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Are Children Protected Equally from Marriage?: The Complexity of Family Context and Race/Ethnicity on Child Food Insecurity

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Background

The American family has evolved to consist in a diverse constellation of arrangements compared to the traditional two-biological parent structure that was salient more than a half century ago (Cherlin 2010). The traditional two-biological parent structure has been replaced with family arrangements which include, but are not limited to, step-families, single-parent households, and cohabiting households with children. Therefore, given these demographic changes, family researchers have been attempting to determine the implications of these alternative family arrangements on child well-being (King 1994; King and Sobolewski 2004).

Decisions that affect child well-being are often made within the family context. Social and economic differences among families and racial and ethnic groups influence such decisions. This study examines the independent effects of marital status on child food security, and the mediating effects of race, and other demographic and socioeconomic variables. This study contributes to the literature by examining child food insecurity issues within the household, which may have implications for federal food assistance programs that target the nutrition of children. Also, the study unravels the complexities of the moderating relationship between family structure and race on child well-being.

There is extensive literature which supports the benefits of marriage for a host of health outcomes among married couples. Married individuals experience better physical and mental health, emotional security, relationship quality, and financial security (Waite and Gallagher 2001). The benefits of marriage are also extended to the children of married parents (Waite 200). Empirical evidence also reveals that the advantages of marriage vary substantially across race and ethnicity. Hispanics and blacks, who are married, receive less security against economic hardship than whites (Hirschl et al. 2003; Hummer and Hamilton 2010). African American women are less likely to economically depend on their husbands than white and Hispanic women (Kane 2000; Winslow-Bowe 2006). Married African-American mothers are also more likely to spend more time at work than their married white and Hispanic counterparts (Hayghe and Bianchi 1994). The disparities in marriage benefits are rooted in the vestiges of structural inequalities (Hirschl et al. 2003; McLanahan and Percheski 2008). The structural disadvantage of minority groups, especially African-Americans, has implications for prospects in the marriage market and family stability (Lichter et al. 1992, Hummer and Hamilton 2010). Differences in the social and economic circumstances of individuals across race and ethnicity, has implications for minority children within the context of various family constellations. Minority children, like their parents, are also less likely to benefit from marriage. Manning and colleagues analyses of children's economic well-being in different family contexts by race show that white children benefit more from marriage than black and Hispanic children (Manning and Brown 2006). Sociodemographic characteristics of the family mediate the effects of family structure on child's well-being, but it does not completely explain the difference between the relationships.

Child food security is an important indicator of child well-being. In the United States, a quarter of households with children experienced food insecurity in the last 12 months (Nord 2009). Food insecurity occurs when the "availability of nutritionally adequate and safe foods or the ability to acquire acceptable food in socially acceptable ways is limited or uncertain" (Nord 2009). Child food insecurity is associated with an increased risk of obesity, depressive symptoms, delays and social and academic development, and behavioral problems (Laitinen et al. 2001; Alaimo at al. 2002; Ashiabi 2005; Jyoti et al. 2005).

Research Questions

The current study aims to address the effects of marital status on child well-being, more specifically child food security. Some studies have examined food security among children by using a measure of food security at the household level (Manning and Brown 2006; Kennedy 2008), however few studies have specifically examined child food security within the household. Child food security indicates a more severe case of food security issues than adult food security within the household; as adults are more likely compromise their nutrition for the welfare of their children (McIntyre et al. 2003). In this study I aim to answer the following questions: (a) Do children residing in cohabiting and single-family households face a higher risk of food insecurity than children residing in traditional family arrangements? (b) How do race and a host of other covariates mediate the relationship between food insecurity and marital status? (c) How does race moderate the relationship between marital status and food insecurity? That is, does marriage protect children of different racial backgrounds equally from food insecurity?

Methods

Data

This study draws upon the 2007-2008 wave of the National Health and Nutritional Examination Survey (NHANES). Data collection is administered by the National Center for Health Statistics, and provides an excellent resource of information on nutritional and health status of adults and children in the United States. The survey examines a nationally represented sample of non-institutionalized individuals annually since 1960, then biannually beginning in 1999. NHANES oversamples African-Americans, Hispanics, and persons age 60 and over to improve the reliability of parameter estimates.

The 2007-2008 wave of NHANES includes interviews on 10,142 individuals. The child food security module was only administered to households with at least one child less than 18 years of age. Listwise deletion was used to handle missing cases on the child food insecurity variable and all other covariates. Therefore, the final sample size includes cases on 5,386 households, or about 53% of the original sample.

Measures

The dependent variable in this study is child food insecurity. The measure of child food insecurity was created based on responses to questions in the USDA (United States Department of Agriculture) food security module. The child food security module consists of eight questions. A respondent who does not affirm any questions about food security are considered fully food secure, an affirmation of one question is considered marginally food secure, and affirmation of two to four questions is considered low food security, and an affirmation of five or more questions in considered very low food security. Sensitivity analysis has shown that respondents who report marginal food security are more similar to households that report low and very low food security than to households that are fully food secure (Jyoti, Frongillo, and Jones 2005). Therefore, a binary variable was created, and respondents that affirmed one or more questions on the child food security module were coded as food insecure (=1), while respondents who affirmed no question was considered food secure (=0). Due to the dichotomous nature of the dependent variable, logistic regression was used to estimate the odds of child food insecurity.

The focal independent variable in this study is marital status of the household head. This variable aims to capture the family context. Dummy variables are created to compare the risk of child food insecurity across children living with a household head that is married, cohabiting, or single. The racial and ethnic identification of the household head is included it the analyses to determine how race moderates and mediates the relationship between family structure and child food insecurity status. I also include the following covariates: the gender, age, citizenships status, and education of the household head, as well as the size of the household and whether total income reported falls below or above 185% of the poverty line. A poverty threshold of 185% is commonly used to determine eligibility for means-tested programs.

Preliminary Results

Descriptive statistics (results not shown) reveal that about 21% of children experience food insecurity. Food insecure children are more likely to live in single parent households, to be Hispanic, live in a household with more family members, below 185% of the poverty line, and live with in a household head who is female, a non-citizen, with a high diploma or less. Multivariate results are reported in Table 2. Model 1 addresses the first research question. The odds of child food insecurity are significantly higher for children living with parents who cohabit or single parent households compared to children resident in a two-parent household. Children with cohabiting parents are 101% more likely to experience food insecurity, while children in a single-parent household are 145% more likely to experience food insecurity. Black and Hispanic children (see Model 2) are significantly more likely to experience food insecurity than white children. Model 3 shows that race partially mediates the effects of family context on child food insecurity status. The coefficient for cohabiting marginally decreases from Model 1, but the coefficient for single status increases. Also, marital status fully mediates the relationship between black and child food insecurity, while partially mediating the relationship between Hispanic and child food insecurity. This finding suggests that the risk of food insecurity among black children can be completely explained by family context, particularly due to black children residing in single parent households.

Model 4 shows how other demographic and socioeconomic characteristics of the household further explains child food insecurity. Preliminary results indicate that as the size of the household increases by one unit, the odds of reporting child food insecurity increases by 24%, and if the household head is a citizen they are almost 25% less likely to report children with food security issues. Not surprisingly, children who live in a household that is above 185% of the poverty line, and have parents with some college or who have a college degree are

significantly less likely to report food insecurity. Adding additional covariates in Model 4 partially explains disparities in child food insecurity risk between children living in alternative family arrangements and two-parent households, but the disparity persists after accounting for household demographics and socioeconomic status. Model 4 also reveals a substantial portion of the difference in child food insecurity status between whites and Hispanics is explained by socioeconomic and demographic indicators of the household head.

Finally, Model 5 reports how the relationship between marital status and child food insecurity is moderated by race. These results are better illustrated in Figure 1, which reports the probability of child food insecurity as a function of race and family context for a child living with four family members and a household head who is female, a citizen, and 30 years of age. These results confirm that the interaction of family context and race varies across groups. Black children in two-parent households have the least probability of reporting food insecurity across all groups. White children suffer the most in cohabiting and single family context in regards to food insecurity. White children in cohabiting and single parent households have almost a 50% probability of experiencing food insecurity compared to those in two-parent families. Black children's probability of food insecurity in married households is almost half as likely than black children in single-parent households. Residing in a two-parent household protects Hispanic children the least compared to blacks and whites. Furthermore, the probability of food insecurity among Hispanic children in married and single parent families is virtually identical (i.e., approximately 30%), while Hispanic children in cohabiting family arrangements are slightly less likely to report food insecurity.

Discussion and Plans for Future Analysis

Preliminary results show that marital status significantly impact well-being of children in regards to food security. Children had an increased risk of food insecurity if they resided in cohabiting or single-family households compared to children living with married parents. Thus, children non-traditional family arrangements have different experiences with adverse events. Race/ethnicity attenuates the effects of marital status on child food insecurity. Race/ethnicity also moderates the effect of marital status on child food security. This study provides evidence that the benefits of marriage on child well-being varies considerably across race.

Moving forward with this study, I will merge waves of NHANES data from 2000-2010 to determine if the results reported in the preliminary findings are consistent with increasing the sample size over multiple waves. I will also use multiple imputation to deal with missing data, and survey weights to deal to the increased probability of Hispanics and blacks to be surveyed in the survey. If the findings in future analyses are consistent, this study will highlight the complexity of race and family context on child well-being.

Figure 1: Probability of Child Food Insecurity as a Function of Race and Family Context

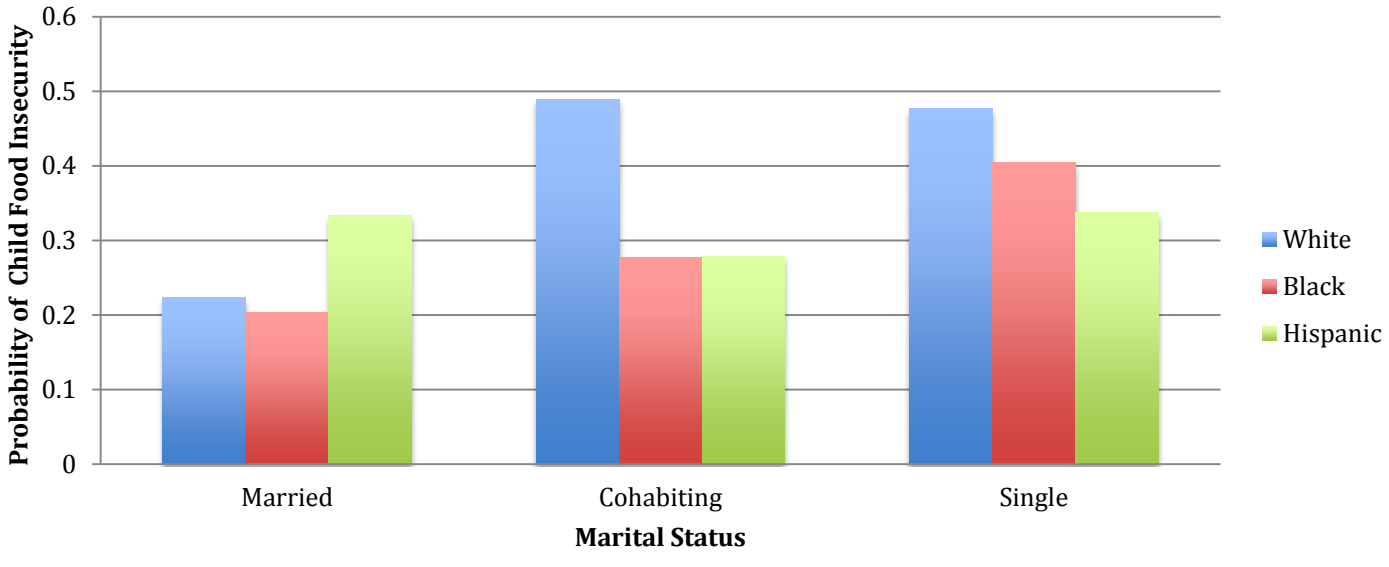

Table 2 Logistic regression (odds ratio) predicting the child food insecurity (NHANES 2007-2008)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR	p	OR	p	OR	p	OR	p	OR	p
Intercept	0.201	***	0.196	***	0.157	***	0.204	***	0.137	***
Background Characteristics										
Marital Status (reference: Married)										
Cohabiting	2.015	***			1.939	***	1.330	*	3.338	***
Single	2.145	***			2.230	***	1.765	***	3.170	***
Race/Ethnicity (reference: White)										
Black			1.263	*	0.983		0.911		0.886	
Hispanic			1.865	***	1.749	***	1.118	***	1.176	***
Other			1.193		1.177		1.303	**	1.920	**
Other Demographic Characteristics										
Female (reference: Male)							1.182		1.242	**
Age							0.996		0.995	
Household Size							1.241	***	1.272	***
Citizen (reference: non-Citizen)							0.748	*	0.753	*
Socioeconomic Characteristics										
Education (reference: High School Graduate)										
Less than High School							0.874		0.918	
Some College							0.708	***	0.753	**
College Graduate							0.304	***	0.323	***
Poverty Index (reference: < 185 poverty index)										
Poverty level index > 1.85							0.282	***	0.288	***
Interaction: Race*Marital Status										
Black*Cohabiting									0.451	*
Black*Single									0.842	
Hispanic*Cohabiting									0.231	***
Hispanic*Single									0.320	***
Other*Cohabiting									0.110	*
Other*Single									0.408	*
N	5,386		5,386		5,386		5,242		5,242	
Pseudo R-Square	0.022	0.012	0.012		0.034		0.127		0.138	

Note: p< 0.001 (***), p< 0.01 (**), p< 0.05 (*)

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