

The Child Care Arrangements of Preschool-Age Children in Immigrant Families in the United States¹

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ABSTRACT

This study examined the child care arrangements of children in immigrant families. Using data from the Survey of Income and Program Participation (SIPP), the study found great diversity in the child care arrangements of children according to their nativity status. Children in immigrant families, especially those in low-income immigrant families, were found less likely to use centre-based child care. Mexican, Asian, and other Hispanic children are also less likely to use centre-based child care. Because quality centre-based child care has been shown to benefit preschool-age children and help prepare them for school, both scholastically and psychologically, less use of centre-based child care among children in immigrant families compared to children in non-immigrant families is a potentially troubling finding. Public policies promoting greater access to and more use of centre-based child care, especially for low-income immigrant families and two-parent immigrant families, may make a significant difference to their children's long-term adaptation, and their children's school readiness and achievement.

INTRODUCTION

Today, the vast majority of America's young children grow up in non-maternal child care. According to the National Household Education Survey, 61 per cent of children younger than age 4 were in regular child care in 1999, including 44 per cent of infants younger than age 1, 53 per cent of 1 year olds, and 57 per cent of 2 year olds (National Research Council, 2000). Moreover, the US Bur-

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eau of the Census estimated that in 1994, 10.3 million children younger than age 5 were in child care while their mothers worked, including 1.7 million infants younger than age 1 (US Bureau of the Census, 1997). Thus, even though the family remains the child's primary context in which early childhood development unfolds, child care has become the complementary context where a child establishes his or her identity, develops language, learns to interact, and comes to understand rules and customs (National Research Council, 2000). And, for most 4 year olds, child care provides them with their first opportunity to experience a school-like environment (Hofferth et al., 1998). These dramatic changes in who rears and socializes America's children have led the National Research Council (2000) to conclude that use of child care has become the norm in American society rather than the exception.

Unclear, however, is whether use of child care is the norm for children in immigrant families in the United States. Until this study, no national-level information has depicted child care use among children in immigrant families and compared their patterns of child care use with those of children in non-immigrant families.² Despite this lack of knowledge, one in every five children in America today is an immigrant or has at least one immigrant parent (National Research Council, 1999). No group of children in America is growing faster than children in immigrant families. Between 1990 and 1997, the number of children in immigrant families grew by 47 per cent compared with only 7 per cent for children in non-immigrant families (National Research Council, 1999).

This study narrows this gap in our knowledge about child care use among children in immigrant families. The central finding that low-income children of immigrants are less likely to use centre-based care than their low-income counterparts in native families is important because child care can influence a child's early development and socialization and can ease his or her transition from home to formal school life. Moreover, in addition to promoting the development of children, centre-based care could help immigrants' children integrate into American society as it is a principal setting possessing the social capital needed to sustain the children through their adaptation to a new socio-cultural environment. Overall, this study draws attention to the early childhood experiences of children in immigrant families, especially their interactions or lack thereof with the American child care system.

BACKGROUND

This study of child care use among children in immigrant families addresses a pressing need for more population-based research on children in immigrant families

in the United States. Until recently, no population-based research on this rapidly expanding group of American children was available. That gap in knowledge has now narrowed, however, with the publications of several studies that have detailed the physical and mental health of children in immigrant families, have described their economic circumstances, and have depicted their educational achievements (National Research Council, 1999; Suarez-Orozco and Suarez-Orozco, 2001; Brandon, 2002). Some of the studies are reassuring because they suggest that the physical health and academic achievement of children in immigrant families are better than or equal to those of US-born children with US-born parents (National Research Council, 1999). Nevertheless, other studies are troubling because they suggest that some children in immigrant families are more likely than US-born children with US-born parents to lack health insurance (Brown et al., 1999), suffer depression and alienation (Rumbaut, 1997; Suarez-Orozco and Suarez-Orozco, 2001), live in poverty and over-crowded housing (Hernandez and Darke, 1999), and use welfare (Brandon, 1999; Hofferth, 1999). Moreover, the advantages possessed by children in immigrant families (e.g. family cohesion, cultural identity, and optimism about life in America) appear to diminish over time in the United States and across generations (National Research Council, 1999; Suarez-Orozco and Suarez-Orozco, 2001).

Although more is known about the health, development, assimilation, and adaptation of children in immigrant families, the impact of many contemporary American social institutions on the adjustments of children in immigrant families remains unexplored. One such institution that has received little attention, yet could affect the adaptation of children in immigrant families, is the child care system.

There are currently only a handful of studies on child care use among children in immigrant families, and most of them are case studies. For example, one case study described a family child care programme in New York City for immigrant children from the former Soviet Union and argued that child care was a critical need for new immigrants because it eased their children's adjustments to public schools (Schnur et al., 1995). In another city-specific study, researchers studying Latino families in the greater Boston area argued that cultural preferences discouraged Latino families from using child care centres (Fuller et al., 1996). Though informative, because the case studies are specific to one locale, or to a specific group of children, or to a particular type of child care, they provide limited information from which to construct a national portrait of child care use among all children in immigrant families who may use various types of child care.

A reason why little is known about the child care use among children in immigrant families for the entire nation is that past nationally representative child care

studies lacked data on the nativity status of the children or parents who were part of the studies (Hofferth et al., 1991). Thus, past national studies of child care were unable to complement findings from the existing case studies. Previous national child care studies provided excellent data on the child care arrangements of children of different races, ethnicities, and family structures (Blau, 1991; Hayes et al., 1990; Duncan and Hill, 1974), but no data on arrangements by nativity status. Likewise, studies have estimated costs of child care for different races, ethnicities, and family structures (Berger and Black, 1992; Blau and Robbins, 1988; Connelly, 1991; Hofferth and Wissoker, 1992; Leibowitz et al., 1988), but not by nativity status. As a result, one of the only national studies that provide insights into the child care arrangements of children in immigrant families is a study by Nord and Griffin (1998). Using data from the National Educational Household Survey, which collected some child care and nativity status data, Nord and Griffin (1998) found that children in immigrant families were less likely to be enrolled in child care programmes than were US-born children with US-born parents. They also found that enrolment rates differed by generation and ethnicity, with Hispanic children in immigrant families less likely to enrol than Asians.

Clearly, more national-level information, like that provided by this study, is needed about the child care arrangements of children in immigrant families, especially their use of centre-based child care. Studies show that use of centre-based child care, in particular, is associated with income levels and poverty status, two-versus one-parent families, and parental work patterns (NICHD, 1997; Capizzano et al., 2000; Connelly and Kimbel, 1999; Brayfield et al., 1995; Connelly, 1991; Ribar, 1992; Berger and Black, 1992; Hofferth et al., 1991; Hofferth, 1995; National Research Council, 1995; Presser, 1988; Lehrer, 1983; and Tout et al., 2000), but whether these key socio-demographic and economic factors operate differently for children in immigrant and non-immigrant families is still unknown. Yet, such information is now imperative to possess and builds upon the major earlier child care studies that demonstrated the significant roles that race, income, poverty status, parental work decisions and work schedules, and family structure play in determining use of alternative types of child care.

Hence, this study adds to the emerging literature on the adjustments of children in immigrant families to US society by broadening the focus to include their use of child care. In America today, there is an unprecedented reliance on non-parental child care (National Research Council, 2000) and thus, as Rumbaut (1997) and Booth et al. (1997) have suggested, child care could be a principal setting beyond the immediate family that possesses the social capital necessary to sustain immigrant children through their adaptation to a new socio-cultural environment.

DATA DESCRIPTION AND EMPIRICAL STRATEGY

Data description

Data for this study are from the 1996 panel of the Survey of Income and Program Participation (SIPP). The SIPP is a longitudinal survey of a random sample of the US population (US Bureau of the Census, 1991). The recently available 1996 SIPP panel contains four rotation groups spanning 1995 through 1998. Each rotation group provided information for at least 36 consecutive months. Each wave of data collection in the survey was conducted quarterly and each participant was interviewed about his or her monthly experiences over those four months (US Bureau of the Census, 1991). Thus, these data provide monthly information on household composition, labour market behaviour, and income sources.

The SIPP is well suited for this study because it collected economic and demographic data on households and because it had detailed questions contained in specially organized topical modules that asked about child care arrangements of preschool-age children of working and non-working parents. The questionnaires directed parents to report child care expenditures for their five youngest children and the hours the children spent in alternative types of child care. The types of child care asked about included child care provided by: (1) the other parent or step-parent, (2) a brother or sister older than age 15, (3) a grandparent, (4) another relative, (5) a non-relative, (6) a day or group care centre, (7) a nursery or preschool, (8) a school, (9) the child, i.e. self-care, (10) a parent working at home, and (11) a parent at the workplace. To estimate the statistical model, I collapsed the 11 types of child care into two child care categories: (1) non-centre based child care,³ which includes parent care, relative care, and non-relative care, and (2) centre-based care. Complementing questions about the types of child care used by parents are questions asking if a second type of child care was used for a child and if so for how many hours. The panel yielded a sample of 7,364 children younger than 6 years old with working or non-working mothers using a form of primary child care.

The SIPP data permit combining the child care information with other data on parents' demographic characteristics, work schedules, income sources, living arrangements, state of residence, and immigrant status. The extensiveness of the child care data once merged with the socio-economic data on the children, including their nativity status, offers an excellent opportunity to study the child care arrangements of children in immigrant families, compare those arrangements with the arrangements of children in non-immigrant families, and examine the determinants of centre-based child care by nativity status.

Statistical model predicting use of centre-based child care and independent variables

With these data, I could specify logistic regression models that calculated the probabilities of preschool-age children receiving two alternative forms of child care by nativity status and by the interaction of nativity status with three key demographic characteristics, namely: low-income status, two-parent family, and only one parent working full-time. This nonlinear modelling strategy has been used extensively to predict many outcomes for immigrants, e.g. welfare receipt (Hofferth, 1999; Brandon, 1999; Jensen and Chitose, 1994). This study builds upon such models by using logistic regression models to examine the probability of children in immigrant and non-immigrant families using centre-based child care. I assume that a logistic model generates my observations and that the probability of observing a child in a type of child care relative to another type of child care is associated with variations in the independent variables. The logistic regression model as described by Agresti (2002: 122) is:

$$\Pr(x) = \frac{\exp(\alpha + \beta x)}{1 + \exp(\alpha + \beta x)}$$

Thus, the dependent variable (“child care arrangement”) has two categories that are indicators of child care arrangements among children. If the primary child care arrangement for a child is a parent, relative, or non-relative, the category “non-centre-based care” is coded 0. If the primary child care arrangement for a child is a day care centre or nursery, the category “centre-based care” is coded 1. “Non-centre-based care” is the comparison group in the logistic regressions.

Nativity status and nativity status interacted with low-income status and family structure are the chief independent variables. Other independent variables measuring demographic characteristics of children, mothers, and households, as well as contextual variables, i.e. state unemployment rates and region of the country, should also affect the type of child care arrangement used. Contextual measures are included since child care studies, such as Stolzenberg and Waite (1984), Blau and Robbins (1988), Blau (1991), Ribar (1992), Berger and Black (1992), Connelly and Kimbel (1999), and Brandon (2000), have demonstrated that families’ decisions about use of non-parental child care are associated with region of the country (measured by the four major statistical regions – Northeast, South, Midwest, and West) and with existing labour market opportunities (measured by state unemployment rates).

FINDINGS

Though representation of every ethnic group of children in the United States was unrealistic, the large sample size ($N=7,364$) guaranteed adequate representation of several groups of children by ethnicity and nativity status. The 1,157 children in immigrant families included 301 non-Hispanic white children, 60 non-Hispanic black children, 509 Mexican children, 127 other Hispanic children, and 160 Asian children. The 6,207 children in non-immigrant families included 4,790 non-Hispanic white children, 731 non-Hispanic black children, 409 Mexican children, 87 Puerto Rican children, 92 other Hispanic children, and 160 Asian children.

Table 1 suggests that important differences in use of child care exist between preschool-age children in immigrant and non-immigrant families. Children in immigrant families are more likely to receive care from their parents than children in non-immigrant families. In contrast, preschool-age children in immigrant families are much less likely to receive centre-based care than preschool-age children in non-immigrant families. Non-relative care is used by similar proportions of children in both types of families, while kin care is used less by children in immigrant families.

There are other socio-demographic differences between the two groups of children as well. More than 60 per cent of young children in immigrant families are low-income compared with about 45 per cent of young children in non-immigrant families. Though oftentimes poor, children in immigrant families are less likely than children in non-immigrant families to receive welfare, i.e. Aid to Families with Dependent Children (AFDC), and more likely to live in two-parent families.

Nonetheless, mothers of children in immigrant families have lower educational attainment and the families of children in immigrant families are more likely to have only one parent who works full-time compared with the families of children in non-immigrant families. Unsurprisingly, the preschool-aged children in immigrant families are much more likely to have Asian or Mexican heritage than their peers in non-immigrant families.

The comparisons of child care arrangements in Table 1, particularly the use of centre-based care, are useful and provide some insights into the socio-demographic differences between children in immigrant and non-immigrant families. However, they are misleading without introducing controls for demographic and socio-economic differences across family types.

TABLE 1
CHARACTERISTICS OF CHILDREN UNDER AGE 6,
BY IMMIGRANT STATUS

	Children in immigrant families ^a	Children in non-immigrant families ^b
Child care arrangements		
Parent care	59.2%	43.7%
Non-relative care	6.6%	7.2%
Centre-based care	13.9%	24.6%
Kin care	20.2%	24.5%
Demographic characteristics		
Household characteristics		
South	27.0%	35.9%
Welfare receipt	12.0%	16.5%
Metro area	86.5%	73.6%
Two-parent family	82.5%	68.3%
Low-income status ^c	60.4%	45.4%
Only one parent works full-time	46.3%	40.0%
Mother's characteristics		
Less than high school	38.5%	15.7%
High school only	26.4%	32.8%
Some college	11.4%	18.8%
College plus	23.5%	32.6%
Mother's age	31.3	30.3
Children's characteristics:		
Infant (2 years or younger)	40.9%	46.9%
Toddler (3-5 years)	59.1%	53.1%
Number of children	2.5	2.3
Non-Hispanic white	25.6%	77.4%
Non-Hispanic black	5.1%	11.8%
Mexican	43.3%	6.6%
Puerto Rican	n.a.	1.9%
Other Hispanic	10.8%	1.5%
Asian	13.6%	1.6%
	(N = 1,157)	(N = 6,207)

Source: SIPP (1996 panel).

Notes: n.a. = not applicable because Puerto Rican children are not considered immigrants to the United States; (a) children in immigrant families are foreign-born with foreign-born parents or born in the United States with at least one foreign-born parent; (b) children in non-immigrant families are born in the United States with both parents also born in the United States; (c) defined as those living in households below the official poverty line or within 200 per cent.

To resolve the concern, multivariate analyses were used: a dependent variable that distinguished centre-based child care from alternative child care arrangements (i.e. parent, relative, and non-relative) was regressed on immigrant status (see Table 2), and on interactions of immigrant status and the two important demographic variables identified earlier in the statistical modelling section, i.e. low-income status and two-parent family as well as other socio-economic and demographic factors (see Table 3). The study would have also examined the interactions between nativity status and only one parent working full-time, but these data lacked sufficient sample sizes and previous analyses suggested that there were no significant differences across work patterns by nativity status.

Table 2 indicates that after controlling for socio-economic and demographic factors, children in immigrant families are less likely to use centre-based child care compared with children in non-immigrant families. This result, produced from the multivariate logistic regression, is more persuasive than the bivariate result because low-income status, parental work participation, and number of parents in a family, as well as the educational attainments of mothers, are controlled or “held constant”. Several reasons possibly explaining why children in immigrant families are found less likely to use centre care include: (1) differential access to centre-based care due to immigrant families having lower income than non-immigrant families (Hernandez, 1999; Hofferth, 1999; Booth et al., 1997); (2) a preference for parental care among immigrant families since the majority are two-parent families (Hernandez, 1999; Booth et al, 1997; Brandon, 2002) and the parent at home could, therefore, promote the children’s ethnic and cultural identities; (3) differential work patterns within the family because, net of preferences, immigrant families compared with non-immigrant families are more likely to have only one parent working full-time while the other parent works in the home (Booth et al., 1997); (4) geographic location since poor immigrants are known to live in segregated neighbourhoods with fewer services (Massey and Denton, 1992; Fong, 1994; Borjas, 1995); (5) language barriers, which have been shown to influence immigrants’ access to other human services (Brown at al., 1999); and (6) a lack of needed social capital to navigate the child care market.

Table 2, though more informative than Table 1, reveals little about the factors that could operate differently for immigrant and non-immigrant families and lead to lower use of centre-based care among children in immigrant families. Of the six possible hypotheses listed above that could explain lower use of centre-based care among children in immigrant families, the size of the SIPP sample and the measures available in the SIPP, permit testing the effects of only two: low-income status and living in a two-parent family. If the evidence suggests

that these two factors operate differently for immigrant and non-immigrant families, after accounting for other factors, e.g. mother's education, geographic region, family size, and ethnicity, then policy interventions may be required to lower access barriers to centre-based care for children in immigrant families.

TABLE 2
LOGISTIC REGRESSIONS ESTIMATING THE ODDS
OF CENTRE-BASED CHILD CARE AMONG PRESCHOOL-AGE
CHILDREN, BY IMMIGRANT STATUS

	Estimated odds ratio	Standard error
South	1.309***	0.114
Midwest	1.011	0.095
West	1.095	0.115
Welfare receipt	0.555***	0.066
Metro	0.811***	0.067
Family income (log)	1.052***	0.017
Mother's age	1.005	0.005
Professional job	1.460***	0.115
High school only	1.429***	0.181
Some college	1.848***	0.251
College plus	2.213***	0.301
Toddler	2.026***	0.134
Number of children	0.810***	0.027
Non-Hispanic black	1.262***	0.119
Mexican	0.508***	0.076
Puerto Rican	0.753	0.249
Other Hispanic	0.621**	0.141
Asian	0.705*	0.134
Two-parent family	0.504***	0.043
Low-income status	0.526***	0.039
Only one parent works full-time	0.535***	0.034
In immigrant family ^a	0.810*	0.091
Log likelihood = -3,504.49		
N = 7,364		

Source: SIPP (1996 panel).

Notes: (a) children in non-immigrant families are the omitted category in the model;
*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Importantly, the logistic regression model in Table 3, which includes the interactions between immigrant status and the two variables of interest, confirms that low-income status and living in a two-parent family operate differently for immigrant and non-immigrant families, after accounting for other factors.⁴ Table 3 shows that when low-income status and immigrant status are interacted, children in low-income immigrant families have lower odds (0.50) of using centre-based child care than children in low-income, non-immigrant families. As expected, children in non-immigrant families that were not low-income had higher odds of using centre-based child care compared with children in low-income non-immigrant families. An additional (unreported) statistical test on differences between estimated coefficients in the model revealed that children in low-income immigrant families had lower odds of using centre-based child care than children in non-immigrant families that were not low-income. (Correlations among some of the independent variables for preschool-age children in immigrant families that were not low-income prevented comparing their odds of using centre-based care with those of children in non-immigrant families that were low-income.)

Table 3 also shows that children in two-parent immigrant families are less than half as likely (0.442) to use centre-based child care than children in two-parent, non-immigrant families. Hence, the finding suggests that immigrant parents with preschool-age children are more likely to choose to stay at home to take care of young children. By contrast, children in one-parent, non-immigrant families were nearly twice as likely (1.96) to use centre-based child care compared with children in two-parent, non-immigrant families and these children were more likely (according to extra statistical tests on the coefficients) to use centre-based child care compared with children in two-parent, immigrant families. Furthermore, children in one-parent, immigrant families were 1.5 times as likely (1.52) to use centre-based child care compared with children in two-parent, non-immigrant families and these children too were more likely to use centre-based child care compared with children in two-parent, immigrant families. The latter finding thereby suggesting that two-parent, immigrant families are the families most likely to face barriers to centre-based care.

Lastly, contrasts were attempted to estimate the effects of having only one parent working full-time by immigrant status on the odds of using centre-based child care. This study and several of its predecessors cited earlier, show that immigrant families are less likely to have a second full-time working parent. Insufficient data, however, prevented estimating such parental work-pattern effects, though such effects are important for research and policy development. Certainly, as Tables 2 and 3 indicate, having only one parent working full-time significantly lowers the odds of using centre-based care.

TABLE 3

LOGISTIC REGRESSIONS ESTIMATING THE ODDS OF CENTRE-BASED CHILD CARE AMONG PRESCHOOL-AGE CHILDREN, WITH INTERACTIONS AMONG IMMIGRANT STATUS AND LOW-INCOME STATUS, TWO-PARENT FAMILY, AND ONLY ONE PARENT WORKING FULL-TIME

	Estimated odds	Standard error
South	1.309***	0.114
Midwest	1.011	0.095
West	1.095	0.115
Welfare receipt	0.555***	0.066
Metro	0.811***	0.067
Family income (log)	1.052***	0.017
Mother's age	1.005	0.005
Professional job	1.460***	0.115
High school only	1.429***	0.181
Some college	1.848***	0.251
College plus	2.213***	0.301
Toddler	2.026***	0.134
Number of children	0.810***	0.027
Non-Hispanic black	1.262***	0.119
Mexican	0.508***	0.076
Puerto Rican	0.753	0.249
Other Hispanic	0.621**	0.141
Asian	0.705*	0.134
Non-immigrant_family x One-parent family ^a	1.94***	0.171
Immigrant_family x Two-parent family ^a	0.435***	0.114
Non-immigrant_family x Not low-income status ^b	1.88***	0.145
Immigrant_family x Low-income status ^b	0.51***	0.108
Immigrant_family x Two parents work full-time ^c	2.09***	0.424
Non-immigrant_family x Two parents work full-time ^c	1.83***	0.122

Source: SIPP (1996 panel).

Notes: *** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$; (a) the comparison group is two-parent, non-immigrant families; (b) the comparison group is low-income, non-immigrant families; (c) the comparison group is non-immigrant families with only one parent working full-time.

Interestingly, the significant interactions in Table 3 are net of controls for other factors that child care studies have found to influence the use of centre-based child care. For example, the odds of using centre-based care have been found to vary with racial or ethnic backgrounds. Tables 2 and 3 also suggest that use of centre-based child care varies along racial or ethnic lines as children with Mexican, other Hispanic, and Asian backgrounds are less likely to use centre-based child care compared with non-Hispanic white children (Hofferth and Wissoker, 1992). Conversely, non-Hispanic black children in this study, like in other child care studies, are more likely to use centre-based care compared with non-Hispanic white children (Fuller et al., 1996; Hofferth et al., 1991; NICHD, 1996).

Other findings also complement those reported previously on the determinants of child care arrangements. For example, this study finds, like previous studies, that more-educated mothers are more likely to use centre-based child care than less-educated mothers. As the Tables indicate, the odds of using centre-based child care rise as mothers' levels of educational attainment increase (Hayes et al., 1990; Blau, 1991; Kisker and Maynard, 1991; Hofferth et al., 1991; Hofferth and Wissoker, 1992; Zaslow et al., 1998; Leibowitz et al., 1998). Other studies have suggested that geographic context, for example, the region within which children reside, may also influence the use of centre-based care (Stolzenberg and Waite, 1984; Capizzano et al., 2000; Phillips, 1995). In this study, the odds of using centre-based child care are higher among children living in the South compared with children living in the Northeast.

Likewise, previous studies have suggested that children from more economically advantaged backgrounds have higher odds of using centre-based care than children from less economically advantaged backgrounds (NICHD, 1997; Capizzano et al., 2000; Connelly and Kimbel, 1999; Brayfield et al., 1995; Connelly, 1991; Ribar, 1992). Findings in this study support these previous studies by suggesting that as income levels rise or if welfare income is received, the odds of using centre-based child care significantly rise or fall, respectively. Children with mothers who have professional jobs compared with children with mothers who do not, as well as older preschool-age children, have higher odds of enrolment in centre-based child care, such as a nursery or day care centre. In summary, this study confirms past child care studies' findings while demonstrating the importance of including measures of children's immigrant status and measures of the immigrant status combined with key demographic factors.⁵

CONCLUSIONS

The issue of the successful adaptation of children in immigrant families to life in the United States is controversial. While disagreeing on which pathways help

children in immigrant families adapt, there is still a consensus that more attention to the complexities of the adaptation process for children in immigrant families is needed. Those complexities involve, but are not limited to, three factors: (1) the ethnicity of children in immigrant families, (2) the multidimensional nature of adaptation, and (3) differences in the rate at which adaptation occurs. This adaptation process for children in immigrant families arises in many aspects of their lives – schooling and health, for example. The child care arrangements of preschool-age children in immigrant families are no exception, and as this study shows, the pathways to child care services in a market economy are influenced significantly by family structure, work patterns among parents, and income status. Once those complexities of the adaptation process are incorporated, a more informative explanation arises as to why children in immigrant families are less likely to use centre-based child care.

Overall, this study extends our understanding of the child care arrangements of children in immigrant families. Importantly, child care arrangements differ by immigrant status and by immigrant status and demographic characteristics of immigrant and non-immigrant families. Thus, inferences about the use of child care among children in immigrant families are difficult to make if key underlying demographic differences between immigrant and non-immigrant families are ignored. Once differences along important demographic lines are recognized and modelled in analyses, however, some generalizations are possible.

First, despite the diversity in the types of child care available to children in America, children in immigrant families, especially children in low-income immigrant families, tend to receive child care from alternatives to centre-based care, mostly from their parents or relatives. Thus, in spite of the rapid growth in the child care market during the last 25 years, which is best characterized by the growth in centre-based child care, and a surge in immigration over the last decade, poor children in immigrant families are less likely to receive centre-based care than poor and non-poor children in non-immigrant families. Moreover, children in two-parent immigrant families are less likely to use centre-based care than children in two-parent non-immigrant families.

More research is required to determine whether the under-utilization of centre-based care among children in immigrant families compared with use among children in non-immigrant families hinders pathways to successful assimilation. Centre-based child care is one of the first societal institutions beyond the immediate family capable of transferring social capital to young children in immigrant families. However, the transfer of such basic social capital as learning rules and norms, speaking English, cooperative play with diverse peers, and understanding how to relate to teachers will occur less frequently for children in immigrant

families, especially for those who are poor. Importantly, more qualitative research on the barriers facing immigrant families' use of centre-based care is required. Detailed ethnographic research could perhaps reveal the economic, social, and cultural impediments that immigrant families confront when attempting to organize child care. Currently, there is little information on the process immigrant families go through to find child care or how long it takes before they decide there are no options in their particular neighbourhoods, or whether they understand their eligibility status for subsidies or benefits that may improve their access to centre-based child care. Clearly, more qualitative research could offer essential insights on these sorts of issues.

Future research may show that differences in use of centre-based child care by income status and immigrant status are traceable to economic disadvantaged among groups of children in immigrant families that existed at the time of entry into the United States. At entry, some preschool-age children in immigrant families may have come with parents who had fewer financial and human capital resources than parents of children in non-immigrant families. Alternatively, differences may be due to language barriers, parental preferences for kin care that maintains ethnic and cultural identity, a lack of social capital that is necessary to navigate the child care market, or a lack of access to care.

Regardless, it is important to recognize that if centre-based child care helps prepare young children in immigrant families for school – scholastically, socially, and emotionally – then certain groups of children in immigrant families do not gain those benefits. Public policies that would promote universal child care and school readiness are worthwhile investments because those types of programmes could help ensure children in immigrant families have access to quality child care and participation in programmes that place them on a more equal footing with their non-immigrant peers by the time they enter school. Furthermore, since this study suggests that affordability is a barrier to access for immigrant parents compared with non-immigrant parents, policies could be established that either relieve the financial burden on these families, such as cash subsidies, added tax relief, or financial incentives. Another demand-side possibility is perhaps to provide income-eligible immigrant parents with child care vouchers to defray the costs of care. Clearly, the study assumes that quality child care that promotes early childhood development is a goal of American society and policy makers.

According to the research on the well-being of children in immigrant families, these particular children's fortunes can improve and demographic risk factors can decline over generations. However, this study cautions against expecting a decline in risk factors associated with school readiness and socialization across

generations if variations in child care experiences, which can influence the development of preschool-age children, between children in immigrant and non-immigrant families are permitted to persist. Thus, policy interventions targeting preschool-age children in immigrant families are required to reduce the chances that children in immigrant families enter elementary school without literary skills and with different, possibly negative, perceptions of their schools, teachers and peers, and themselves.

In conclusion, this study underscores the need for a deeper understanding of the forces determining the child care arrangements of children in immigrant families and the effects of child care on their development and early adaptation to life in the United States. Failure to pursue this research will deprive us of understanding an important possible antecedent to the documented problems some children in immigrant families experience early in their formative school years, such as difficulties in adapting to school and achieving scholastic success.

NOTES

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2. Clear definitions of the groups of children compared in the study are provided and thoroughly discussed in the later methods section. For now, the reader should note that children in non-immigrant families are US-born children with US-born parents, sometimes referred to as "third-generation" children (Hernandez, 1999; Smith and Edmonston, 1997). Children in immigrant families are foreign-born with foreign-born parents and US-born children with at least one foreign-born parent, sometimes referred to as "first-generation" and "second-generation" children, respectively (Hernandez, 1999; Smith and Edmonston, 1997).
3. Parent care consisted of types (1), (10), and (11); relative care consisted of types (2), (3), and (4); non-relative care consisted of type (5); centre-based care consisted of types (6) and (7).

4. The author is indebted to an anonymous referee who made excellent suggestions about the logistic modelling strategy.
5. Also see studies by Berger and Black, 1992; Hofferth, 1995; National Research Council, 1995; Presser, 1988; Lehrer, 1983; and Tout et al., 2000.

REFERENCES

- Agresti, A.
2002 *Categorical Data Analysis*, second edition, John Wiley and Sons, Hoboken, NJ.
- Berger, M., and D. Black
1992 "Child care subsidies, quality of care, and the labour supply of low-income, single mothers", *Review of Economics and Statistics*, 74: 635-642.
- Blau, D.
1991 "The quality of child care: an economic perspective", in D. Blau (Ed.), *The Economics of Child Care*, Russell Sage Foundation, New York: 145-173.
- Blau, D., and P. Robbins
1988 "Child care costs and family labour supply", *The Review of Economics and Statistics*, 60: 374-381.
- Booth, A., et al.
1997 *Immigration and the Family: Research and Policy on US Immigrants*, Lawrence Erlbaum Associates, Inc., New Jersey.
- Borjas, G.J.
1995 "Ethnicity, neighborhoods, and human-capital externalities", *American Economic Review*, 85(3): 365-390.
- Brandon, P.D.
1999 "Public assistance receipt among immigrant children and their families: evidence from the survey of program participation", in D.J. Hernandez (Ed.), *Children of Immigrants: Health, Adjustment, and Public Assistance*, Committee on the Health and Adjustment of Immigrant Children and Families, Board on Children, Youth, and Families, National Academy Press, Washington, DC.
2000 "Child care utilization among working mothers raising children with disabilities", *Journal of Family and Economic Issues*, 21(4): 343-364.
2002 "The living arrangements of children in immigrant families in the United States", *International Migration Review*, 36(2).
- Brayfield, A., et al.
1995 *Caring for Children in Low-income Families*, Substudy of the National Care Child Survey, 1990, Urban Institute Press, Washington, DC.
- Brown, E.R., et al.
1999 "Access to health insurance and health care for children in immigrant families", in D.J. Hernandez (Ed.), *Children of Immigrants: Health, Adjustment, and Public Assistance*, Committee on the Health and Adjustment

- of Immigrant Children and Families, Board on Children, Youth, and Families, National Academy Press, Washington, DC.
- Buriel, R., and T. De Ment
1997 "Immigrant and sociocultural change in Mexican, Chinese, and Vietnamese American families", in A. Booth et al. (Eds), *Immigration and the Family: Research and Policy on US Immigrants*, Lawrence Erlbaum Associates, Inc., New Jersey: 150-165.
- Capizzano, J., et al.
2000 *Child Care Patterns of School-age Children with Employed Mothers*, Urban Institute, Washington, DC.
- Connelly, R.
1991 "The importance of child care costs to women's decision making", in D. Blau (Ed.), *The Economics of Child Care*, Russell Sage Foundation, New York: 87-118.
- Connelly, R., and J. Kimmel
1999 "Marital status and full-time/part-time work status in child care choices: changing the rules of the game", paper presented at the ASPE/Census Bureau Small Grants Research Conference, Washington, DC.
- Duncan, G., and R. Hill
1974 "Modal choice in child care arrangements", in G. Duncan and J. Morgan (Eds), *Five Thousand American Families: Patterns of Economic Progress*, 4: 301-324.
- Fong, E.
1994 "Residential proximity among racial groups in US and Canadian neighborhoods", *Urban Affairs Quarterly*, 30(2): 285-297.
- Fuller, B., et al.
1996 "Rich culture, poor markets: why do Latino parents forgo preschooling?", *Teachers College Record*, 97(3): 400-418.
- Gordon, M.
1964 *Assimilation in American Life: The Role of Race, Religion, and National Origins*, Oxford University Press, New York.
- Hayes, C., et al.
1990 *Who Cares for America's Children?* National Research Council, National Academy Press, Washington, DC.
- Hernandez, D.J. (Ed.)
1999 *Children of Immigrants: Health, Adjustment, and Public Assistance*, National Academy of Sciences Press, Washington, DC.
- Hernandez, D.J., and K. Drake
1999 "Socioeconomic and demographic risk factors and resources among children in immigrant and native-born families: 1910, 1960, and 1990", in D.J. Hernandez (Ed.), *Children of Immigrants: Health, Adjustment, and Public Assistance*, Committee on the Health and Adjustment of Immigrant Children and Families, Board on Children, Youth, and Families, National Academy Press, Washington, DC.
- Hofferth, S.
1995 "Caring for children at the poverty line", *Children and Youth Services Review*, 17: 1031.

- 1999 "Receipt of public assistance by Mexican American and Cuban American children in native and immigrant families", in D.J. Hernandez (Ed.), *Children of Immigrants: Health, Adjustment, and Public Assistance*, Committee on the Health and Adjustment of Immigrant Children and Families, Board on Children, Youth, and Families, National Academy Press, Washington, DC.
- Hofferth, S., and D. Wissoker
1992 "Price, quality, and income in child care choice", *Journal of Human Resources*, 27: 70-111.
- Hofferth, S., et al.
1991 *National Child Care Survey 1990*, The Urban Institute Press, Washington, DC.
1998 *Characteristics of Children's Early Care and Educational Programs: Data From the 1995 National Household Education Survey*, NCES 98-128, US Department of Education, National Centre for Education Statistics, Washington, DC.
- Jensen, L., and Y. Chitose
1994 "Today's second generation: evidence from the 1990 US Census", *International Migration Review*, 28: 714-735.
- Kisker, E., and R. Maynard
1991 "Quality, cost, and parental choice of child care", in D. Blau (Ed.), *The Economics of Child Care*, Russell Sage Foundation, New York: 127-144.
- Lehrer, E.
1983 "Determinants of child care mode choice: an economic perspective", *Social Science Research*, 12: 69-80.
- Leibowitz, A., et al.
1988 "Child care for preschoolers: differences by child's age", *Demography*, 25: 205-220.
- Lopez, D.
1996 "Language: diversity and assimilation", in R. Waldinger and M. Bozorgmehr (Eds), *Ethnic Los Angeles*, Russell Sage Foundation, New York: 139-163.
- Massey, D.S., and N.A. Denton
1992 "Residential segregation of Asian-origin groups in US metropolitan areas", *Social Science Research*, 76(4): 170-177.
- National Research Council and Institute of Medicine
1995 *Child Care for Low-income Families: Summary of Two Workshops*, Steering Committee on Child Care Workshops, Board of Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education, National Academy Press, Washington, DC.
1999 *Children of Immigrants: Health, Adjustment and Public Assistance*, Committee on Health and Adjustment of Immigrant Children and Families, Board of Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education, National Academy Press, Washington, DC.

- 2000 *From Neurons to Neighborhoods: The Science of Early Childhood Development. Committee on Integrating the Science of Early Childhood Development*, Board of Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education, National Academy Press, Washington, DC.
- NICHD Early Child Care Research Network
- 1996 "Characteristics of infant child care: factors contributing to positive caregiving", *Early Childhood Research Quarterly*, 11: 269-306.
- 1997 "Familial factors associated with the characteristics of nonmaternal care for infants", *Journal of Marriage and the Family*, 59: 389-408.
- Nord, C.W., and J.A. Griffin
- 1998 "Educational profile of 3- to 8-year-old children of immigrants", in D.J. Hernandez (Ed.), *Children of Immigrants: Health, Adjustment and Public Assistance*, Committee on Health and Adjustment of Immigrant Children and Families, Board of Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education, National Academy Press, Washington, DC.
- Phillips, D.A. (Ed.)
- 1995 *Child Care for Low-income Families: A Summary of Two Workshops*, National Academy Press, Washington, DC.
- Presser, H.
- 1988 "Shift work and child care among young dual-earner American parents", *Journal of Marriage and the Family*, 50: 133-148.
- Ribar, D.
- 1992 "Child care and the labour supply of married women: reduced form evidence", *Journal of Human Resources*: 27, 134-165.
- Rumbaut, R.G.
- 1997 "Ties that bind: immigration and immigrant families in the United States", in A. Booth et al. (Eds), *Immigration and the Family: Research and Policy on US Immigrants*, Lawrence Erlbaum Associates, Inc., New Jersey: 3-46.
- Schnur E., et al.
- 1995 "Family child care and new immigrants: cultural bridge and support", *Child Welfare*, LXXIV(6): 1237-1248.
- Smith, J., and B. Edmonston
- 1997 *The New Americans: Economic, Demographic, and Fiscal Effects of Immigration*, National Research Council, National Academy Press, Washington, DC.
- Stolzenberg, R.M., and L. Waite
- 1984 "Local labour markets, children, and the labour force participation of wives", *Demography*, 21: 157-170.
- Suarez-Orozco, C., and M. Suarez-Orozco
- 2001 *Children of Immigration*, Harvard University Press, Cambridge.
- Tout, K., et al.
- 2001 "Two roles of early care and education: development opportunity for young children and work support for families", *Child Trends*, Washington, DC.

US Bureau of the Census

- 1991 *Survey of Income and Program Participation: Users' Guide*, second edition, US Government Printing Office, Washington, DC.
- 1997 *Who's Minding Our Preschoolers?*, Fall 1994 update, US Government Printing Office, Washington, DC.

LA GARDE DES ENFANTS D'ÂGE PRÉ-SCOLAIRE DANS LES FAMILLES IMMIGRÉES AUX ÉTATS-UNIS

La présente étude s'intéresse à la garde des jeunes enfants dans les familles immigrées. Sur la base de données provenant de l'enquête sur les revenus et la participation aux programmes, l'auteur fait le constat d'une large diversité en termes de garde des enfants, selon l'origine ethnique des familles. Il a ainsi établi que les enfants de familles immigrées, surtout à modeste revenu, étaient moins enclines à utiliser les services centralisés de garde d'enfants. Les enfants de familles asiatiques, mexicaines et plus généralement de langue espagnole avaient également moins tendance à se tourner vers ce type de service. En raison du profit que peuvent tirer des enfants d'âge pré-scolaire de leur placement dans des services centralisés de garde d'un bon niveau qualitatif et de la bonne préparation qu'offre leur passage dans un tel service tant sur le plan de la scolarité que sur le plan psychologique, il est troublant de savoir que les enfants des familles immigrées en font un moindre usage que les familles autochtones. Les politiques publiques favorisant l'accès aux services centralisés de garde des enfants et incitant les familles à en faire usage, surtout auprès des familles immigrées à faibles revenus et dont les deux parents sont des immigrants, peuvent modifier considérablement la capacité d'adaptation à long terme de leurs enfants, ainsi que leur attitude face à l'école et l'issue de leur scolarité.

ARREGLOS PARA EL CUIDADO DE HIJOS DE FAMILIAS INMIGRANTES EN LOS ESTADOS UNIDOS EN EDAD PREESCOLAR

Este estudio examina los arreglos de cuidado infantil de los hijos de familias de inmigrantes. Gracias a los datos obtenidos de una encuesta sobre el nivel de ingresos y la participación en programas, se determinó que había gran diversidad en los arreglos de cuidado infantil para los hijos según su nacionalidad. Los hijos de familias de inmigrantes, especialmente aquellos de bajos ingresos, recurrían en menor medida a cuidados centralizados. Los niños mexicanos, asiáticos y otros niños de habla hispana también recurrían en menor medida a dichos cuidados. En razón de su calidad, los cuidados centralizados de niños han demostrado ser provechosos para niños en edad preescolar puesto que los preparan para la escuela, tanto desde el punto de vista escolar como psicológico, por ello, la poca utilización de estos cuidados entre los hijos de familias de inmigrantes, en comparación a los hijos de familias no inmigrantes, es sumamente

preocupante. Las políticas públicas destinadas a promover un mayor acceso y utilización de cuidados infantiles centralizados, especialmente para las familias de inmigrantes de bajos ingresos o las familias en que ambos padres son inmigrantes, pueden tener una incidencia a largo plazo en la adaptación de los niños, así como en su preparación y éxito en la escuela.