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Nonresident Father's In-kind Support and Child Support Contributions on Child's Household Food Insecurity

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Abstract

Using the first three waves of the Early Childhood Longitudinal Survey- Birth Cohort (n = 1450), the association between nonresident father involvement and household food insecurity among single mother households is investigated. Three patterns, or subgroups, of food insecurity were created: always food secure, persistently food insecure, and transitionally food insecure. Households that were persistently food insecure displayed the most disadvantaged by being the poorest among the three subgroups, in addition to receiving less child support and in-kind support. Logistic regressions indicate that households with legal and informal child support agreements are less likely to always be food secure and informal child support is associated with experiencing persistent food insecurity. However, greater in-kind support acts as a buffer to experiencing transitional food insecurity. Implications for financial allocations on household well-being are discussed.

KEYWORDS: child support, Early Childhood Longitudinal Survey- Birth Cohort, food insecurity, in-kind support, nonresident father involvement

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In 2006, 10.9 percent of households (12.6 million) experienced food insecurity at least part of the time (Nord, Andrews, & Carlson, 2007). In other words, an adult and/or child in a household experienced "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire food in socially acceptable ways" (Bickel et al., 2000). The prevalence of food insecurity has been found to be higher among single mother households (30.4%) compared to single father households (17%) and married households with children (10.1%) (Nord, Andrews, & Carlson, 2007). Mothers and children economically fare worse after a union dissolution than nonresident fathers (Bartfeld, 2000), and single mother households have been associated with disadvantaged child outcomes (Ram & Hou, 2003). Child support regulations have been put into place as a mechanism to mitigate negative child outcomes by increasing the financial security among children and custodial parents in hopes of reducing poverty and reduce welfare dependency. Most research on child support has focused on the trends in child support contributions (Huang, Mincy, & Garfinkel, 2005; Meyer, Ha, & Hu, 2008; Stirling & Aldrich, 2008; Waller & Plotnick, 2001) or how paternal child support contributions relate to his relationship and involvement with his children (Arditti & Keith, 1993; Seltzer, Schaeffer, & Charng, 1989), contact and relationship quality with the custodial parent (Hutson, 2007), or direct influence child development (Argys, Peters, Brooks-Gunn, & Smith, 1998; Knox, 1996). Less research has focused on the effects of nonresident father's financial contributions through child support payments and in-kind support on children's home environment. Taking a family systems perspective, the current study investigates how nonresident father's child support payments and in-kind contributions relate to child's household

food security, which indirectly influences children's development. This is a pertinent research and policy question as previous research has suggested negative behavioral and academic outcomes for children residing in a households where a child and/or adult experiences food insecurity (Dunifon & Kowaleski-Jones, 2003; Jyoti, Frongillo, & Jones, 2005), and positive academic outcomes for children who receive child support (Argys, Peters, Brooks-Gunn, & Smith, 1998).

Child Support and In-kind Support on Child and Household Outcomes

Research on the effects of child support payments has found a positive impact on children's cognitive development and academic achievement (Argys, et al., 1998; Knox, 1996) and behavioral outcomes (McLanahan, Seltzer, Hanson, & Thomson, 1994). Less research has focused on the effects of child support on the household environment. There is only one study (to the author's knowledge) that investigates the effect of father involvement on food insecurity (e.g., Garasky & Stewart, 2007). This study investigated how visitation and child support relates to the resident child's household food insecurity. Results indicate frequent visits by the nonresident father reduce the likelihood that the resident child's household will experience food insecurity. The study also found child support to reduce food insecurity, yet the results were less consistent. Garasky and Stewart (2007) suggest that visitation serves as a proxy for in-kind support to the child. In-kind support to children, in form of clothes or school supplies, or in-kind support to households, in form of home or car repairs, could free up the resident mother's income for food.

Research on in-kind, or informal, a child support contribution has found low-income parents to prefer informal child support contributions over formal child support payment (Waller & Plotnick, 2001). Achatz and MacAllum (1994) found that in-kind child support contributions,

such as diapers, toys, clothing, and shoes, are viewed as "direct" support by fathers and recognized informal contributions as a valid mechanism to fulfill financial obligations. Fathers felt that informal contributions provide them with greater control on how the money is spent. Research on informal child support payments has also been associated with greater cognitive stimulation in the home environment (Greene & Moore, 1996).

Individual and Household Factors Related to Food Insecurity

Aside from families experiencing poverty, being classified as low income, or experiencing changes in income (Gundersen & Gruber, 2001), there are various individual and household sociodemographic characteristics associated with food insecurity. For instance, single parenthood (Nord, Andrews, & Carlson, 2004), being African American or Hispanic (Nord, Andrews, & Carlson, 2004), low education attainment (Daponte & Stephens, 2004; Rose Gundersen, & Oliveira, 1998), unemployment (Daponte & Stephens, 2004), poor health status (Tarasuk, 2001), and having children in the household (Furness, Simon, Wold, & Asarian-Anderson, 2004) are individual and household characteristics associated with food insecurity. Despite the effort to understand the individual and household correlates of household food insecurity, there a dearth of research exploring how non-resident fathers' contributions may influence food security in single mother households where the child resides.

Current Study

In this study, the first three waves of the ECLS-B are utilized to examine the influence of in-kind support and child support on children's household food insecurity. The paper takes a family systems perspective by including child, mother, father, and household characteristics in the model. The paper also integrates the conceptual framework of Lamb et al. (1997) as a way to categorize father involvement. Lamb's et al. (1987) three-part taxonomy of father involvement

focuses on fathers' responsibility, which includes financial support, fathers' accessibility, or his availability to his child, and fathers' engagement with the child, or direct interaction with the child (Pleck & Masciadrelli, 2004). Building upon Garasky and Stewart's study (2007), the current study investigates Garasky and Stewart's (2007) suggestion that visitation serves as a proxy for in-kind support; the current study includes additional measures of in-kind support, in addition to the type of child support agreement, as an assessment of fathers' responsibility. Fathers' assessment of his accessibility is conceptualized through his geographic distance from the child, and father-mother contact services as a proxy for engagement with the child.

Garasky and Stewart's (2007) also used three individual items as proxy measures of food insecurity. The proposed study uses the 18-item U.S. Food Security Survey Module to measure duration of household food insecurity. Using the standardized module provides a more accurate depiction and allows results to be compared with national statistics of food security (Bickel et al., 2000). In addition, focusing on the duration of household food insecurity among single mother households allows for a representation of household food insecurity patterns to be built. A depiction of the duration of single mother's household food insecurity is important as the prevalence of food insecurity is greater among single mother households compared to single father households and married households with children (Nord et al., 2007). Understanding how nonresident father involvement, in addition, to child, maternal, and household factors influence single mother households in becoming persistently food insecure versus fluctuate in their food insecurity status is not well described in the literature. All analyses control for a rich set of child, maternal, and household characteristics that have been found to be related to predicting food insecurity.

Data and Methods

The analyses use data from the ECLS-B, a longitudinal data set collected by the National Center of Education Statistics (NCES). The baseline sample of approximately 10,200 births who participated in the child assessments out of approximately 14,000 selected children was designed to be nationally representative of children born in 2001 with an over-sample of Asian and American Indian children, twins, and low and very low birth weight children. The ECLS-B follows children from birth through kindergarten with data collection occurring when the child is 9 months of age, 2 years of age (2003), approximately 4 years of age (at pre-school, Fall 2005), and at kindergarten entry. To investigate the effects of in-kind support and child support contributions on child's household food insecurity, the first three waves of survey data are used[1]. Of the 10,200 children who participated in the first wave of the survey, approximately 8,900 participated in the third wave. Nonresponse bias analysis was conducted on preschool data collection to assess potential bias due to nonresponse, and results indicate insubstantial differences (Chernoff, Flanagan, McPhree, & Park, 2007).

Analysis Sample. The analysis sample consists of approximately 1,450 children. The reported sample sizes for subgroups of the data have been rounded to the nearest 50 per NCES restrictions regarding disclosure of restricted use data. However, the analyses and statistics presented in the tables are generated using all observations in each subsample. To create the analysis sample, children who reside only with their biological mother were included (n = 2,200). Children who were missing information for any of the food insecurity variables were excluded (500 children excluded). Children missing less than 100 observations were dropped (250 children excluded), while children missing more than 100 missing values were assigned the mean value to the missing data points for the continuous variables and the modal value for binary variables (e.g., child age, child race, father previously lived in the household, distance father

lives from the child). All models included variables that indicated whether the observation had a value that was mean- or mode-replaced.

Household Food Insecurity. Food insecurity captures the following experiences due to financial constraints: running out of food, perceptions that food in a household is of inadequate quality or quantity, and reduced food intake by adults or children (Bickel et al., 2000). Food insecurity in all three waves is based on an 18-item scale developed by the US Department of Agriculture (USDA) that measures both the quality and quantity of food over the past 12 months. In each wave, based on information from the 18-item scale, household food insecurity status was created based on methods used in Bickel et al. (2000). Households are considered to be food insecure if they provide affirmative responses to 3 or more items related to adult or child food insecurity; therefore, the household-level variable captures whether adults and/or children in the household are experiencing food insecurity. The ECLS-B provides three categorical measures of household food insecurity: very low food security, low food security, or food secure if an adult or child in the household is experiencing food insecurity[2]. Using this information I combined very low food security and low food security into one category to indicate that an adult or child in the household is experiencing food insecurity.

To examine the effects of in-kind support and child support on the duration of household food insecurity, three mutually exclusive dichotomous variables were created for household of food insecurity. Households who did not experience food insecurity at either interview were classified as “always food secure”. Households who experienced food insecurity at all interviews were classified as “persistent food insecure”. The final group, “transitional food insecure”, experienced food insecurity in at least 1 interview, but not in others.

Father Characteristics and Involvement. Mothers reported on the nonresident father’s

characteristics at the 9 month data collection: education (1 = less than 12th grade education completed; 0 = high school graduate) and father's previous presence in the household (1 = previously lived in the household; 0 = never lived in the household). Mothers also reported on nonresident father involvement and the items mapped onto Lamb's tri-fold conceptual model (Lamb et al., 1987). Accessibility was assessed through nonresident father's geographic distance from the child (1 = father lives less than 59 minutes away in distance from the child; 0 = father lives 60 minutes or more in distance from the child). Responsibility was assessed through three items: type of child support arrangement [legal arrangement, informal arrangement, no arrangement (omitted)], average amount of child support received, and index score of in-kind support. Mothers who responded that they had no child support arrangement with the nonresident father were coded as zero in the average amount of child support received. Mothers responded to four items on a 1 = often to 3 = never scale assessing how many times the nonresident father had bought child clothes, diapers, toys, or presents; paid for medical expenses; paid for child care expenses; or provided financial support for the resident child (not including child support). An index score of in-kind support for the child was created by summing and reverse coding the responses provided by the father so that higher scores indicate greater in-kind support. Father's engagement was assessed through 1 item that serves as a proxy for direct engagement. Mothers were asked on a Likert scale 1 = every day or almost every day to 6 = less than once a month, how often the mother has been in contact with the father either by phone, letter, or other means. A dichotomous variable was created to indicate the mother was in contact with the father at least once a week.

Child, Maternal, and Household Characteristics. A rich set of covariates capturing child, maternal, and household variables are included in our models and based on mother report. All of

the covariates are collected at the 9 month data collection, with the exception of child race/ethnicity which was collected at the 24 month data collection. Child covariates include: age of the child at time of the assessment (months), gender (female = 1; male = 0), and race/ethnicity [Non-Hispanic White, non-Hispanic Black (omitted), Hispanic, and other]. Child's health in general was reported on a 5-point Likert scale as excellent, very good, good, fair, or poor. Since it is a relatively uncommon occurrence for children to be of less than good health, a dichotomous measure of health was created by coding a child in "poor" health if the mother stated that the child is in "good", "fair", or "poor" health, just as Currie and Stabile (2002) have previously done.

Maternal covariates include the following characteristics: age at birth (years), education (1 = less than 12^{th} grade education completed; 0 = high school graduate), employment status (1 = full time employment; 0 = not employed full time), and marital status at time of birth (1 = married at time of birth; 0 = not married at time of birth).

Household characteristics include: income [<$20,000 (omitted), $20,001- 40,000, >= $40,001], relative pays for child care, total number of individuals in the household, geographic region [Northeast, Midwest, South, West (omitted)], size of city [rural (< 2,5000), town (2,500 – 49,999; omitted), city (>=50,000)].

Analytic Strategy

Weighted descriptive analyses were conducted for the full sample and subgroups using the ECLS-B provided weight, W3C0. Logistic regression models were estimated to examine the association between nonresident father involvement and duration of single mother household food insecurity. Standard errors are corrected using the Huber-White sandwich estimator of the variance to account for multiple observations within a state (clustering on the state identifier).

Finally, all analyses also include state-level fixed effects to control for variation in policy environments between states over time. All data analysis was performed with STATA 9.0 SE for Windows

Results

Sample descriptives

Descriptive statistics for the full sample and by duration of household food insecurity status are provided in Table 1. On average the study sample is primarily Non-Hispanic Black (41%), have household incomes less than $20,000 (61%), have 4 individuals in the household, 72% of the households live in urban areas, 77% of the households have fathers who previously lived in the household, and 68% of the families do not have any child support agreement. Seventy-seven percent of the households who are never food insecure have fathers who live less than 1 hour in distance, on average receive approximately $73 dollars in child support per month, and receive the greatest amount of in-kind support of the three subgroups. The households who are persistently food insecure have the greatest percentage of children in poor health of the three subgroups. Mothers in this group are older, 61% have less than a high school degree, and 83% have incomes less than $20,000. Mothers in this group also receive the least amount of children support (approximately $17/month) and in-kind support compared to the other two subgroups. Many of the characteristics of the transitional food insecure households fall in between the characteristics of the never food insecure households and the persistently food insecure households (e.g., mothers age at birth, less than a high school degree, income less than $20,000, father lives than 1 hour away, amount of child support, in-kind support).

Multivariate results

Logistic regression analyses were used to examine the relationship between nonresident father involvement duration of household food insecurity patterns. Table 2 presents regression coefficients and standard errors. Because the coefficients are difficult to interpret, marginal fixed effects from these models are also presented. Model fit statistics includes the log likelihood score and the Pseudo R-square.

Always food secure. Single mother households with nonresident fathers who have less than a high school education are less likely to be consistently food secure. Single mother households who receive legal and informal child support from nonresident fathers are less likely to be food secure. For instance, single mother households who have legal child support agreement are 10 percentage points less likely to always be food secure, while single mother households who have an informal child support agreement are 13 percentage points less likely to always be food secure. The greater amount of child support and in-kind support received is related to single mother households more likely being always being food secure. Mothers who are older at birth and have less than a high school education are less likely to consistently be food secure. Single mother households who have incomes greater than $20,000 compared to households where incomes are less than $20,000 are more likely to be food secure. For example, households where incomes are between $20,000 and $40,000 are 14 percentage points more likely to be food secure and 25 percentage points more likely to be food secure with incomes greater than $40,000.

Persistently food insecure. Single mother households who have informal child support agreements and receive greater amount of child support are more likely to be persistently food insecure. Specifically, households that have an informal child support agreement are 4 percentage points more likely to be persistently food insecure. Mothers who are older and have

less than a high school education are also more likely to be persistently food insecure. Last, single mother households with incomes between $20,000 and $40,000 compared to households with incomes less than $20,000 are less likely to be persistently food insecure.

Transitional food insecure. Single mother households who have a legal child support agreement with the nonresident father are more likely to be transient in their food insecurity status. The marginal effects indicates that these households are 9 percentage points more like to transition in their food insecurity status. Single mothers who receive greater in-kind support are less likely to experience transient food insecurity. Mothers who are older at the birth of their child are more likely to have households that transition in their food insecurity status. Last, single mother households with incomes greater than $20,000 are less likely to experience transient food insecurity. For instance, single mother households with incomes between $20,000 and $40,000 are 10 percentage points less likely to be inconsistent food insecurity; while single mother households with incomes greater than $40,000 are less likely to experience transitory food insecurity by 22 percentage points.

Discussion

Overall, the analyses indicate that nonresident father's responsibility, or financial contributions, and not his accessibility or his engagement, are related his child's household food insecurity status. In general having a legal or informal child support agreement was related to greater probability of food insecurity. For example, having a legal and informal child support agreement decreases the probability of always being food secure. In addition, having an informal child support agreement is associated with a greater likelihood of being persistently food insecure. However, in-kind support serves as a protect factor from experiencing short-term episodes of food insecurity.

Father Characteristics

The results suggest that when it comes to the household food insecurity, nonresident father's financial contributions are highly significant to creating a healthy environment. Single mother households that have some form of child support agreement appear to be more disadvantaged in terms of food insecurity. Furthermore, in-kind support appears to have the greatest influence in combating household food insecurity among families that fluctuate in their food insecurity status. Fathers that contribute to the child household with child-related expenses may be freeing up the mother's everyday expenditures, and allowing her to buy more food. The results from this study support Garasky and Stewart's (2007) hypothesis that in-kind support helps alleviate household food insecurity. Thus, child and father advocates need to encourage nonresident fathers to support mothers in other ways aside from child support contributions.

A limitation of the data is that mothers report on father's characteristics and involvement. However, previous research has indicated mother reports of father involvement to be reliable (Hernandez & Coley, 2007). Related, the dependent variable and the rest of the independent variables are also based on mother report. Mothers who are food insecure may not be the best judge of their child's health or other child, father, or household characteristics. Furthermore, the father-mother contact variable is not a true measure of how often the father engages with his child, but serves as a proxy of father's contact with his child.

Child, Mother, and Household Characteristics

The findings suggest that mother and household characteristics, but not child characteristics, are related to duration of household food insecurity. Specifically, the older the mother is at birth, the more likely the household will experience various patterns of food insecurity. This may be counterintuitive; however, older mothers may not be dependent on their

own parents for support. Younger parents may have the financial support and social support that is needed to make ends meet. Consistent with previous research on the relationship between low educational attainment and household food insecurity (Daponte & Stephens, 2004; Rose Gundersen, & Oliveira, 1998), the results indicate that single mothers who have less than a high school degree are less likely to always be food secure and more likely to be persistently food insecure. Results also suggest that income greater than $20,000 is related to single mother households not experiencing various patterns of food insecurity. This is consistent with previous research that has found low income to be associated with food insecurity (Gundersen & Gruber, 2001).

There are limitations to the analysis that should be noted. The food insecurity variables do not give us an indication of the timing and intensity of the food insecurity. Related, it is not possible to determine for how long families experienced food insecurity in the past 12 months. Last, the results could be biased if variables have been omitted that are related to father involvement and food insecurity.

Summary

This paper offers an opportunity to expand how nonresident fathers' contributions relate to his child's household food security status. Nonresident father involvement through his in-kind support appears to reduce the likelihood that the resident child will experience household food insecurity. Results suggest that encouraging programs and policies to promote increased involvement by nonresident fathers in other ways besides child support may be beneficial to the household environment, which will indirectly influence the child's development.

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Footnotes

[1] The Kindergarten data is presently not available.

[2] Prior to 2006, these categories were referred to as food insecure with hunger, food insecure without hunger, and food secure, respectively.

Table 1. Weighted Descriptive Statistics of Study Variables for Entire Sample and by Food Insecurity Status.

	Full Sample		Always Food Secure		Persistent Food Insecure		Transitional Food Insecure	
Father Characteristics	Mean or %	SD	Mean or %	SD	Mean or %	SD	Mean or %	SD
Less than high school degree	0.42	---	0.42	---	0.37	---	0.43	---
Father previously lived in the household	0.77	---	0.78	---	0.58	---	0.76	---
Father lives <= 59 minutes	0.72	---	0.74	---	0.52	---	0.71	---
Father-Mother contact every week	0.66	---	0.68	---	0.42	---	0.65	---
Legal child support agreement	0.17	---	0.16	---	0.21	---	0.18	---
Informal child support agreement	0.14	---	0.15	---	0.10	---	0.14	---
No child support agreement	0.69	---	0.69	---	0.69	---	0.68	---
Amount of child support	60.79	218.09	72.70	263.62	16.77	49.91	46.47	127.54
In-kind support	3.51	2.38	3.73	2.48	2.48	1.82	3.25	2.21
Child Characteristics								
Age of assessment at wave 1 (months)	10.64	2.13	10.47	1.91	10.85	2.48	10.89	2.39
Female	0.50	---	0.52	---	0.31	---	0.49	---
Non-Hispanic White	0.28	---	0.28	---	0.10	---	0.30	---
Non-Hispanic Black	0.42	---	0.40	---	0.48	---	0.44	---
Hispanic	0.24	---	0.27	---	0.39	---	0.18	---
Other Race	0.06	---	0.05	---	0.03	---	0.08	---
Poor Health	0.14	---	0.13	---	0.22	---	0.16	---
Maternal Characteristics								
Mother's age at birth	23.30	5.52	22.86	5.41	26.23	5.57	23.65	5.57
Less than high school degree	0.43	---	0.39	---	0.61	---	0.48	---
Employed full-time	0.36	---	0.38	---	0.38	---	0.31	---
Married	0.17	---	0.16	---	0.21	---	0.17	---
Household Characteristics								
Income <= $20,000	0.61	---	0.53	---	0.83	---	0.71	---
Income $20,001-$40,000	0.27	---	0.30	---	0.15	---	0.24	---
Income >= $40,001	0.12	---	0.17	---	0.02	---	0.05	---

Relative pays for child care	0.04	---	0.05	---	0.03	---	0.03	---
Total number in household	4.23	1.50	4.34	1.49	4.29	1.26	4.05	1.53
Northeast region	0.16	---	0.16	---	0.14	---	0.16	---
Midwest region	0.21	---	0.19	---	0.24	---	0.23	---
South region	0.46	---	0.48	---	0.36	---	0.44	---
West region	0.18	---	0.17	---	0.26	---	0.18	---
Lives in city (population >= 50,000)	0.72	---	0.72	---	0.87	---	0.70	---
Lives in town (population 2,500-49,999)	0.13	---	0.14	---	0.09	---	0.13	---
Lives in rural area (population <2,500)	0.15	---	0.14	---	0.04	---	0.17	---
N	1450		900		50		500	

Table 2. Logistic Regression Estimates by Duration of Food Insecurity

	Always Food Secure			Persistent Food Insecure			Transitional Food Insecure		
	B	SE	Marginal Effect	B	SE	Marginal Effect	B	SE	Marginal Effect
Father Characteristics									
Less than high school degree	-0.26	0.13	-0.06	0.30	0.38	0.01	0.20	0.14	0.04
Father previously lived in the household	-0.24	0.17	-0.05	-0.07	0.32	0.00	0.25	0.18	0.05
Father lives <= 59 minutes	-0.22	0.19	-0.05	-0.20	0.24	0.00	0.28	0.20	0.06
Father-Mother contact every week	-0.03	0.20	-0.01	-0.45	0.30	-0.01	0.12	0.18	0.03
Legal child support agreement	-0.43**	0.13	-0.10	0.35	0.30	0.01	0.40**	0.12	0.09
Informal child support agreement	-0.55*	0.21	-0.13	1.16*	0.50	0.04	0.41†	0.21	0.09
Amount of child support	0.00*	0.00	0.00	0.00**	0.00	0.00	0.00†	0.00	0.00
In-kind support	0.09	0.03	0.02	-0.01	0.07	0.00	-0.08**	0.03	-0.02
Child Characteristics									
Age of assessment at wave 1 (months)	-0.02	0.03	0.00	0.05	0.08	0.00	0.02	0.03	0.00
Female	0.09	0.12	0.02	-0.08	0.27		-0.08	0.11	-0.02
Non-Hispanic White	0.31	0.19	0.07	-0.92†	0.51	0.00	-0.15	0.17	-0.03
Hispanic	0.35†	0.19	0.08	-0.78†	0.43	-0.02	-0.21	0.19	-0.05
Other Race	0.09	0.17	0.02	-0.81†	0.47	-0.02	0.09	0.20	0.02
Poor Health	-0.06	0.16	-0.02	0.89	0.35	-0.01	-0.11	0.15	-0.02
Maternal Characteristics									
Mother's age at birth	-0.06***	0.01	-0.01	0.06**	0.02	0.03	0.05***	0.01	0.01
Less than high school degree	-0.33**	0.13	-0.08	0.91*	0.39	0.00	0.19	0.12	0.04
Employed full-time	0.08	0.14	0.02	-0.23	0.31	0.02	-0.04	0.13	-0.01
Married	0.12	0.17	0.03	0.30	0.39	-0.01	-0.18	0.17	-0.04
Household Characteristics									
Income $20,001-$40,000	0.63***	0.17	0.14	-1.18*	0.51	-0.02	-0.49**	0.16	-0.10
Income >= $40,001	1.31***	0.24	0.25	-0.66	0.66	-0.01	-1.25***	0.24	-0.22
Relative pays for child care	0.23	0.31	0.05	-0.07	0.72	0.00	-0.22	0.31	-0.05

Total number in household	-0.02	0.05	-0.01	0.07	0.08	0.00	0.00	0.05	0.00
Northeast region	-1.07***	0.26	-0.26	-0.85†	0.47	-0.02	0.30	0.26	0.07
Midwest region	-0.50**	0.17	-0.12	-1.58***	0.27	-0.03	0.30	0.24	0.07
South region	-0.62**	0.18	-0.14	-0.57*	0.25	-0.01	-0.06	0.18	-0.01
Lives in city (population >= 50,000)	0.04	0.17	0.01	0.76	0.54	0.02	-0.16	0.16	-0.03
Lives in town (population 2,500-49,999)	0.10	0.22	0.02	0.56	0.63	0.02	-0.18	0.19	-0.04
Log Likelihood	-975.83			-232.74			-958.74		
Pseudo R^2	0.09			0.21			0.08		

Note: State fixed effects are included in the models. Controls for missing child age, missing child race, missing father previously lived in household, and missing distance father lives from child are also included. Omitted categories include Non-Hispanic Black, income < 20,000, West region, lives in town (population 2,500 - 49,999), and no child support agreement. The sample size, rounded to the nearest 50 per NCES regulations, is 1450. † *p<.10* **p* <.05 ***p* <.01 *** *p* <.001.