (Zhan, 2006). These findings could be, at least in part, the result of limitations in measuring parenting practices (e.g., self-report measurements by children). Therefore, researchers also need to examine how parental assets, expectations, and practices influence different dimensions of children's school outcomes (in addition to test scores and high school graduation). Our inquiry sought to answer the following research questions:

1. What are the effects of parental assets on child academic outcomes?

2. What are the effects of parental assets on parental involvement and parental expectations?

3. Do parental involvement and parental expectations mediate the effect of parental assets on child academic outcomes?

Data and Methods

Sample

Data were obtained from the Survey of Income and Program Participation (SIPP), a longitudinal panel survey that has been collected three times a year by the U.S. Census Bureau since 1984. SIPP collects information from a nationally representative sample of U.S. households. The core module of the SIPP survey is conducted with each wave, and collects information on basic sociodemographics, income, and welfare program participation. In addition, each wave of SIPP has a topical module that obtains detailed information related to a specific subject or theme.

This study combined three data sets for analyses: the core module of the 2001 SIPP wave 6 for demographics and income information; the topical module of the 2001 SIPP wave 6 on assets; and the topical module of the 2001 SIPP wave 7 on children's well-being. The data were collected between October 2002 and May 2003.

The unit of analysis was each child between the ages of 5 and 17 years in the sample. After removing extreme outliers of net worth (less than $-500,000 or more than $5,000,000), 4% of the sample was excluded from the analysis; the final sample included 12,392 children aged 5 to 17 years from 7,235 households.

Measures

Assets (independent variable). The independent variable—parental assets—was measured as net worth values. These values were calculated by subtracting the total debt from total wealth in each household. Total wealth included the value of the home and other real estate, vehicles, business equity, interest-earning assets in banks or other financial institutions, stock and mutual fund equity, and retirement savings accounts such as IRAs or KEOGHs, 401(k)s, and Thrift Savings Plans. Total debt included mortgages on the home and other real estate (such as rental property); vehicle loans; margin and brokerage accounts; business or professional debt; credit card and store bills; medical bills; loans from individuals and financial institutions; and educational loans. Because of skewed distribution of assets, the values of assets were natural logged.

Parental expectation and parental involvement (mediator). The parental expectation for each child was explored by asking the primary caregiver, "How far do you think the child will go in school?" The five response options were 0 (*less than high school graduate)*; 1 (*high school graduate*); 2 (*some college or training*); 3 (*college graduate*); and 4 (*more than college graduate*). Because the distribution of this variable approached normality with a moderate negative skewness (-0.997), it was treated as a continuous variable in the analysis.

Parental involvement was measured in this study through two variables. The first variable—parent-child interactions—was a composite variable derived from two questions asked of each child's primary caregiver: "How often do you and the child talk or play with each other for 5 minutes or more just for fun?" and "How often do you praise or compliment the child by saying something like 'Good for you'?" The five response options ranged from 0 (*never*), 1 (*about once a week*), 2 (*a few times a week*), 3 (*one or two times a day*) to 4 (*many times each day*). A composite variable was created by adding these items together (scores ranged from 0 to 8, Cronbach alpha = 0.78), and the composite variable was treated as a continuous variable in the analysis.

The second variable for parent involvement was measured by asking the primary caregiver to identify the number of days he or she had breakfast with his or her child each week. Because the response scales for this question were different from our other two measures of parental involvement, we created a separate variable for this question. The response scale ranged from 0 to 7, and it was used as a continuous variable in the analysis.

Children's school outcomes (outcome). This study included three questions regarding child school outcomes, all of which were asked to the primary caregiver for each child. The three outcome questions included (a) has the child ever repeated a grade, (b) has the child ever been expelled or suspended from a school, and (c) has the child shown interest in schoolwork.

If a child had repeated a grade, the response was coded as 1, and otherwise it was coded 0. If a child had ever been expelled or suspended from school, the response was coded as 1, and otherwise it was coded 0. For the question of the child's interest in schoolwork, responses of *often true* were coded as 1, and all other responses were coded as 0.

Among theses school outcome questions, two of the measures, "repeated a grade" and "interested in schoolwork" were related to the children between ages 5 and 17 years; another outcome "expelled from a school," was limited to children between ages 12 and 17 years.

Control variables. The control variables included child characteristics, primary caregiver characteristics, and household characteristics. The child characteristics included age (in years) and a dichotomous variable for gender (coded 1 for *boy,* and 0 for *girl*). The characteristics of the primary caregiver included (a) age of primary caregiver (in years); (b) a dichotomous variable for the primary caregiver's gender (coded 1 for *female*, and 0 for *male*); (c) a set of dummy variables indicating race/ethnicity of primary caregiver (white [the reference category], black, Hispanic, and other race/ethnicity); (d) a set of dummy variables for the education level of the primary caregiver (*do not have high school diploma*, *have a high-school diploma or GED* [the reference category], *some college*, and *bachelor's degree or more*); (e) a dichotomous variable for marital status of primary caregiver (coded 1 for *married*, and 0 for *nonmarried*); and (f) a set of dummy variables for the primary caregiver's employment status (*full-time* defined as 35 hours or more a week [the reference category], *part-time*, and *not employed*).

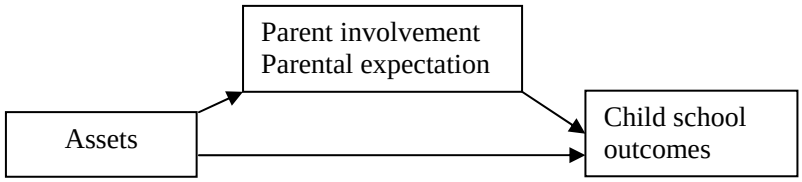
The household characteristics collected included the following: (a) a dichotomous variable for location of household, coded 1 for *metropolitan area* or 0 for *non-metropolitan area*; (b) the number of children living in the household; (c) the number of adults (18 years and older) living in the household; and (d) the total household income, which was defined as the total amount of monthly

income. Because the distribution of income was skewed, income data were transformed into a natural log.

Analysis

This study focused on the effects of net worth on child school outcomes mediated by parenting practices and parental expectations. The mediation model tested a direct path between the independent variable (parental assets) and dependent variables (child school outcomes), and an indirect link between the independent variable and dependent variable through a mediator of parental expectations and parental involvement (MacKinnon, Krull, & Lockwood, 2000). In mediation analysis, full mediation is supported if, when the mediator is controlled, the effect of the independent variable on a dependent variable becomes nonsignificant. However, the analysis supports partial mediation if, when the mediator is controlled, the effect of the independent variable on the dependent variable is reduced but still significant. Figure 1 summarizes the mediation model for this study.

Figure 1. Mediation model.



Based on the mediation model of this study, a series of regressions were run to examine the associations between assets and children's school outcomes, and the possible mediating effects of parental expectations and parental involvement.

To demonstrate a mediated relationship between parental assets and child school outcomes, the regression results had to meet the following conditions: (a) evidence of significant links between the predictors and outcomes, (b) evidence of a significant relationship between the predictors and the mediator, (c) evidence of significant links between the mediator and the outcomes, and (d) controlling for the mediator must remove or reduce the relationship between the predictor and the outcomes (Baron & Kenny, 1986).

A mediation analysis was conducted using the four steps recommended by Baron and Kenny (1986). First, each of the child school outcomes was regressed on assets to test direct effects of assets on child school outcomes. Second, parental expectation and parental involvement were regressed on assets to test direct effects of assets on possible mediators. Third, the child school outcomes were regressed on parental expectation and parental involvement to test direct effects of possible mediators on child school outcomes. Fourth, child school outcomes were regressed on assets and parental expectation and parental involvement to test indirect effects of assets on child school outcomes.

To satisfy the conditions of being mediators, each of the three mediators tested in this study (i.e., parental expectation, parent–child interactions, and number of breakfasts with a child each week)

had to be shown to be associated with assets and with at least one of the child school outcomes. Further, controlling for the mediators must eliminate or reduce the significance of the association found between assets and the child school outcomes.

Results

Sample Characteristics

Table 1 illustrates the child, primary caregiver, and household characteristics of the sample. The mean age of children was 11.2 years old, and the sample was nearly evenly divided between genders (50.5% were boys, 49.5% were girls). Although a majority of children lived with both parents (67.3%), nearly one-quarter (24.4%) of children lived only with their mother, 3.8% of sampled children lived only with their father, and 4.5% of children did not live with either parent.

Table 1. Sample characteristics

	Mean or freq.	Std. or %
Child		
Age	11.20	3.59
Gender (Male)	6,254	50.47%
Parents		
Both present	8,342	67.32%
Mother only	3,019	24.36%
Father only	474	3.83%
None	557	4.49%
Primary Caregiver		
Age	39.30	7.58
Race		
White	7,825	63.15%
Black	1,934	15.61%
Hispanic	2,013	16.24%
Other	620	5.00%
Education		
Less than High School Grad.	2,061	16.63%
High School Grad.	3,664	29.57%
Some College	3,968	32.02%
College and More	2,699	21.78%
Marital Status (Married)	8,611	69.49%
Work Status		
Full time	5,959	48.09%
Part time	2,527	20.39%
None	3,906	31.52%
Metro Area	9,420	76.02%
Gender (Women)	11,782	95.08%
Total No. of Adults in HH	2.05	0.81
Total No. of Children in HH	2.48	1.25
Financial Resources		
Mean total HH income	$5,045.42	4,879
Median total HH income	$3,888.00	
Mean total HH asset	$132,612.50	281,194
Median total HH asset	$38,471	

Note. HH = household

The mean age of the primary caregivers was 39.3 years, and the vast majority of primary caregivers were women (95.1%). In addition, most caregivers were white (63.2%) with some college education (32.0%), employed full-time (48.1%), and lived in a metropolitan area (76.0%). There were an average of 2.1 adults (i.e., over 18 years) living in the household, and an average of 2.5 children living in each household. The mean household income was $5,045 per month, and the mean of total household assets was $132,612.

Table 2 summarizes the mean and frequency of the three mediator variables and the three child school outcomes used in this study. The means of parental expectation and parent-child interactions were 2.9 and 6.3 respectively. On average, primary caregivers breakfasted with the child 3.5 days per week.

About 8% of children had repeated a grade, and 11.8% of children had been suspended or expelled from school. According to the primary caregivers, the majority of children (64.3%) were interested in schoolwork.

Table 2. Means and Frequencies of Mediators and Child Outcomes

	Range	Mean or Freq.	Std. or %
Mediators			
Parental expectation	0-4	2.90	0.90
Parental involvement			
Parent-child interactions	0-8	6.33	1.65
Breakfast with child	0-7	3.50	2.71
Child outcomes			
Repeated grade	0,1	1019	8.22%
Expelled, suspended from school	0,1	692	11.78%
Interested in schoolwork	0,1	7388	64.32%

Assets and Child School Outcomes

Table 3 presents outcome data from logistic models for the three child school outcomes: "repeated a grade," "expelled from a school," and "interested in school work." After controlling for demographics and social backgrounds of each child, the effect of assets on each of the child school outcomes was found as significant. Children with higher net worth were less likely to have repeated a grade ($p<.001$) or to have been expelled from school ($p<.01$). In addition, our analysis showed that children with higher net worth were more likely to be interested in schoolwork ($p<.001$). These findings support the direct relationship of assets on child school outcomes.

Among the control variables, child characteristics were found to be significant for child school outcomes. Boys and older children were more likely to have repeated a grade, been expelled from school, and less likely to be interested in schoolwork ($p<.001$).

In addition, the characteristics of the primary caregiver had significant influence on child school outcomes. Compared to children whose primary caregiver was white, children with black primary caregivers were more likely to have repeated a grade ($p<.001$), and were more likely to have been

expelled from school (p<.01). However, children with Hispanic primary caregivers were less likely to have repeated a grade (p<.001), less likely to have been expelled from school (p<.001), and more likely to be interested in schoolwork (p<.001). Further, as compared with children whose primary caregivers had a high school education, children whose primary caregivers had less than a high school education showed less interest in schoolwork (p<05) and were more likely to have repeated a grade (p<.001). Children whose primary caregivers had attained a higher educational level (i.e. *some college* or *a bachelor's degree or more*) were less likely to have repeated a grade (p<.001) and were more interested in a school work (p<.001). Children from households with a married primary caregiver were less likely to have repeated a grade (p<.001), less likely to have been expelled from school (p<.001), and more likely to be interested in schoolwork (p<.001) when compared with children from households with unmarried primary caregivers.

Furthermore, the primary caregiver's work status was shown to be significant and related to both repeating a grade and school expulsion. Compared with children whose primary caregiver was employed full-time (i.e., 35 hours or more per week), children whose primary caregiver was not working were more likely to have repeated a grade (p<.001) and more likely to have been expelled from school (p<.01).

The analysis provided interesting results for household characteristics such as the number of adults and household income. The number of adults living in the household was found to be significant and negatively related to the child school outcome of interest in schoolwork (p<.05). Further, when controlling for household net worth and social demographics, our analysis showed household income was not a significant predictor of any child school outcome examined in this study.

Table 3. Estimates from Logistic Regression Models of Child School Outcome Measures

	Repeated a grade		Expelled from school		Interested in a school work	
Variables	b	S.E.	b	S.E.	b	S.E.
Intercept	5.096*	2.20	4.219	2.56	-2.697*	1.08
Child gender (boy)	0.467***	0.07	0.664***	0.09	-0.574***	0.04
Child age	0.142***	0.01	0.133***	0.03	-0.081***	0.01
Primary caregiver						
Gender (female)						
(Male)						
Female	0.008	0.15	0.343	0.19	0.013	0.09
Age	-0.012*	0.01	-0.023***	0.01	0.011***	0.003
Race/Ethnicity						
(White)						
Black	0.349***	0.09	0.326**	0.11	0.056	0.06
Hispanic	-0.365***	0.11	-0.508***	0.14	0.398***	0.06
Other	-0.084	0.17	-0.065	0.20	0.345***	0.10
Education						
Less than high school grad.	0.361***	0.10	0.365**	0.12	-0.138*	0.07
(High school grad.)						
Some college	-0.296***	0.09	-0.126	0.11	0.117*	0.05
College grad. and more	-0.368**	0.12	-0.165	0.14	0.269***	0.06
Marital status						
Married	-0.295***	0.08	-0.531***	0.11	0.274***	0.05
(Non-married)						
Work status						
(Full time)						
Part time	0.014	0.10	0.192	0.11	-0.019	0.05
No work	0.369***	0.08	0.301**	0.11	0.002	0.05
Residency						
Metro area	-0.144	0.08	0.160	0.10	0.091	0.05
(Non-metro area)						
Number of children in HH.	0.049	0.03	0.046	0.04	-0.006	0.02
Number of adults in HH.	0.007	0.05	0.042	0.06	-0.055*	0.03
Total income log	-0.015	0.03	-0.023	0.03	0.009	0.02
Total net worth log	-0.660***	0.17	-0.590**	0.19	0.281***	0.08
N		12,392		5,875		11,487
-2DLL		6,543.92		4,000.63		14,410.20
Likelihood Ratio		499.29***		258.67***		559.14***
Wald		462.31***		242.89***		523.66***

Note. Reference groups shown in parentheses. HH = household
*p<.05: **p<.01: ***p<001

Parental Expectation, Parenting Practice, and Child School Outcomes

Table 4 summarizes a series of logistic models constructed for the three child school outcomes of repeating a grade, school expulsion, and interest in schoolwork. Models 2, 3, and 4 tested the changes in the effect of net worth by including one of the three study mediators: parental expectations, parent-child interactions, and the number of breakfasts (i.e., the number of days per week that the primary caregiver breakfasted with the child). Chi-square statistics based on a likelihood ratio test were applied to see if the models by inclusion of mediators were significantly improved in model fit than Model 1.

When parental expectation (Model 2) or number of breakfasts (Model 4) were included in the regressions, the effects of net worth on each of the three child school outcomes were diminished or removed. Significant results from likelihood ratio tests suggested that the reduction of the effects of net worth on child school outcomes by inclusion of parental expectations and number of breakfasts were meaningful. However, including parent-child interaction (Model 3) did not decrease the effect of net worth on any of the child school outcomes, and therefore, this variable was omitted from the final model (Model 5).

When we included the combination of parental expectation and number of breakfasts in Model 5, the effects of net worth on school expulsion and interest in schoolwork were removed, and the absolute points of coefficients of assets on "repeated a grade" were decreased by 21.4%.

Regarding other covariates in full models (Model 5), significances and directions of each covariate were very close to the models without any mediators (Model 1) except primary caregiver education. In full models, the effects of caregiver education level on child school outcomes became non-significant by adding two mediators, parental expectation and number of breakfasts

The direct impact of three possible mediators (i.e., parental expectation, parent-child interactions, and number of breakfasts) on outcomes of repeating a grade and school expulsion were also tested in Models 2, 3, and 4 to evaluate one of the criteria for being a mediator. Both parental expectation and number of breakfasts were found as significant for all child outcomes in this study; however, parent-child interaction was shown to be a significant predictor only for the child's interest in schoolwork.

Table 4. Estimates from Logistic Regression Models of Child School Outcome Measures with Mediators

	Repeated a grade					Expelled from school					Interested in a schoolwork				
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	5.096*	5.249*	5.028*	4.987*	5.134	4.219	3.721	4.609	4.232	3.716	-2.697*	-3.380**	-0.400***	-2.605*	-3.290**
Child gender (boy)	0.467***	0.428*	0.468***	0.465***	0.425***	0.664***	0.631***	0.658***	0.664***	0.625***	-0.574***	-0.544***	-0.570***	-0.578***	-0.548***
Child age	0.142***	0.127***	0.143***	0.134***	0.121***	0.133***	0.122***	0.128***	0.117***	0.108***	-0.081***	-0.069***	-0.067***	-0.070***	-0.060***
Primary caregiver															
Gender (female)															
(Male)															
Female	0.008	0.059	0.007	0.013	0.064	0.343	0.459*	0.342	0.346	0.469*	0.013	-0.025	-0.010	0.012	-0.025
Age	-0.012*	-0.012*	-0.012*	-0.012*	-0.011*	-0.023***	-0.019**	-0.023***	-0.022**	-0.019**	0.011***	0.011***	0.012***	0.010**	0.010**
Race/Ethnicity															
(White)															
Black	0.349***	0.483***	0.352***	0.323***	0.460***	0.326**	0.479***	0.316**	0.309**	0.467***	0.056	-0.077	0.110	0.089	-0.047
Hispanic	-0.365***	-0.231*	-0.362***	-0.377***	-0.244*	-0.508***	-0.356*	-0.523***	-0.509***	-0.358*	0.398***	0.254***	0.471***	0.413***	0.270***
Other	-0.084	-0.015	-0.079	-0.106	-0.030	-0.065	0.019	-0.090	-0.077	0.019	0.345***	0.299**	0.428***	0.372***	0.319**
Education															
Less than high school grad.	0.361***	0.264**	0.362***	0.348***	0.260**	0.365**	0.284*	0.356**	0.346**	0.278*	-0.138*	-0.024	-0.106	-0.116	-0.008
(High school grad.)															
Some college	-0.296***	-0.205*	-0.297***	-0.292***	-0.204*	-0.126	-0.005	-0.121	-0.123	-0.007	0.117*	-0.005	0.110*	0.108*	-0.011
College grad. and more	-0.368**	-0.204	-0.369**	-0.363**	-0.202	-0.165	0.027	-0.163	-0.170	0.022	0.269***	0.047	0.267***	0.261***	0.044
Marital status															
Married	-0.295***	-0.243**	-0.296***	-0.270**	-0.222**	-0.531***	-0.466***	-0.528***	-0.498***	-0.441***	0.274***	0.225***	0.266***	0.245***	0.200***
(Non-married)															
Work status															
(Full time)															
Part time	0.014	0.025	0.013	0.032	0.043	0.192	0.195	0.199	0.218	0.224	-0.019	-0.064	-0.050	-0.047	-0.090
No work	0.369***	0.351***	0.366***	0.400***	-0.066***	0.301**	0.256*	0.314**	0.337**	0.287**	0.002	0.030	-0.033	-0.038	-0.007

Table 4. Estimates from Logistic Regression Models of Child School Outcome Measures with Mediators (continued)

	Repeated a grade					Expelled from school					Interested in a schoolwork				
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Residency															
Metro area	-0.144	-0.066	-0.143	-0.140	-0.202	0.160	0.294**	0.158	0.153	0.282**	0.091	-0.020	0.091	0.082	-0.027
(Non-metro area)															
Number of children in HH.	0.049	0.0004	0.049	0.050	0.064	0.046	0.001	0.044	0.043	-0.001	-0.006	0.048**	0.003	-0.005	0.049**
Number of adults in HH.	0.007	-0.019	0.008	0.008	-0.011	0.042	-0.007	0.038	0.050	0.006	-0.055*	-0.025	-0.040	-0.055*	-0.025
Total income log	-0.015	-0.006	-0.016	-0.015	-0.006	-0.023	-0.012	-0.020	-0.027	-0.016	0.009	0.0004	0.002	0.010	0.001
Total net worth log	-0.660***	-0.540***	-0.660***	-0.633***	-0.519**	-0.590**	-0.409*	-0.594**	-0.552**	-0.381	0.281***	0.134	0.284***	0.250**	0.110
Parent expectation	---	-0.455***	---	---	-0.446***	---	-0.583***	---	---	-0.562***	---	0.675***	---	---	0.664***
Parent-child interactions	---	---	0.010	---	---	---	---	-0.045	---	---	---	---	0.174***	---	---
Breakfast with child	---	---	---	-0.067***	-0.056***	---	---	---	-0.118***	-0.100***	---	---	---	0.079***	0.069***
N	12,392	12,392	12,392	12,392	12,392	5,875	5,875	5,875	5,875	5,875	11,487	11,487	11,487	11,487	11,487
-2DLL	6,543.92	6,371.42	6,543.69	6,543.69	6,353.71	4,000.63	3,818.01	3,996.92	3,952.49	3,785.09	14,410.20	13,627.71	14,210.10	14,303.83	13,553.15
x^2 (df)	---	172.5(1)***	0.23(1)	25.93(1)***	190.21(2)***	---	182.62(1)***	3.71(1)***	48.14(1)***	215.54(2)***	---	782.49(1)***	200.1(1)***	106.37(1)***	857.05(2)***
Wald	462.31***	626.68***	462.52***	481.35***	638.08***	242.89***	400.30***	246.11***	279.83***	421.51***	523.66***	1148.36***	695.35***	615.31***	1200.76***

Note. Reference groups shown in parentheses. HH = household
*p<.05: **p<.01: ***p<001

Assets and Parenting Involvement and Parent Expectations

Table 5 shows the outcomes of ordinary least squares regressions (OLS) on parent-child interactions, parental expectations, and number of breakfasts.

After controlling for demographics of both the child and the primary caregiver, the level of net worth in the household was found to be a significant and strong predictor of both parental expectations (p<.001) and the number of breakfasts with the child each week (p<.001). However, household net worth was not a significant predictor for parent-child interactions. These results support the direct effect of assets on parental expectation and parent involvement measured by the number of breakfasts with the child.

Among other covariates, child's age and the primary caregiver's race/ethnicity, education, marital status, and work status were found to be significant determinants for all three mediators (i.e., parent-child interactions, parental expectation, and number of breakfasts). The child's age was shown to be negatively related to parent-child interactions (p<.001), parental expectations (p<.001), and number of breakfasts (p<.001). Compared to white primary caregivers, primary caregivers who were black, Hispanic, or other race/ethnicity reported less time playing with and praising their children (p<.001), and fewer breakfasts with their children. However, the academic achievement expectations of primary caregivers who were black, Hispanic, or other race/ethnicity were higher than those of white primary caregivers.

In addition, primary caregivers who had less than a high school education reported fewer parent-child interactions and lower parental expectations as compared to primary caregivers who were high school graduates. Married primary caregivers reported greater parent involvement and higher parental expectations for their children when compared with unmarried primary caregivers. Further, although unemployed primary caregivers reported more parent-child interactions and more breakfasts per week with the child, these caregivers reported lower parental expectations for their children as compared with primary caregivers who worked full-time.

Household characteristics, especially household composition, were significant in several areas. Both the number of children living in the household and the number of adults living in the household were found to be significant and negative determinants for parent-child interactions and parental expectations. However, total household income was significant and positively related to parent-child interactions and parental expectations.

Table 5. OLS Regression Models of Three Measures of Parent-Child Involvement and Parent Expectation

	Parent-child involvement		Parent expectation		Days breakfast with a child	
Variables	b	S.E.	b	S.E.	b	S.E.
Intercept	7.11***	0.57	1.99***	0.30	-0.70	0.93
Child gender (boy)	-0.07**	0.03	-0.10***	0.02	-0.03	0.05
Child age	-0.09***	0.004	-0.03***	0.002	-0.13***	0.01
Primary caregiver						
Gender						
(Male)						
Female	0.14*	0.07	0.07	0.04	0.01	0.11
Age	-0.003	0.002	0.001	0.001	0.01***	0.004
Race/Ethnicity						
(White)						
Black	-0.29***	0.04	0.20***	0.02	-0.44***	0.07
Hispanic	-0.36***	0.04	0.25***	0.02	-0.18*	0.07
Other	-0.40***	0.07	0.08*	0.04	-0.32**	0.11
Education						
Less than high school grad.	-0.18***	0.05	-0.20***	0.03	-0.27***	0.08
(High school grad.)						
Some college	0.06	0.04	0.19***	0.02	0.15*	0.06
College grad. and more	0.04	0.04	0.34***	0.02	0.20**	0.07
Marital status						
Married	0.08*	0.04	0.10***	0.02	0.41***	0.06
(Non-married)						
Work status						
(Full time)						
Part time	0.16***	0.04	0.04*	0.02	0.35***	0.06
No work	0.20***	0.04	-0.04*	0.02	0.58***	0.06
Residence						
Metro area	0.004	0.03	0.16***	0.02	0.15**	0.06
(Non-metro area)						
Number of children in HH.	-0.05***	0.01	-0.08***	0.01	-0.02	0.02
Number of adults in HH.	-0.08***	0.02	-0.04***	0.01	-0.02	0.03
Total income log	0.042***	0.01	0.01*	0.01	-0.002	0.02
Total net worth log	0.02	0.04	0.15***	0.02	0.36***	0.07
N	12392		12392		12392	
R^2	0.07		0.10		0.06	
F	49.88***		78.59***		46.85***	

Note. Reference groups shown in parentheses. HH = household
*p<.05: **p<.01: ***p<001

In summary, this study found that the effect of assets was partially mediated (for repeating a grade) and fully mediated (for school expulsion and interest in schoolwork) by two mediators: parental expectations and number of breakfasts. Specifically, this study found that (a) assets were a significant predictor of all child school outcomes included in our study; (b) assets were a significant predictor of parental expectations and of parent involvement, measured by number of breakfasts with the child per week; (c) two mediators (parental expectations and number of breakfasts) were significant determinants of child school outcomes; and (d) when controlling for household net worth, household income was not a significant predictor of the child school outcomes included in our study.

Limitations

There are a few noteworthy limitations of this study. First, some important control variables are not included in this study because of data availability. For example, knowledge of child characteristics (i.e., intelligence, planfulness, health status) and school environments will be needed for further study. Second, this study uses a cross-sectional perspective to explain the association between assets and academic outcomes through parenting mediators. Further study using longitudinal analysis will provide more accurate measures of causal relationships between assets and child academic outcomes. Third, this study includes a limited number of mediators representing parental expectation and parental involvement. Despite these limitations, this study addresses important research questions that have rarely been posed in regard to a large data set with a nationally representative sample.

Discussion

The purpose of this study was to examine the effects of parental assets on child academic outcomes, parent-child involvement, and parental expectations. This article examined three research questions by analyzing a nationally representative data set: (a) What are the effects of parental assets on child academic outcomes? (b) What are the effects of parental assets on parental involvement and parental expectations? and (c) Do parental involvement and parental expectations mediate the effect of parental assets on child academic outcomes? Our findings indicate that parental assets are a significant predictor of the measured child academic outcomes, and that the effect of parental assets on these academic measures is mediated by both parental expectations for their child's academic achievement and the number of days each week a parent eats breakfast with their child.

In response to our first research question regarding the impact of parental assets on child academic outcomes, we found that assets are significant predictors of all child academic outcomes measured in the study (i.e., caregiver reports of grade repetition, expulsion/suspension, and whether the child showed interest in schoolwork). This finding is consistent with other research that has linked household wealth and positive child outcomes (Scanlon & Page-Adams, 2001; Williams, 2004; Zhan, 2006). Interestingly, although we found that assets are a significant predictor of all child outcomes, income is not found to be significantly related to these child academic measures. This finding provides additional support for the importance of incorporating asset measures alongside income measures when investigating economic well-being (Shapiro, 2001; Sherraden, 1991; Wolff, 2001).

Our second research question examined the impact of parental assets on parental expectations and parental involvement. We hypothesized that there would be a relationship between parental assets

and the three parent measures: parental expectations of educational achievement and the two parental involvement variables. Our hypothesis is supported by study findings that showed asset ownership is associated with (a) parental expectations for their child's educational achievement and (b) one of two parental involvement variables—the variable measuring the number of days a parent eats breakfast with their child each week. However, parental assets are not associated with the other parental involvement measure, which was a composite score of time spent each week talking or playing with their child and time spent each week praising their child.

To answer our third research question, we used a mediation analysis to test whether parental expectations and two measures of parental involvement were pathways through which assets influence child academic outcomes. We find that two of the three parent variables mediate the relationship between parental wealth and child educational outcomes. Parental expectations and the number of days the primary caregiver eats breakfast with their child are both significant mediators between assets and child academic outcomes.

These findings are consistent with other research and provide additional evidence of a relationship between asset ownership and parental expectations for their child's education. The findings also suggest that this relationship mediates the impact of assets on a child's academic performance (Zhan, 2006). This finding is in line with both theory and research that explore how asset holding can change an individual's outlook as well as their plans for the future, which may, in turn, affect their behaviors or habits (DiPasquale & Glaeser 1999; Rossi & Weber, 1996; Scanlon 2001; Sherraden, 1991; Shobe & Page-Adams, 2001; Yadama & Sherraden, 1996). Similar results are seen in research on Individual Development Account (IDA) programs, which foster asset accumulation among low-income participants by helping them save for asset-building purposes. Participants in IDA programs report changes in their attitudes and expectations after participating in an IDA program and starting to save (McBride, Lombe, & Beverly, 2003; Sherraden et al., 2005). Examples of these changes include increased self-confidence, increased hope for the future, increased ability to set and achieve goals, greater sense of responsibility, and reduced levels of stress. Moreover, some IDA participants with children have reported feeling reassured that their savings would benefit their children by paying for their children's education, improving their living environment, or generally providing for their children's future (McBride, Lombe, & Beverly, 2003; Sherraden et al., 2005).

Research provides mixed findings regarding which types of parental involvement activities are most beneficial to child outcomes. Parental involvement in school is significantly associated with positive child outcomes, and, although to a lesser extent, parental involvement in the home is also shown to be significant (Barnard, 2004; Fan & Chen, 2001). In our study, only one of the two measures of parental involvement is shown to mediate the effects of asset holding on child academic outcomes. Specifically, the number of breakfasts is a significant mediator but the parental involvement composite variable is not significant. This research finding adds to the literature and provides new evidence that eating breakfast with a child may be a positive parenting practice that influences educational outcomes.

This study includes several noteworthy findings regarding our control variables. Both race and parental education are significant predictors of all of the child and parent outcomes in the study. Although black parents are more likely to report that their child has repeated a grade or been expelled or suspended from school than white parents, the opposite is true for Hispanic parents who are significantly less likely to report that their child has been expelled or repeated a grade than were

white parents. Furthermore, Hispanic parents are significantly more likely to report that their child is interested in school work than are white parents. In terms of the parent measures, black, Hispanic, and other race/ethnicity parents have significantly lower scores on both measures of parent involvement than white parents; however, these parents report significantly higher parental expectations for their child's educational achievement than white parents.

The education level of the primary caregiver is linked to child academic outcomes and parent measures. Children whose primary caregiver had less than a high school diploma are more likely to have repeated a grade and to have been expelled or suspended, and are less likely to be interested in school work. In addition, primary caregivers with less than a high school education have lower levels of parental involvement and parental expectations when compared with caregivers with a high school education.

Another interesting result is that child gender is significantly associated with the parent involvement composite variable and parent expectations. Parents of boys have lower reports of involvement and lower educational expectations for their children than parents of girls. There is also a significant association between the number of adults and the number of children in the household and two of the parent measures. Larger numbers of adults and larger numbers of children in the household are associated with decreases in parental involvement and parental expectations.

Conclusion

By examining the effects of parental assets on child academic outcomes and parental expectations and involvement, this study provides additional support for the inclusion of assets, in addition to income, in measurements of child and family economic well-being. In line with other research that has demonstrated that income alone is insufficient as a predictor of child outcomes (Gershoff, Raver, Aber, & Lennon, 2007), our study finds that income is not a significant predictor of any of the child academic outcomes but that assets are a significant predictor for all of the child school outcomes. Therefore, it is important to include asset measures in both the definition and the measurements of economic well-being.

This study also provides information useful for a range of policies and programs directed toward children and families. First, these findings support the importance of developing and including wealth and asset-based interventions in any efforts aimed at addressing child and family poverty. In addition, these findings suggest that programs aimed at improving parenting skills and strengthening family functioning should consider including financial components in their interventions, specifically components focused on asset building. For example, family support programs could collaborate with and refer clients to local asset-building initiatives, such as IDA programs and homeownership programs. Last, child academic programs such as the kindergarten through grade 12 school system, tutoring programs, and early education programs should also address parental wealth and asset ownership as critical components affecting child academic performance. For example, these child programs could either refer families to local asset-building initiatives or provide workshops for parents on financial education topics.

Future research should examine which specific assets are related to child outcomes. Although there has been considerable research conducted on homeownership, far less is known regarding the affects of other assets on the outcomes of children.

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