

Submission to 2005 PAA meeting, Philadelphia, PA

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Title: The Effects of Grandparent Care on Children's Developmental Outcomes

Over the past two decades, social scientists and policy makers have become increasingly interested in the role that grandparents play in their grandchildren's lives. Much of the focus of this research has been on grandparent maintained families, as the percentage of children living in this type of family arrangement has risen considerably. A recent U.S. Census Bureau report shows a 76 percent increase in grandparent maintained families between 1970 and 1997, so that by 1997, 3.9 million children lived in grandparent maintained households (Casper and Bryson 1998). Data from the most recent 2000 U.S. Census indicates that 5.8 million grandparents live with their grandchildren that are under the age of 18. An issue receiving somewhat less attention, however, is the role that non-custodial grandparents play in providing routine childcare to their grandchildren. While informal family childcare has declined over the past three decades, grandparent childcare remains a prevalent form of care. Preschool age children are more likely to be cared for by a grandparent than by any other relative or non-relative, with 21 percent of preschoolers in grandparent care (Smith 2002). Almost half of all grandparents provide some type of child care to their grandchildren under the age of 13 (Guzman 2004). Further, the increased labor force participation of mothers, and the recent increase in work requirements of welfare recipients, may spell an increase in informal grandparent childcare among certain segments of the population. Despite recent research on the contours of grandparent childcare and on the effects of maternal employment on child developmental outcomes, research regarding

the outcomes of grandparent childcare is relatively scant. Our study examines this important, and as of yet, unanswered question: what are the effects of grandparent childcare on children's development? How does grandparent childcare mediate the effects of maternal employment on children's development?

Two areas of scholarship inform our inquiry. First, there has been some research on the effects of kinship care on children, although findings have been mixed. In one recent study, the authors find that children living with kin and without their parents are at increased risk, primarily of the socioeconomic sort (Ehrle, Geen, and Clark 2001). Other studies suggest that while children may benefit from a kin support network, the quality of childcare by relatives, in-home babysitters, and other informal providers is not always highly rated (Kontos et al. 1995). Second, there has been a developing line of research on the effects of early maternal employment on children's development, with findings again somewhat mixed. Results from existing research on maternal employment and children's well-being have yielded mostly negligible or positive effects (Belsky 1990; Parcel and Menaghan 1994; Perry-Jenkins et al. 2000), except for maternal employment during the very early stages of children's lives (Han et al. 2001; Rhum 2004). Much of this body of literature, however, has focused on middle-class two-parent families (Brooks-Gunn, Han, and Waldfogel 2002; Harvey 1999). Among low-income families, results from the literature range from no effect (Zaslow et al. 1999) to a modest but overall positive effect of maternal employment on children's cognitive and social development (Moore and Driscoll 1997; Vandell and Ramanan 1992; Zaslow and Emig 1997). Research investigating the processes and mechanisms through which maternal employment affects children's well-being is more limited. We focus on grandparent care as a potentially important mediating variable in the effects of maternal employment on children's development.

Methods

We examine these issues through the study of children's time diary data and stylized survey data collected in the 1997 and 2002 waves of the Child Development Supplement (PSID-CDS). Unique to this data set is the detailed information about children's daily activities, which was collected in a time diary format in the spring and the fall of 1997. From these diaries, researchers can construct children's activities over a week, and the role of caregiver, peers, kinship, and others in children's lives. The CDS contains child development information for approximately 3,600 children aged 0 to 12 in 1997. We restrict our analysis to about 1,500 children who were under the age of 6 in 1997 and were also present in the second wave of the study. The child outcomes that we will examine include children's cognitive ability measured by the Woodcock Johnson Revised Tests of Achievement and the WISC Digit Span scores, children's social emotional adjustment measured by externalizing and internalizing behavioral problem indices, and children's health measured by their height and weight and presence of chronic diseases. These assessments were conducted in both waves of the study.

From children's time diary data, we construct children's weekly time based on data collected for a randomly chosen weekday and a weekend day. Two levels of involvement were examined, one accounts for only the time that a child is directly engaged with another person, the other includes the time that someone is available to the child but is not directly engaged with him or her in a certain activity. Following Lamb's convention (1985), we refer to these two levels of involvement as "engaged time" and "accessible time." We will examine how much time a child spends with grandparents and what activities he or she does when under a grandparent's care. From stylized survey questions, we obtain information on the childcare history for the child, including the main form of childcare utilized, spell and costs of each child care arrangement. We

will construct measures that indicate the extent to which grandparent is involved in caring for a child and relate them to children's outcomes in the second wave of the study.

We compare the time use patterns for children across families at three poverty thresholds – (1) below the federal poverty level for the respective family size (\$16,036 for a family of four in 1996), (2) at or above the federal poverty level, but at or below twice the federal poverty level for the respective family size, and (3) above twice the federal poverty level for the respective family size.

Preliminary Results

Descriptive results of children's time with grandparents, presented in Table 1 indicate that children from poor or near-poor families spend significantly more time with relatives than do children from non-poor families. On average, children in the two lower income groups spend about eight hours per week directly engaged with grandparents and about seven hours per week directly engaged with other relatives, while children in non-poor families spend about two to three hours less per week with grandparents and with other relatives. When we include the time that these relatives are accessible to them, the differences become magnified, with those in the non-poor group spending about 9.5 hours less with grandparents and about 5.5 hours less with other relatives per week. These results suggest that grandparents and other relatives often serve as childcare providers for parents who have scarce financial resources. A more detailed examination of the data reveals that this is particularly true for children under the age of two in poor or near-poor families who spend 8 to 10 hours per week directly engaged with a grandparent and 20 to 22 hours per week if we include the time a grandparent is accessible to them.

Table 2 presents data for low-income families only. Comparing children from two-parent working poor families to children from two-parent nonworking poor families, we see that children in working poor families spend significantly more time with grandparents than do children in nonworking poor families. In previous analyses (Yeung and Glauber forthcoming) we uncovered these quantitative differences in children's time-use. In this paper, we will examine in detail what activities children do with grandparents, and relate these early-childhood experience to child outcome data from the second wave of the PSID-CDS.

We will examine the *effects* of grandparent care on children's developmental outcomes using a change score model and child outcome data from Wave II of the CDS. A major problem in establishing the causal order between grandparent care and children's well-being is that of selection bias. One way around this problem is to estimate *change models* or *longitudinal fixed-effects models*. These models result from the first difference of the two cross-sectional regressions at time 1 and time 2. This difference eliminates the threat of bias posed by permanent child, household, and family characteristics that are omitted from the regression equation but are related to both income and children's outcomes.

Grandparent care may be an important mediating variable in the relationship between maternal employment and child's outcome. Thus, we expect our results to inform the current theoretical debate over maternal employment, especially as it relates to low-income mothers, and to inform child policy considerations.

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Table 1: Time Children Aged 0-5 Spend with Others, by Income Group

Total Weekly Engagement Hours (mean)	Income Group		
	Poor	Near-poor	Non-poor
Mother	29.64	33.56	30.92
Father	5.01 ^{bc}	14.03 ^a	16.27 ^a
Stepmom	0.13	0.12	0.03
Stepdad	0.28	0.40	0.14
Siblings (biological or step)	29.27	28.28	26.43
Grandparents	7.87	8.08 ^c	5.57 ^b
Other relatives	6.67 ^c	6.85 ^c	4.03 ^{ab}
Other non-relatives	16.36	17.42	19.41
Friends	5.40	3.69	5.35
Number of Observations	213	202	803

Total Weekly Engagement + Accessible Hours (mean)	Income Group		
	Poor	Near-poor	Non-poor
Mother	52.91	55.35	51.97
Father	8.89 ^{bc}	20.43 ^{ac}	28.45 ^{ab}
Stepmom	0.22	0.15	0.06
Stepdad	0.56	0.57	0.26
Siblings (biological or step)	43.10	38.55	39.97
Grandparents	19.36 ^c	17.51 ^c	10.02 ^{ab}
Other relatives	12.40 ^c	12.96 ^c	7.08 ^{ab}
Other non-relatives	36.72	34.88	40.52
Friends	6.68	4.44	6.41
Alone	0.34	0.29	0.47
Number of Observations	213	202	803

^aSignificantly different from mean of poor group at .05 level

^bSignificantly different from mean of near-poor group at .05 level

^cSignificantly different from mean of non-poor group at .05 level

Table 2: Children's Time Use and Parental Involvement for Children who Reside in Low-Income Households (poor and near-poor)

	Single-mother families		Two-parent families	
	Working Poor (n=369)	Nonworking poor (n=229)	Working Poor (n=319)	Nonworking poor (n=119)
<u>Children's Weekly Time With Others (in hours)</u>				
Time engaged with mother	22.5	23.4	27.01*	22.51*
Time engaged with father	2.03*	3.7*	15.25*	10.41*
Time engaged with both parents	1.28+	2.05+	10.67+	8.21+
Time engaged with siblings	29.36	25.7	29.03	29.6
Time engaged with friends	7.32	10.12	7.27	5.13
Time engaged with grandparent(s)	3.95	5.8	5.52*	3.06*
Time engaged with other relatives	6.65	6.16	5.97	7.58
Time engaged with other non-relatives	33.29*	27.91*	23.93*	30.53*
<u>Children's Weekly Time in Various Activities</u>				
achievement-related (studying & reading)	2.22	2.3	2.39	3.18
watching TV	15.66	13.68	13.03	13.91
arts, sport, and music	5.06*	7.10*	4.89	4.68
Other leisure activities	16.57	14	18.66	18.71
in day care	6.14*	2.51*	3.18	1.28
<u>Non Time Diary Involvement Measures</u>				
PCG monitoring/supervision behavior (1=low, 5=high)	3.77	3.85	4.05	3.95
% PCG volunteered in school more than once	10.26*	14.72*	19.17*	28.22*
% PCG attend PTA and like meetings more than once	13.65*	31.6*	23.01	31.41
Emotional support index (2-14)	8.01*	7.71*	10	9.4
Providing stimulating interaction (2-14)	8.52	9.06	9.5	9.8
<u>Barriers for School Involvement</u>				
% work schedule a barrier more than once	0.69*	0.40*	0.46*	0.29*
% day care a barrier more than once	0.15*	0.03*	0.05*	0.13*
<u>PCG Psychological Well-being</u>				
parental aggravation (4-25)	8.60*	9.90*	8.16	8.93
Primary caregiver emotional stress (0-4)	0.78+	0.91+	0.56*	0.81*

* group means significantly different at .05 level

+ group means significantly differently at .10 level