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Subsidizing child care: How child care subsidies affect the child care used by low-income African American families

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Abstract

To evaluate the type and quality of child care used by low-income families who were either receiving or not receiving subsidized child care, we interviewed 111 African American parents from a randomly selected sample of low-income families. We inquired about their child-care use, satisfaction with care, work stress, and employment history. Using standardized assessment instruments, independent observers in the children's child-care setting evaluated the quality of the care and characteristics of the providers. We found that families using subsidized child care were more likely to use center care and other more formal types of care, while families not using subsidized child care were more likely to use a relative in the relative's home. Families using subsidized care tended to use licensed and registered child-care arrangements more than non-subsidized families. Also, subsidized families spent approximately half as much out-of-pocket money for child care. However, we found no evidence that the care used by families using subsidized care was of any higher quality than that used by non-subsidized families. We examine the possibility that child-care subsidy programs may not be adequately designed or funded to increase the availability of quality child care to low-income families. Educators and policy makers may want to consider additional means of increasing access to quality care in low-income families.

1. Introduction

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) dramatically changed federal welfare and child care policies (Schumacher & Greenberg, 1999). By replacing Aid to Families with Dependent Children (AFDC) with Temporary Assistance to Needy Families (TANF), federal entitlements to cash and child-care assistance were terminated, and states were given additional child-care funding to distribute to parents on assistance and to low-income families. Families could now receive funding for child-care subsidies though the federal Child Care Development Fund (CCDF), state funds for CCDF, and funds allocated to child care from TANF.

Although child-care funding programs were primarily designed to support parental employment, enhancing parental choice was a clearly stated goal of the new child-care subsidy system (Adams & Rohacek, 2002). Subsidies were designed to enable parents to have more child-care options, thereby increasing parental choice and parent child-care satisfaction, and to facilitate low-income parents' access to higher quality, more expensive care (Adams & Rohacek, 2002). Access to higher quality care, it was hoped, would foster child development in low-income families, since higher quality care has been linked to enhanced cognitive and language development, pro-social behavior and skills, academic achievement, and socio-emotional development (Barnett, 1995; Burchinal et al., 2000b; Feagans, Fendt, & Farran, 1995; Loeb, Fuller, Kagan, & Carrol, 2004; NICHD Early Child Care Research Network, 1999; Peisner-Feinberg et al., 2001; Ramey & Campbell, 1992).

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Child-care quality is a critical issue for all children, but it matters even more for low-income children (Duncan & Brooks-Gunn, 2000; McLoyd, 1998). Low-income children, who may be less likely to have compensatory advantages available at home, are also less likely to have quality child care than children from more affluent families (Brooks-Gunn, Brown, Duncan, & Moore, 1995; Fuller & Strath, 2001; Phillips & Adams, 2001; Vandell & Wolfe, 2000). Researchers have found that quality child care brings with it more benefits for low-income children than for higher income children (Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000a; Peisner-Feinberg et al., 2001). Therefore, increasing access to quality child care for low-income families is an important and meaningful public policy goal.

Although many eligible children do not receive child-care assistance (Blau & Tekin, 2001; Child Care Bureau, 2002; Shlay, Weinraub, Harmon, & Tran, 2004), there are still many children who do. In 2002, it was estimated that more than 2 million children nationwide were receiving child-care subsidies through public funding programs (Adams & Rohacek, 2002). Yet, little is known about the quality of subsidized child-care arrangements (Mezey, Schumacher, Greenberg, Lombardi, & Hutchins, 2002) and about how these subsidies affect the child-care usage of low-income parents. Do subsidies enable parents to have more choice in child-care arrangements, fewer work–family conflicts, and greater satisfaction with the care, and better quality care for their children? In this study, we investigate these dimensions of care in two groups of low-income families—those using child-care subsidies to pay for care and those not using subsidies.

1.1. What we know about the effects of subsidized care

Information from administrative records and parental surveys reveal several things about subsidized care in comparison to non-subsidized care.

First, subsidized children are more likely to be cared for in legally regulated settings, either in child-care homes or centers, than other low-income children. Administrative figures show that 76% of children receiving CCDF subsidies were cared for in regulated homes or centers (Adams & Rohacek, 2002), but there is wide variation across states. A study of five states showed that the proportion of subsidized children whose main child care arrangement was center-based ranged from 18% in Oregon to 79% in Texas (Child Care Subsidy Dynamics Study Team, 2002). Comparisons within groups of low-income families show that low-income families with child-care subsidies are more likely to access formal and regulated child care than low-income families without subsidies (Brooks, Risler, Hamilton, & Nackerud, 2003; Mezey et al., 2002; Schumacher & Greenberg, 1999).

Second, the programs providing child care to subsidized families tend to be diverse, ranging from small family-based programs to large child-care centers serving hundreds of children (Child Care Subsidy Dynamics Study Team, 2002). The quality of those providers who serve large numbers of subsidized children has been called into question. Examining administrative records, Wisconsin researchers reported that programs specializing in meeting the demand for subsidized care were less likely than other child care programs in the state to employ highly educated staff and more likely to experience high staff turnover (Adams, Roach, Riley, & Edie, 2001).

Third, the average duration of subsidy for children is short. According to the Child Care Subsidy Dynamics Study team (2002), the average duration of subsidy across five states for any particular child ranged from 3 to 7 months.

And finally, we know that, as planned, families on subsidies pay considerably less out of pocket funds for their care than other families (Brooks et al., 2003). According to Schumacher and Greenberg (1999), families purchasing care with subsidies paid an average of $58 per month in 1998 dollars, compared to the $245 per month paid by families purchasing care without subsidies.

Studies concerning the effectiveness of the current subsidy system have been primarily limited to administrative records and tend to focus on subsidy utilization. While the information on the frequency of subsidy uptake among eligible families is useful, little is known about whether subsidies enable low-income families to access higher quality care than they would without these subsidies, and whether the care that subsidy recipients use is more likely to meet their needs than the care they would otherwise access. In one of the few studies addressing this issue, Brooks et al. (2003) found that compared to mothers from subsidy waiting lists, low-income mothers receiving subsidies for their child's care spent half as much of their income on child care. They were also more likely to have their children in a formal licensed child-care center, report more stable care, have an easier time finding care, and be more satisfied with their child care arrangement. In that study, however, the researchers did not directly observe the quality of the care that the subsidized and non-subsidized families received.

There are many reasons to be concerned about whether the current subsidy system increases the access of low-income families to higher quality care. As Adams and Rohacek (2002) have observed, the priorities of the child-care subsidy system have been deliberately slanted toward supporting parental employment. This emphasis on parental choice has allowed all forms of child care to be supported in some states, whether care is licensed and/or regulated or not. In many states, subsidy funds are payable to kith and kin caregivers with little or no child-care training or experience. Federal regulations require states to dedicate at least 4% of the CCDR-related funds to efforts that increase the quality and availability of child care, but that amount is often not sufficient to make substantial changes in the availability of quality care. Finally, the limits on fees paid to providers, along with regulations on fees charged and conditions of child-care instability, offer little opportunity to providers receiving child-care subsidies to make quality-enhancing improvements (Helburn, Morris, & Modigliani, 2002).

1.2. This study

In this study, we investigated how the receipt of child-care subsidies affected the care families used. To do this, we compared the type and quality of early child care obtained by families using some kind of child-care subsidy or assistance to the quality of early child care used by comparable low-income families who did not receive any subsidized assistance. Rather than rely on administrative data, we directly interviewed a sample of parents selected from a larger pool of randomly selected low-income African American parents to learn about their child care-related experiences. To measure the type and quality of child care used, we interviewed parents and providers about the children's care, and we observed the children in their child-care arrangement. Finally, we measured the qualifications and professionalism of the providers.

Recognizing that our findings would depend on the particular sample of families and providers we recruited for study, we took care to select randomly from an identified population of low-income families. We were also careful to document the differences between the families who used child-care assistance and those who did not, as well as the differences between the providers who consented to be studied and those who did not.

2. Method

2.1. Sample selection

In Fig. 1, we present a flow chart diagramming the participant selection. We began by calling 12,455 randomly selected phone numbers of households in specified Philadelphia zip codes. According to 1990 U.S. Census figures, these zip codes included a significant number of low-income residents, both African American and White. We called each telephone number at least once. From these contacts, 85 White[1] and 457 African American respondents who were at least 18 years of age, employed at least 25 h per week, and had children less than 4 years of age living in their homes were identified and completed an initial telephone survey. Of these families, 316 (69%) were African American and met the household income eligibility criteria of being at or below the Metropolitan Statistical Area (MSA) median ($41,392), having a child under the age of five living in the household as of September 2002, using a child-care arrangement for that child at least 20 h per week on a regular basis, having no language barriers, and willing to complete a longer interview for $25. (See Shlay et al. (2004) for further details of that sampling procedure.) Finally, 143 families completed the preliminary interview and were invited to participate in this study.

2.2. Sample characteristics

Of the 143 respondents invited to participate, 111 (78%) came to university offices to participate in a study of child-care preference.[2] All respondents were parents, and all but two of the parents were mothers. There were significant

[1] We had planned to include both White and African American families. The 2000 Census figures, released after the sampling was completed for this study, revealed that significant changes occurred between 1990 and 2000, with few eligible white families remaining in these census tracts in 2000. The number of eligible White families (85) was insufficient for analyses, and so they were dropped from the sample.

[2] Of the 32 the families who did not participate, 17 were deemed ineligible (6 no longer had a child in the household under age five and 11 were not using child care at the time of the study), 4 were unable to be contacted, and 11 decided not to participate. One family completed a parent interview

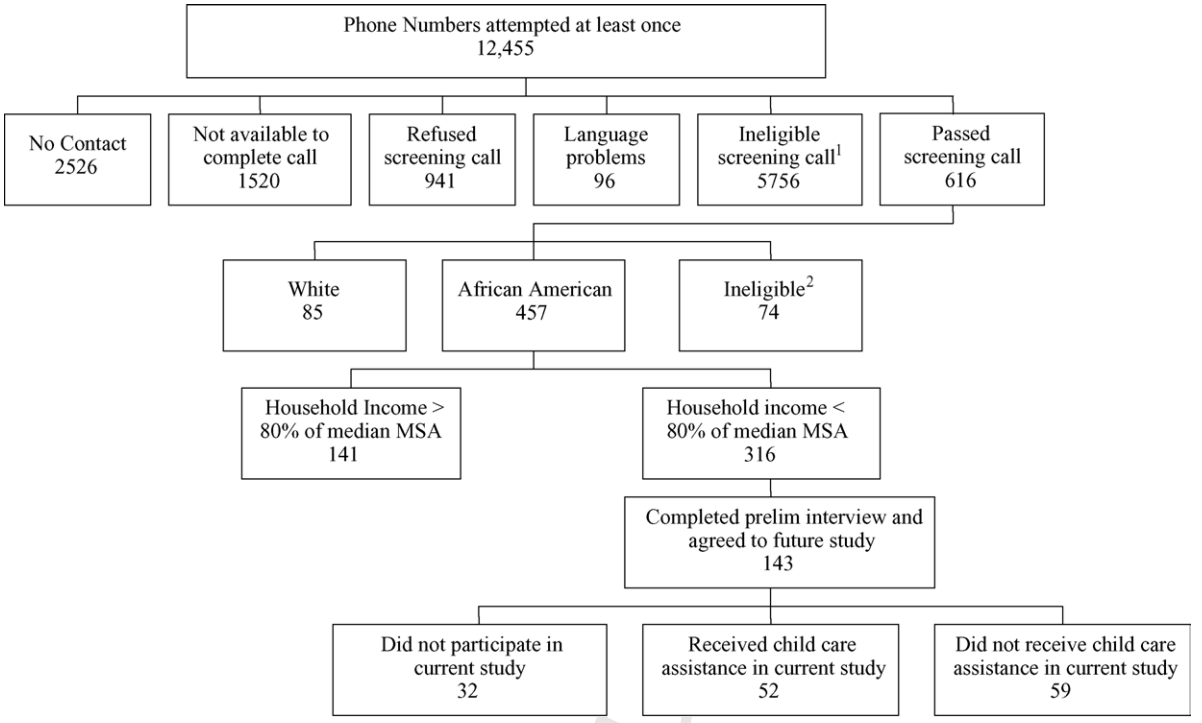

Fig. 1. Flow chart for participant selection. Notes: 1 = Ineligible screening calls included those in which there was no adult in the household, the wrong zip code, no child under the age of 4, respondent not employed, or respondent not White or African American. 2 = Ineligible respondents included those who had difficulties answering the interview questions, who refused many of the items, or who were repeatedly unavailable to complete the interview.

differences in the mean age of those respondents who participated in the study and those who did not (30 and 34 years, respectively), family type (participants were more likely to be single parents), and level of education (participants were slightly more educated).

The average age of the target child selected for the study in each group was reported to be 3½ years old. Of the 111 families, 52 families reported receiving assistance to help offset the cost of child care and 59 families reported not receiving government assistance of any kind. The nine families who had their children in Head Start were assigned to the group of families who reported using child-care subsidies. This is because families whose children were eligible for Head Start would have met the income guidelines for other federal assistance programs in the state, but did not have to apply separately for child-care funds. Head Start programs in the region also take children from families on subsidized care. Thus, families receiving assistance were those receiving assistance from any of three programs: state subsidy funding (mothers were required to be employed at least 25 h), federal TANF funding (mothers not required to work, but limited to 5 years in the program lifetime total), and Head Start (families required to be at or below 100% of the Federal Poverty Income Guideline). Of these, 64.5% were receiving state subsidies, 28.8% were receiving TANF subsidies, and 17.3% had their children in Head Start. (Because children could be both in Head Start and receive child-care assistance funds, this percentage exceeds 100%.)

Table 1 displays the familial and demographic characteristics of the participating parents who reported receiving child-care assistance and those who did not report receiving child-care assistance. It also presents the results of statistical tests of the differences between the groups. Although not significantly different, there was a trend ($p = .07$) for those receiving child-care assistance to be somewhat younger ($M = 29.3$ years) than those not receiving child-care assistance ($M = 31.7$ years). The majority of participants from both groups reported their marital

but was dropped from the sample when their data proved fictitious.

Table 1
Demographic and background characteristics of parents receiving and not receiving financial assistance for child care expenses

	Receiving child-care assistance[a] $N = 52$	Not receiving child-care assistance $N = 59$	t or χ^2	p
Gender				
% Female	100	97	1.80	.18
Target child's age (in months)				
M	43.10	43.02	.03	.98
S.D.	16.75	13.74		
Parent's age (in years)	$n = 52$	$n = 58$		
M	29.33	31.71	−1.86	.07
S.D.	6.30	7.02		
Marital status				
% Married and living with spouse	10	29	6.74	.03
% Separated or widowed	10	5		
% Single, never been married	80	66		
% Currently living with a spouse or partner	81	54	8.76	<.01
Number of people in household				
M	3.67	3.37	1.38	.17
S.D.	1.10	1.19		
Number of children in home under 18				
M	2.48	1.92	3.05	<.01
S.D.	1.02	.93		
Education level				
% High school diploma/GED or below	46	14	14.31	<.001
% Some college/vocational school or Associate's degree or above	54	86		
% Currently in school/taking classes	40	27	2.19	.14
% Currently employed	79	88	1.26	.26
Times of day worked	$n = 41$	$n = 52$	5.60	.02
% Days (7 a.m. to 7 p.m.)	85	64		
% Nights (7 p.m. to 7 a.m.) or times vary	15	36		
Hours per week at work (S.D.)	$n = 41$	$n = 52$		
M	33.54	36.98	−1.75	.08
S.D.	19.79	9.17		
Monthly household income	$n = 51$	$n = 59$		
M	$1417.37	$2350.39	−4.17	<.001
S.D.	$935.45	$1394.70		

[a] This group includes parents receiving state subsidy for working parents, child-care assistance through welfare, or Head Start.

status as single, but more of the child-care assistance recipients were single and never-married than their non-recipient counterparts (80 and 66%, respectively). At the same time, a higher percentage of assistance recipients reported living with a spouse or partner (81%) than did non-assistance recipients (54%). Parents receiving child-care assistance had significantly more children in the home under age 18 ($M = 2.48$) than non-recipients ($M = 1.92$).

Parents receiving child-care assistance were less educated than parents not receiving assistance. Only 54% of assistance recipients had schooling beyond high school graduation compared to 86% of non-recipients. At the same time, 40% of the assistance recipients and 27% of the non-assistance recipients were in school or taking classes at the time of the survey, but this difference was not statistically significant.

Seventy-nine percent of the child-care assistance recipients and 88% of the non-recipients were employed. Of these employed parents, more assistance recipients (85%) were working during standard hours (7 a.m. to 7 p.m.) as compared to the employed non-assistance recipients (64%). There was a tendency for families using assistance to work fewer

Table 2
Comparison of parent characteristics by those families or care providers rated and not rated for quality

	Receiving child-care assistance		t or χ^2	p	Not receiving child-care assistance		t or χ^2	p
	Rated for quality	Not rated for quality			Rated for quality	Not rated for quality		
Age	$n = 35$	$N = 17$	1.25	.22	$n = 34$	$N = 24$	.68	.50
M	28.57	30.88			31.18	32.46		
S.D.	6.53	5.64			7.17	6.89		
Marital status	$N = 35$	$N = 17$	.50	.78	$N = 35$	$N = 24$	.43	.81
% Married and living with spouse	11.4	5.9			25.7	33.3		
% Separated, divorced or widowed	8.6	11.8			5.7	4.2		
% Single, never been married	80.0	82.4			68.6	62.5		
Education level	$n = 35$	$N = 17$	.25	.62	$n = 35$	$N = 24$	3.05	.08
% Some college/vocational school or above	51.4	58.8			80.0	95.8		
Monthly household income	$N = 34$	$N = 17$	.35[a]	.73	$N = 35$	$N = 24$	−.33	.74
M	$1376	$1501			$2401	$2277		
S.D.	$588	$1418			$1453	$1332		
Income-to-needs	$N = 32$	$N = 13$	−.58	.57	$n = 34$	$N = 22$	−.51	.61
M	.58	.53			.85	.76		
S.D.	.97	.86			1.58	1.47		
Times of day worked	$n = 28$	$N = 13$	.73	.39	$n = 30$	$N = 22$	2.98	.08
% Nights (7 p.m. to 7 a.m.)/times vary	17.9	7.7			26.7	50.0		
Number of children in home under 18	$N = 35$	$N = 17$	.82	.42	$N = 35$	$N = 24$	1.44	.16
M	2.40	2.65			1.77	2.13		
S.D.	1.09	.86			.877	.99		

[a] Assuming unequal variances between groups.

hours per week ($M = 34$ and 37 h, respectively). Assistance recipients had, on average, a significantly lower monthly household income ($1417) than non-assistance recipients ($2350).

2.2.1. *Participating child-care providers*

Not all of the families' child-care providers agreed to participate in the child-care observation procedures of this study. Only 68% of the providers invited to participate in the study completed forms, and slightly fewer (64%) permitted us into their setting to observe.

Table 3
Distribution of observed child care programs as a function of child-care assistance status

	Receiving child-care assistance		t or χ^2	p	Not receiving child-care assistance		t or χ^2	p
	Rated for quality	Not rated for quality			Rated for quality	Not rated for quality		
% Licensed/registered arrangement	$n = 35$	$n = 17$	7.91	< .01	$n = 35$	$n = 23$	7.82	.01
	73.9	70.6			72.4	52.2		
Primary child-care arrangement grouped	$n = 35$	$n = 17$	12.69	< .01	$n = 34$	$n = 24$	10.79	<.01
% Center	91.4	47.1			76.5	33.3		
% Non-center care	8.6	52.9			23.5	66.7		
Primary child care arrangement	$n = 35$	$n = 17$	12.69	<.01	n=34	n=24	10.87	<.01
% Center	91.4	47.1			76.5	33.3		
% Non-relative in their home	5.7	35.3			11.8	29.2		
% Relative care	2.9	17.6			11.8	37.5		

Characteristics of those families where the providers were rated for quality of care within each child-care assistance group are presented in Table 2 along with the results of statistical tests. There were no significant differences in the provider participation rate between the families receiving child-care assistance and those not receiving assistance (67% versus 57%), and no significant differences between the *parents'* characteristics for those whose care providers were rated for quality and those whose care providers were not rated for quality. However, within the families *not* using child-care assistance ($n = 59$), those providers for whom we have provider information ($n = 34$) came from families where the parents tended to be less educated (80% of those who participated had education beyond high school, compared to 96% whose caregivers did not participate $p = .08$) and somewhat more likely to work days than nights (73% versus 50%, $p = .08$). These two trends reduced the differential in education level and day and night care between families receiving assistance and those not receiving assistance (see Table 1), resulting in more equitable comparisons between care providers in the subsidized and non-subsidized family groups.

Table 4
Background characteristics of parents receiving and not receiving assistance for those families for whom child-care providers were observed

	Receiving child-care assistance[a] $N = 35$	Not receiving child-care assistance $N = 35$	t or χ^2	p
Gender				
% Female	100	97	1.01	.31
Target child's age (in months)				
M	43.51	43.94	−.12	.91
S.D.	17.90	12.90		
Parent's age (in years)	$n = 35$	$n = 34$	−1.58	.12
M	28.57	31.18		
S.D.	6.53	7.17		
Marital status				
% Married and living with spouse	11.40	25.70	2.43	.30
% Separated or widowed	8.60	5.70		
% Single, never been married	80.00	68.60		
% Currently living with a spouse or partner	22.9	40.00	2.39	.12
Number of people in household				
M	3.63	3.17	1.67	.10
S.D.	1.17	1.12		
Number of children in home under 18				
M	2.40	1.77	2.66	.01
S.D.	1.09	.88		
Education level				
% High school diploma/GED or less	48.60	20.00	6.34	.01
% Some college/vocational school or associate's degree or above	51.40	80.00		
% Currently in school/taking classes	42.90	34.30	.54	.46
% Currently employed	$n = 34$	$n = 35$		
	82.40	85.70	.15	.70
Times of day worked	$n = 28$	$n = 30$	.65	.42
% Days (7 a.m. to 7 p.m.)	82.1	73.3		
% Nights (7 p.m. to 7 a.m.) or times vary	17.9	26.7		
Hours per week at work (S.D.)	$n = 28$	$n = 30$	−1.01	.32
M	34.73	37.08		
S.D.	9.14	8.69		
Monthly household income	$n = 34$	$n = 35$	−3.82[b]	<.001
M	$1375.74	$2400.66		
S.D.	$588.19	$1453.43		

[a] This group includes parents receiving state subsidy for working parents, child-care assistance through welfare, or Head Start.
[b] Assuming unequal variances between groups.

Table 3 presents the types of child-care programs for those providers who allowed us to observe and those who did not in each group along with the results of statistical tests of the differences between the groups. Not surprisingly, providers who consented to be observed were more likely to be licensed or registered providers and more likely to be in formal care arrangements rather than informal care than those who did not consent to be observed. These differences were true for both groups of families, those receiving child-care assistance and those not receiving assistance. Thus, although there were differences in the providers who chose to participate and those who refused, this differential participation was about the same for the two groups of families.

Differences between the families whose care was observed or not as a function of parental child care assistance status can be looked at yet another way. Table 4 shows the comparison of families receiving assistance and not receiving assistance for only those families whose care providers were observed. As in the larger sample, families receiving assistance whose child-care setting was observed had more children in the home under 18 years of age (2.40 versus 1.77, $p \leq .01$), had lower educational levels (51% with some college versus 80% with some college, $p \leq .01$) and had lower monthly incomes ($M = \$1375$ versus \$2401, $p \leq .001$) than families not receiving child-care assistance whose child care setting was observed. Because of the differential participation rate for the care providers, family differences as a function of child-care assistance level on several other variables (marital status, times of day worked) are no longer observed for those families whose child-care setting was rated for quality, making the comparisons for quality of care between families on assistance and those not on assistance somewhat more equitable.

3. Procedure

Between November 2002 and May 2003, we telephoned parents, ascertained their eligibility for this study, and invited them to participate. We interviewed parents for 20 min to update personal, familial, and child-care information. With the parents' help, we selected a "target child" for this study. This was determined by the ages of the children within the household in a care arrangement. A child 3 or 4 years of age was selected as the target child over younger or older children in the household.

To determine the child-care arrangement that would become the focus for our observation, we asked parents to identify up to three child-care arrangements they used for the target child on a regular basis for at least 20 h per week. When families used more than one child-care arrangement, we used the following criteria to select the child-care arrangement in which to observe: (1) the care arrangement used for the most hours per week and (2) the child care setting which was the most formal of arrangements (i.e., center care versus relative care).

Upon completion of the telephone interview, parents were asked for contact information regarding their child-care provider and were asked to notify their provider about our upcoming call. Parents were paid \$30.00 as a token of appreciation for their participation.

We then contacted child-care providers and administered a brief provider interview over the telephone. If the care took place in a child-care center, we also asked directors to complete a brief interview about the center. Prior to the observation visit, we sent the providers a consent form and questionnaire packet to complete. The questionnaire packet and consent form were either picked up at the visit or returned in the mail.

Trained observers, blind as to family subsidy status, visited the child-care location for approximately 2½ h on the pre-arranged morning. Visits included a brief introduction to the provider, followed by an unobtrusive observation of the caregiving environment and the care provider's interaction with the children in the group. At the end of the observation, the observer asked the provider questions regarding items that could not be observed (e.g., afternoon activities) and indicated final ratings on the child-care assessment score sheets.

Observers collected child-care observation data on 59 child-care center classrooms, seven family day care homes, and five informal care arrangements.[3] An additional four care providers completed the interviews and questionnaires but refused to be observed. Sixty-eight (96%) questionnaires were completed and returned from the care providers. We paid providers \$30.00 for their participation.

[3] Four child-care center classrooms and one family day care home had two children from different families attending. Observations were conducted and provider questionnaires were collected only once from each arrangement if a care arrangement had multiple children assigned to the same group, i.e., receiving child-care assistance or not receiving child-care assistance. In the event the care arrangement cared for two children assigned to different groups; one receiving and one not receiving child-care assistance, their data was counted twice; once for each group.

3.1. Measures

3.1.1. Parent interview

On the telephone, interviewers collected information from the parent regarding demographic and background characteristics, child-care usage, parental employment experiences, and household income.

During the telephone call, interviewers also administered an adapted version of the Work and Family Conflict Scale (Marshall & Barnett, 1993) in question format. The Work and Family Conflict Scale assesses the stressors and benefits associated with combining work and family. The scale consists of 13 items that measure the strains associated with combining work and family (e.g., 'Working causes you to miss out on some of the rewarding aspects of being a parent'), and eight items that measure the benefits associated with combining work and family (e.g., 'Having both work and family responsibilities gives your life more variety'). Respondents answer on a four-point rating scale from 1, 'Not at all true' to 4, 'Very true.' Reliability scores for the adapted version of the scale have been high (.87; NICHD ECCRN, 1999). For this study, internal consistency coefficient yielded .78. High scores on the Work and Family Conflict Scale have been significantly correlated with depression and anxiety in adult women (Wortman, Biernat, & Lang, 1991).

3.1.2. Child care observation measures

Standardized observational procedures were used to assess the global quality of the caregiving environment. These included the Early Childhood Environment Rating Scale—Revised (ECERS-R; Harms, Clifford, & Cryer, 1998), the Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989), the Infant/Toddler Environmental Rating Scale (ITERS; Harms, Cryer, & Clifford, 1990), and the Informal Child Care Quality Instrument (ICCQI; Matthews & Thornburg, 2001). To assess the caregiver's sensitivity with the children, the Arnett Caregiver Interaction Scale was used (Arnett, 1989). Each measure is described below.

3.1.3. Early Childhood Environment Rating Scale—Revised Edition

The Early Childhood Environment Rating Scale—Revised Edition (ECERS-R; Harms et al., 1998) is a standardized instrument that examines the developmental appropriateness of classroom practices and the global quality of the caregiving environment in center classrooms for children 2½ to 5 years of age. It consists of 43 items organized into seven subscales assessing particular dimensions of the environment including: Space and Furnishings, Personal Care Routines, Activities, Interaction, Program Structure, and Parent and Staff Involvement. Within each subscale, discrete items are scored on a seven-point scale with quality descriptors anchored at "1" (inadequate; does not meet children's custodial care needs), "3" (minimal; meets custodial needs and some basic developmental needs), "5" (good; meets developmental needs), and "7" (excellent; highly personalized care). To obtain a score on the ECERS-R, all items under odd-numbered descriptors at lower scores must be satisfied to move up the scale. When a classroom is observed to have all the characteristics in a lower description, but only part of the next higher description, the even number score in between is assigned.

Although there is little published psychometric information on the ECERS-R, reliability, and validity of its predecessor, the ECERS, has been well established (Harms & Clifford, 1980). The scale authors report reliability for the total score on the ECERS-R to be .92 and subscale internal consistencies ranging from .71 to .88 (Harms et al., 1998). For this study, we found the total score reliability to be .91, with reliability on the subscales ranging from .53 (Personal Care Routines) to .89 (Activities). Higher scores on the ECERS and/or ECERS-R have been found to be positively correlated with teacher's education (Cassidy, Buell, Pugh-Hoese, & Russell, 1995; Holloway, Kagan, Fuller, Tsou, & Carroll, 2001; Howes, Whitebrook, & Phillips, 1992), and several child outcomes, including better cognitive linguistic, and communicative performance (Burchinal et al., 2000a, 2000b; Peisner-Feinberg & Burchinal, 1997), and better math skills (Burchinal et al., 2000a; Peisner-Feinberg et al., 2001).

3.1.4. Infant/Toddler Environment Rating Scale

The Infant/Toddler Environment Rating Scale (ITERS; Harms et al., 1990) containing 35 items is an adaptation of the ECERS created for use with infants from birth to 11 months and toddlers 12–30 months in a center classroom. Like the ECERS-R, the ITERS is divided into seven subscales: Furnishings for Display for Children, Personal Care Routines, Listening and Talking, Learning Activities, Interaction, Program Structure, and Adult Needs. Scoring for the ITERS is conducted in the same fashion as for the ECERS-R.

The scale authors report the test–retest reliability for the overall scale as .79 and the individual subscales ranging from .58 to .76. For this study, we found an internal consistency coefficient for the total score to be .89. Scores on the ITERS and the ECERS measure similar constructs. Scores on the ITERS have been shown to be correlated with scores on the ECERS (Burchinal et al., 2000a, 2000b; Scarr, Eisenberg, & Deater-Decker, 1994). Like the ECERS, higher scores on the ITERS have been shown to be related to higher teacher education (Cassidy et al., 1995) and children's language and cognitive development (Burchinal et al., 2000; Peisner-Feinberg & Burchinal, 1997). ITERS scores have also been found to be related to teacher's interaction with the children (De Kruif, McWilliam, Ridley, & Wakely, 2000).

3.1.5. Family Day Care Rating Scale

The Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989) is a modification of the ECERS that assesses the quality of care-giving setting in a family day care home. It consists of 32 items that cover six categories including: Space and Furnishings, Basic Care Routines, Language and Reasoning, Learning Activities, Social Development, and Adult Needs. Because family day care homes usually include children of different ages, many items have two versions for children younger than and older than 2 years of age. One or both versions are scored depending on the ages of the children served. Scoring for the FDCRS is conducted the same way as for the ECERS-R and the ITERS.

The FDCRS has demonstrated adequate psychometric properties. The scale authors have reported internal reliability estimates on the subscales to range from .70 to .93. For this study, we found the total score reliability to be .71. Scores on the FDCRS have been shown to be associated with structural measures of quality such as group size (Holloway et al., 2001), ratios (Kontos, Howes, Shin, & Galinsky, 1995), teacher education (Fiene et al., 2002; Holloway et al., 2001), and training (Kontos, Howes, & Galinsky, 1996). Higher scores have also been shown to be related to the use of a curriculum (Fiene et al., 2002).

3.1.6. Combining child-care scores across child-care types

For comparisons of child care across families receiving assistance and those not receiving assistance, scores from the ECERS-R, FDCRS, and ITERS were considered separately and they were also combined for an overall score of the quality of the care-giving environments. We consider combining the ECERS-R, ITERS, and the FDCRS an acceptable course of action, as the format of scoring on all three measures is identical. While the subscales comprising each of the three measures are not identical, the comprehensive definition of the environment is functionally similar. The conceptual framework for evaluating the quality of the programs is based on the current definitions of best-practices and is consistent across all three measures.

3.1.7. Caregiver Interaction Scale

The Caregiver Interaction Scale (CIS; Arnett, 1989) was used to assess a specific caregiver's (usually the head care provider) involvement and sensitivity with the children in the group. The scale consists of 26 items organized into four subscales including positive interaction (e.g., Speaks warmly to the children), punitiveness (e.g., Seems critical of the children), detachment (e.g., Does not seem interested in the children's activities), and permissiveness (e.g., Does not reprimand children when they misbehave). Items are rated on a four-point scale indicating the extent to which each behavior occurs, from not at all ("1") to very much ("4").

The CIS has been used to augment the ECERS, FDCRS, and ITERS in numerous studies (De Kruif et al., 2000; Fiene et al., 2002; Howes, Phillipsen, & Peisner-Feinberg, 2000; Jaeger & Funk, 2001; Kontos et al., 1996; Peisner-Feinberg et al., 2001) and has demonstrated adequate reliability and validity. Internal consistency coefficients reported for three of the subscales (harshness, detachments, and sensitivity) have been high (i.e., $\geq$.81) (Helburn, 1995; Howes, Smith, & Galinsky, 1995; Shlay, Jaeger, & Weinraub 1998). For this study, we found the internal consistency to be .86. Positive scores on the measure have been linked to the use of a curriculum (Fiene et al., 2002), teacher education (De Kruif et al, 2000; Howes, 1997; Kontos et al., 1996), training (Kontos et al., 1996), children's social competence (Howes et al., 1992), and higher scores on global measures of quality (Wishard, Shivers, Howes & Ritchie, 2003).

3.1.8. Observer training and reliability

Two observers were trained to score the ECERS-R, FDCRS, and the ITERS. Inter-rater reliability was deemed acceptable if observers maintained a minimum of 80% agreement within one-scale point on each item and $r \geq .70$ across all items at each observation. Inter-rater reliability was adequately established on four consecutive visits for

each measure prior to data collection.[4] In addition to achieving reliability prior to data collection, checks were made throughout the study.[5]

Next, observers were trained to score the ICCQI. Inter-rater reliability was determined acceptable if $r \leq .80$ over four consecutive ratings of informal child-care environments viewed of pre-recorded video observations. Inter-rater reliability was adequately obtained prior to data collection.[6]

Finally, two observers were trained and certified to score the Caregiver Interaction Scale (CIS; Arnett, 1989). To be certified on the CIS, inter-rater reliability ($r \geq .70$) needed to be established for each observation. The CIS was conducted during all visits using each of the formal environmental quality measures ($N = 12$). Inter-rater reliability was adequately demonstrated on all visits prior to and during data collection.[7]

3.1.9. Center director interview

We interviewed center directors to collect information about the program and personal characteristics of the director. We asked directors about the number of children served, number of children receiving subsidies, center fees, number of teachers employed at the center, and the average education level of the head teachers. We also asked directors about their education level, years experience in child care, and their time at the center.

3.1.10. Provider interview

We asked the care providers 13 questions concerning their general professional and personal characteristics. Providers reported the number of children in their group, the number of providers available each day, number of subsidized children, hours worked per week, child-care income, job satisfaction and commitment to being a child-care provider. We also asked family day care providers and informal care providers about their fees.

3.1.11. Provider questionnaire

Care providers completed three standardized questionnaires that assessed various care-giving characteristics including knowledge of child development, child-rearing attitudes, and professionalism.

Knowledge of child development and the appropriate activities for children of different ages was examined using the Knowledge of Infant Development Inventory—3- to 6-year-old version (KIDI; MacPhee, 1981). The measure consists of 58 statements about child development to which the respondent indicates their agreement or disagreement. Examples of items include: 'the parent just need to feed, clean and cloth the baby for it to turn out fine' and 'a typical four-year old can print his/her own name.' Internal reliability coefficients have been reported ranging from .67 to .82. (Conrad, Gross, Fogg, & Ruchala, 1992; MacPhee, 1981; Shlay et al., 1998). For this study, internal consistency coefficient for the 3- to 6-year-old version of the KIDI is .74. Parents' scores on the KIDI have been related to their formal educational experiences regarding child development (MacPhee, 1981), the age-appropriateness of stimulation they provide in the home (MacPhee & Fabio, 1992), and, in interaction with maternal confidence, predicts the quality of the mother–child interaction.

Child-rearing attitudes were assessed using the Parental Modernity Scale (Schaefer & Edgerton, 1985). This questionnaire consists of 30 statements about rearing and education young children, assessing the extent to which the respondent has authoritarian attitudes regarding child rearing. Examples of the items include: 'in order to be fair, a teacher must treat all children alike' and 'children will not do the right thing unless they must.' The respondent indicates the extent to which they agree with each statement based on a five-point rating scale (1 = strongly disagree, 5 = strongly

[4] Two observers obtained inter-rater reliability coefficients on the ECERS-R ranging from .86 to .98 ($M = .93$) with the percent agreement within one rating point averaging 96%. Inter-rater reliability coefficients on the FDCRS ranged from .89 to .96 ($M = .92$) with the percent agreement within one rating point averaging 93%. Inter-rater reliability coefficients on the ITERS ranged from .83 to .94 ($M = .88$) with the percent agreement within one rating point averaging 89%.

[5] Half way through data collection, two inter-rater reliability visits were conducted using the ECERS-R and one reliability visit was conducted FDCRS. Inter-rater reliability coefficients on the ECERS-R were .88 and .98 with percent agreement within one rating point registering at 88 and 100%, respectively. Inter-rater reliability on the FDCRS was .98 with 100% percent agreement within one rating point. Because five or fewer visits were conducted using the ITERS and ICCQI, reliability was not checked during data collection.

[6] Two observers obtained inter-rater reliability coefficients on the ICCQI ranging from .83 to .91 ($M = .86$).

[7] Reliability coefficients on the Arnett obtained for these 12 visits ranged from .76 to.93 ($M = .84$). Inter-rater reliability on the Arnett was checked again during data collection when the reliability on the ECERS-R and FDCRS was assessed and was consistently found to be adequate ($r \geqq .87$).

agree). The scale authors report a split-half reliability of .90 and a test–retest reliability of .84. Other researchers have reported internal reliability coefficients ≥.75 (NICHD ECCRN, 1996; Shlay et al., 1998). For this study, internal consistency coefficient for the Parent Modernity Scale is .81. Less authoritarian child-rearing attitudes in child care have been related to more positive caregiving (Arnett, 1989; NICHD ECCRN, 1996).

Professionalism was measured using a questionnaire designed by Jorde-Bloom (1988). Containing 13 questions, this questionnaire asks about specific activities related to the care provider's job. Specifically, it collects information pertaining to subscriptions to professional journals or magazines, affiliations with professional organization, training or educational activities undertaken in the past year, and advocacy work relating to child care. It also asks if the care provider considers their work 'just a job' or a 'career' and their commitment to early childhood education. Alpha coefficients for the scale have been adequate ranging from .56 to .75 (Jorde-Bloom, 1989; Shlay et al., 1998). For this study, internal coefficient for the professionalism scale was .63. Scores on this measure have been related to provider education and training (Jorde-Bloom, 1989) and the availability of child care resources in the neighborhood (Shlay et al., 1998).

4. Results

First, we present comparisons of parental reports of child-care experiences for families using child care assistance ($n = 52$) and those not using child-care assistance ($n = 59$). Then, we examine how the child-care situations used by families on assistance and those not on assistance differ in type, quality, and provider characteristics. Finally, to explore differences in the two groups of families that might lead to differential child-care usage patterns in subsidized and non-subsidized families, we compare the correlates of quality care in the two groups.

4.1. Differences in families' child-care usage as a function of child-care assistance receipt

Table 5 presents the information we collected from both groups of parents along with the results of statistical tests. Families on assistance and those not on assistance differed in the distributions of the types of child care they used (χ^2 [1, $n = 111$] = 10.09, $p = .04$). More of the families receiving assistance used center care than did families not receiving assistance (77% versus 58%). We saw little difference in the use of family day care arrangements across the two groups (15% versus 19%). At the same time, more of the families not using assistance had children cared for by a relative in the relative's home than did families using assistance (19% versus 2%). Families not on assistance were more likely to learn of child-care arrangements through family and friends, while families using assistance were more likely to learn of child-care arrangements through government offices, referral agencies, or public notices (χ^2 [1, $n = 111$] = 11.08, $p \leq .01$). Overall, families using public assistance to pay for child care tended to be more likely to have their children in licensed, registered arrangements than families not receiving assistance (89% versus 71%, $p = .07$). No differences were observed in the hours per week families used their child-care arrangements, the length of time their child had been in the arrangement or the percentage of families using more than one concurrent arrangement. Parents' experience with missed days of employment and lateness were infrequent. Nevertheless, parents on assistance missed only a half day on average in the previous month due to child-care issues; parents not receiving assistance missed on average 1.5 days.

Not presented in Table 5 is additional information collected from families in the two groups which showed no differences in the parents' commute times from home to the child-care location (19 and 15 min, respectively), between the child-care setting and the parents' work (34 and 31 min), and no differences observed in parents' satisfaction with the care or with parents' report of the stress of combining work and family.

Where families differed considerably, not surprisingly, was in how much they paid out of pocket for their child care. As shown at the bottom of Table 5, families receiving child-care assistance paid about half as much ($43 per week) as families not receiving child-care assistance ($90 per week).

4.2. Differences in child-care quality as a function of child-care assistance

Because of the differential rate of cooperation across child-care providers (see Table 3), the distribution of providers we observed and rated for quality was more similar across family assistance group than the distribution of providers actually used by the total sample. The small number of cases within each type of care precluded the possibility of

Table 5
Child care used by families receiving and not receiving child-care assistance

	Receiving child-care assistance[a] $n = 52$	Not receiving child-care assistance[a] $n = 59$[b]	t or χ^2	p
Primary child care arrangement used				
% Using a center	77	58	10.09	.04
% Using non-relative in their home (FDC)	15	19		
% Using relative in relative's home	2	19		
% Using relative in child's home	6	2		
Learned of child care arrangement through . . .				
% Used previously for other child	10	3	19.09	.01
% Advertisement or Yellow pages	4	5		
% Subsidy office or referral agency	22	7		
% Family/friends	46	76		
% Noticed facility in neighborhood	14	3		
% Employer	6	2		
% Other source	–	3		
% Using licensed/registered arrangement	89	71	5.31	.07
Hours per week in arrangement				
M	40	39	.41	.69
S.D.	10	10		
Length of time using arrangement (in months)				
M	15	17	−.81	.42
S.D.	12	13		
% Using only one child care arrangement	96	92	1.00	.32
Average number of days arrived late to work due to child care issue				
M	.50 ($n = 48$)	1.51 ($n = 57$)	−2.23[c]	.03
S.D.	1.01	2.99		
Amount paid out of pocket for child care per week				
M	$43 ($n = 40$)	$90 ($n = 51$)	−6.03	<.001
S.D.	$33	$39		

[a] This group includes parents receiving state subsidy for working parents, child-care assistance through welfare, or Head Start.
[b] Except where noted.
[c] Assuming unequal variances between groups.

testing differences in the quality of care within each provider type, so scores from the ECERS-R, FDCRS, and ITERS were combined across child-care arrangement types. These data are presented in Table 6.

Care providers whom we observed did not differ on the quality of interaction with the child (CIS scores of 2.12 for both families receiving child assistance and those not receiving assistance), on global child-care quality scores on the observational scales (4.10 versus 4.07, respectively), or on caregiver education or knowledge of child development, caregiver child-rearing attitudes, or caregiver professionalism. Also, according to our observations, there were no differences in group sizes or teacher–child ratios in the two groups.

Care providers also did not differ when child-care measures were grouped categorically as a function of quality of care over or under particular cut-off scores. There were no differences in the percent of families receiving child-care assistance and those not receiving child-care assistance in child-care arrangements that were rated very high quality (scores over 5) or low quality (scores under 3). (These data are not shown in the tables.) Finally, we observed no differences on any of the quality measures when we compared *only* the center providers from each of the two groups.

4.3. Exploring null findings: Power analyses and correlates of quality care in the two groups

To examine our null findings on quality comparisons between families receiving and not receiving child-care assistance we first performed power analyses to assure that sufficient power was present to detect any possible quality

Table 6
Quality of care used by parents receiving and not receiving child-care assistance

	Receiving child-care assistance[a]	Not receiving child care assistance	*t*	*p*
Caregiver Interaction Scale[b]	*n* = 35	*n* = 33		
M	2.12	2.12	−.12	.90
S.D.	.13	.12		
Global Child Care Quality Score[c]	*n* = 34	*n* = 30		
M	4.10	4.07	.14	.89
S.D.	.82	.97		
Caregiver knowledge of child development	*n* = 34	*n* = 34		
M	.71	.74	−1.23	.23
S.D.	.11	.07		
Caregiver child-rearing attitudes	*n* = 34	*n* = 34		
M	2.83	2.83	−.01	.99
S.D.	.47	.45		
Caregiver professionalism	*n* = 34	*n* = 34		
M	.52	.50	.41	.68
S.D.	.20	.23		
Caregiver education	*n* = 37	*n* = 37		
M	4.57	4.22	.68	.50
S.D.	2.19	2.23		
Group size	*n* = 29	*n* = 26		
M	12.31	12.31	.00	1.00
S.D.	5.29	4.84		
Teacher child ratio children <36 months[d]	*n* = 9	*n* = 6		
M	1:5.50	1:5.83	−.40	.70
S.D.	1.22	2.07		
Children > 36 months[e]	*n* = 20	*n* = 20		
M	1:7.13	1:7.11	.02	.99
S.D.	3.03	3.76		

[a] This group includes parents receiving state subsidy for working parents, child-care assistance through welfare, or Head Start.
[b] Caregiver Interaction Scale (Arnett, 1989).
[c] Global quality of care was assessed using the Early Childhood Environment Rating Scale—Revised (ECERS-R; Harms et al., 1998), the Family Day Care Rating Scale (FDCRS; Harms and Clifford, 1989), and the Infant/Toddler Environmental Rating Scale (ITERS; Harms et al., 1990).
[d] Teacher:child ratio requirement for children 25–36 months = 1:6.
[e] Teacher:child ratio requirement for children over 36 months = 1:10.

differences. These analyses showed that our sample size had sufficient power to detect medium to large-sized effects. For large effects ($d = .80$), 26 subjects would have been necessary. For medium effects, 64 subjects were necessary. We had 34–35 subjects, depending on the measure, in each group.

We also examined the validity of the quality measures, especially since they were summed across child-care types. As predicted, overall measures of child-care quality (summed ECERS-R, FDCRS, and ITERS scores) were correlated, congruent with other findings already in the literature. Child-care arrangements that scored highest on these quality measures were those in which providers were more educated ($r = .33$, $p \leq .05$) providers scored higher on knowledge of child development ($r = .27$, $p \leq .05$), providers had more non-traditional child-rearing attitudes ($r = .41$, $p \leq .01$), and providers earned more income on their jobs ($r = .35$, $p \leq .05$). Within the centers only, center arrangements that scored highest on the quality measures also were more likely to offer sliding fees ($r = .30$, $p \leq .05$) and had more educated head teachers ($r = .47$, $p \leq .001$). Directors in the highest scoring centers had more years experience as director of that facility ($r = .33$, $p \leq .05$). These correlations lend validity to our use of child-care quality measures summed across different types of child-care arrangements.

Although quality scores for the child-care arrangements predictably related to care provider measures, there were no significant relations between family characteristics and quality measures of the child-care arrangement. Neither

parental income (within this restricted range), parental education level, time of day worked nor parental satisfaction with child care was related to the observed child-care quality.

We were also concerned about the wide income difference (M = $1376 versus $2401, $p \leq .001$, see Table 4) between families using child-care assistance and those not using assistance. Could it be that the reason there are no differences in quality between families receiving child-care assistance and those not receiving assistance was that the families not receiving assistance had higher incomes and were able to purchase higher quality care? To test this possibility, we examined whether our results were influenced by income level. Using per capita family income information, we selected from each group those families who might be eligible to receive subsidies if they were to have applied for these subsidies using the income information that they gave us. Using these rough criteria, we identified 50 of the 52 subsidy receiving families and 45 of the 59 families not receiving subsidies as "eligible" based on their family income and household size for child-care assistance. Eliminating those families who were on TANF from the subsidy group, we found no per capita income differences between these two groups of subsidized and non-subsidized, subsidy eligible, non-TANF families (M = $1599 versus $1780, $t = 1.00$, $p = .32$).

We compared the 50 and 45 subsidy-eligible families on the observed child-care quality measures listed in Tables 5 and 6. We found that families using subsidized child care differed from families not using subsidized child care on only four measures—use of child care center (76% versus 51%, $\chi^2 = 13.42$, d.f. = 1, $p < .01$), use of licensed or registered arrangement (88% versus 69%, $\chi^2 = 5.21$, d.f. = 1, $p < .02$), average number of days arrived late to work (.52 versus 1.61, $t = -2.24$, $p < .03$), and amount paid out of pocket for child care per week ($44 versus $87, $t = -5.15$, $p < .001$). These findings replicated the previous findings with the larger group of families selected on the basis of low income alone. Again, power for these analyses was sufficient to permit identification of large differences in child-care quality between the groups, but none were observed.

5. Discussion

Changes in the federal welfare system in 1996 introduced new methods for helping states distribute child-care funding to parents on assistance and to low-income, working-class families. The new system was designed to enable parents to have more successful employment experiences and greater child-care options, thereby increasing parental choice and parent child-care satisfaction and facilitating parents' access to higher quality care. Has this new system been successful in enabling parents to have more choice in child-care arrangements, fewer work–family conflicts, greater satisfaction with the care and better quality care for their children?

The results of this study of low-income African American families randomly selected from a large urban sample indicate that there are three clear differences between the care obtained when families are receiving public assistance for child care and when they are not. First, when families are receiving child-care assistance, they are more likely to use center care and more formal types of care and less likely to use relative care on a regular basis than families not using child-care assistance. Second, families receiving assistance may be somewhat more likely to use licensed and registered child-care arrangements than other families. And third, not surprisingly given the financial subsidy, subsidized families paid about half the amount out-of-pocket as families not using subsidies. Since families using subsidies had significantly lower incomes, this additional money may have been critically important to the families. These findings replicate those already in the literature based on administrative and parent report data.

At the same time, we did not find other anticipated differences between families using subsidized care and those not using subsidized care in the quality of child care used or families' satisfaction with child care. These urban African American families receiving child-care assistance were as likely to use child care located close to their home or work, as likely to be stressed combining the pressures of work and family, and as satisfied with their child's care as other low-income African American parents.

More importantly, we found no evidence of differences in the child-care quality received by children from subsidized or non-subsidized families. Not only did we find no differences in the average scores of quality in each group, but also families in the subsidized group were no more likely to use very high or very low quality care. For families in both groups, the average level of child care was rated only about "four" on a "one" to "seven" scale on the global child-care quality measures we used. Experts consider a score of "five" on these scales "good"; a score of "three" score is considered "minimal." Few of the children in either group were in "good" or "excellent" quality care. The absence of differences was found even when we compared subsidy receiving and non-subsidy receiving low-income families selected for being potentially subsidy eligible.

Thus, despite being able to document widely known differences between families on child-care assistance and those not on assistance, we were unable to show that child-care assistance families select better quality child care or child care that might be more convenient in terms of commuting times between home and workplace. Use of subsidies did not appear to reduce work–family conflict, promote greater satisfaction with child care, or affect parental employment success factors. The use of child-care subsidies was not related to better quality child care on any of the measures of observed care we used.

Certainly, this study suffers from a number of limitations. First, the sample is small despite our best attempts to recruit a larger sample. We had power to detect only large- to moderate-sized differences between the groups. The sample was selected at random from a large group of households, randomly contacted in a large city. Contacting these families took more than 6 months of intensive phone calls by professional callers. Once the families were identified, there was selected attrition in care provider participation, with fewer informal caregivers agreeing to be observed. While this provided us with more comparable samples of providers from the families on assistance and those not using assistance, it reduced our ability to observe the informal kith and kin providers used primarily by the families not using child-care assistance.

Like many other studies, this study suffers from a lack of information about the quality of *informal* child-care arrangements. Also, because of the small number of families and providers, we were not able to study families using specific types of child-care assistance; we needed to combine families using TANF, CCDF funds, and Head Start. While this is justifiable in that Head Start families were eligible for federal child-care subsidies and were getting federally subsidized care, we would have preferred to examine the effects of the subsidy system on the child-care choices above and beyond Head Start. Nevertheless, the inclusion of Head Start classes might have been expected to exaggerate the beneficial effect of child-care subsidies, but no such effects were found. Post hoc analyses excluding the Head Start families, showed similar null results. Also, when the data analyses were restricted to only families with incomes low enough to most likely qualify them to receive child-care subsidies were they to have applied for them, we also failed to find any differences in the quality of care for the children in the two groups.

Lastly, this study suffers from the usual problem of selective participation of caregivers. More of the caregivers who participated were center caregivers rather than relatives, and more often the caregivers were registered or licensed than not. This probably biased us toward observing higher quality care than might indeed be in the population at large. Nearly every study of child-care providers suffers from this problem. What was helpful here is that the same selection factors operated in both groups that we were comparing. If anything, the families from whom the child-care providers were observed were more rather than less similar after the selective participation rate of the care providers was taken into consideration.

These limitations may have biased our study toward being more likely to observe *better* quality care in the families using child-care assistance than other families. So, why were we not able to find better quality care in the families using child-care assistance than those not using assistance?

We do not think that the lack of found differences in child-care quality between families using public assistance and those not using public assistance can be attributed to small sample size and limited power for analyses. Although we had the power to observe only large differences in quality of care between the two groups and we had insufficient power to detect more minimal differences that may have existed, the incredible similarity in the mean scores within the two groups suggest that larger samples might not have identified differences in quality of care between the two groups.

Perhaps the answer lies, as Adams and Rohacek (2002) have suggested, within the design of the child-care subsidy system itself. TANF and CCDF funds are designed with the primary intention of supporting parental work, not parental choice or child-care quality. Mechanisms built into the child-care system to improve quality are minimal. The quality set-aside in the system is small—only 4% of the funds. These funds are often used to aid in state licensing systems, provider training and compensation strategies, technical assistance networks and state professional developmental networks, but they are a very small amount of funding particularly given the large size of the overall child-care market these funds are designed to affect. As Helburn et al. (2002) noted, there is little incentive for providers to provide better quality care or seek additional education or training.

These limited child-care subsidy funds may do little to increase the supply of higher quality care available to low-income families. Child-care assistance may enable low-income families to select from a wider array of care possibilities than families without this assistance, but subsidized families still select from the same pool of neighborhood care available to other low-income families in their neighborhoods. Research by Elizabeth Jaeger and Suzanne Funk (2001) shows that the care provided by child care centers in Philadelphia is of only minimal quality,

exceeding children's custodial needs, but not fully meeting their developmental needs. The average overall quality of home-based arrangements was even lower, at or below minimal standards of quality. Thus, while subsidies may enable low-income families to access center care over more inferior home-based care, the center care that they access does not appear to be any better than is generally available to paying clients in the same low-income neighborhoods.

Some research suggests that low-income families with access to free or low-cost, home-based kith and kin care that they trust are less likely to apply for child-care subsidies than other families (Shlay et al., 2003). If this is the case, then type of care used and subsidy use may be intertwined. Studying whether subsidy use increases families' ability to access higher quality care may require a longitudinal investigation in which researchers examine whether change in subsidy use over time leads to higher quality care. We are currently engaged in such a study, one that will also enable us to examine ethnic differences in families' child-care subsidy usage.

What would the families in this study have done had they not had the financial assistance to enable them to access the more costly centers that they used? Compared to the families not using subsidized care, the subsidized families in this study were more likely to be single, never-married mothers with slightly more children under the age of 18 in their household and lower household incomes. Thus, it is possible that the care these families might have used in the absence of subsidies might have been far lower in quality than that used by the comparison sample in this study.

Ideally, use of families on the waiting list for subsidies would have made a better control group than selecting for families of low-income status from the general population. However, use of child-care waiting lists is problematic for several reasons. First, families on welfare are given priority for child-care assistance, so groups of subsidy-receiving families will usually have lower incomes than groups of non-subsidy receiving families, as found in this study. Second, waiting lists are often of short duration, from 3 to 7 months. Thus, families' child-care subsidy status might have changed by the time a family could have been enrolled in a study. Third, it is possible that families might use inferior care temporarily while they are on the waiting list, believing that their child is soon to enter a better child-care setting.

Finally, our previous research (Shlay et al., 2004) showed that eligible families waiting for child care are different from eligible families who decline to apply for subsidies. In our research comparing subsidy eligible families receiving and not receiving care, two-thirds of the subsidy-eligible families did not apply for child-care subsidies. Families who did not apply for child-care subsidies were less likely to have been on welfare, more likely to be single parents with court-ordered child support, and more likely to be employed for longer hours and higher incomes. Nearly one-third of the families we interviewed who did not apply for subsidies *for which they were eligible* reported that they did not need help paying for care, ostensibly because they felt they already had child care that met their needs. Thus, use of comparable low-income samples may be more advantageous than the use of waiting list controls for studying child-care quality differences in subsidized versus non-subsidized families.

Our finding that low-income families on subsidies were more likely to avail themselves of center care may be sufficient evidence that child-care subsidies are effective in providing higher quality care for the children of these families. This is because center care has been documented to be of higher quality than more inexpensive, home-based care. Loeb, Fuller, Kagan, and Carrol (2003) showed positive cognitive effects for low-income children in center care over those in child-care homes, and they reported that children in family child-care homes had more behavioral problems than other children. Using data from the NICHD Study of Early Child Care and Youth Development, Tran & Weinraub (in press) and Tran (in preparation) showed that families using center and family day care arrangements were more likely to have stable arrangements than families using other types of care. Enabling families to move from more informal, family-based care to more professionalized center care may be the great benefit of child-care assistance programs. Research reviewing the effects of welfare and employment policies on young children (Morris, Gennetian, & Duncan, 2005) suggests that many welfare support programs may be effective for preschool children due to the increased use of center-based child-care arrangements these programs enable.

6. Policy implications

Subsidies increase affordability and access to center care for low-income families. However, we can provide no evidence that subsidies do anything to increase the quality of that care. Are policy makers content with providing subsidies that result in care that only reaches a minimal level of quality? Researchers and policy makers may want

to address the capacity of a system that appears limited in its ability to increase child-care quality for low-income families.

Child-care providers maintain that the subsidies that are provided are too low to enable providers to deliver a level of care more than minimal (Graham, personal communications, 2004, 2005). The Commonwealth of Pennsylvania sets reimbursement rates to the centers at 65% of market rate. Despite providers' objections, this market rate is not assessed on a regular, updated basis. At the same time, some families complain that co-pays are too high, making subsidized care less attractive to them (Shlay et al., 2004). At an accredited child-care center in downtown Philadelphia that serves Head Start and subsidized families along with full-paying families, the weekly charge for a preschool child is $195.[8] Costs co-paid by parents at that center range from $5 to $75 a week, depending on family income, number of children, and household size. Yet, the Commonwealth of Pennsylvania currently pays only $142.60 a week per child. Thus, the center loses money for many if not all of the subsidized children in the center. The difference between the cost of care and the reimbursed amount must be met by board fundraising and local foundation grants. For programs not as adept at fundraising as this one, providing quality care is simply not possible. Until child-care providers receive subsidies sufficient to pay for high-quality care, the subsidy system may be less than fully effective in providing quality care for children.

Not only are subsidized families shortchanged in quality, but so are families who do not receive subsidies. The average out of pocket payments by non-subsidized families was $90, barely half as much as it costs to provide quality care. Policy makers choose between subsidizing fewer people at higher rates or more people at lower rates. Either way, low-income families are not able to access high-quality care. Until more money is put into the system to increase the number of subsidies and the amount of those subsidies, low-income children will not be able to access the type of care widely demonstrated to reduce the disparities between rich and poor in our nation.

Perhaps the decisive test for policy does not lie in the subsidy system's effects on the quality of care that children are afforded. Perhaps the ultimate test is whether the parents who use these subsidies are likely to have more successful employment outcomes and become self-supporting. Are parents using child-care subsidies better able to find and hold employment? Do parents receiving child-care subsidies miss fewer work days or days late to work because of child-care problems? We found that it did, in the short period that we monitored. However, the frequencies associated with these variables were small, so we need to be cautious in interpreting the observed difference in fewer days late to work in the subsidized care group. Longer term studies following parents using child-care subsidies are required to address this issue more fully.

7. Conclusion

When low-income African American families received public child-care assistance, they were more likely to use center care and more formal types of care, less likely to use relative care on a regular basis, and somewhat more likely to use licensed and registered child-care arrangements than other families. Subsidized child care required nearly half as much parental out-of-pocket expenditure. However, the care used by families on child-care assistance was no more likely to be high quality than that used by families not on assistance. Because both families receiving and not receiving child-care assistance were drawing from the same pool of child care in the marketplace, our inability to observe any differences in the quality of that care may reflect that the care generally available in low-income neighborhoods is low. The size of subsidies may not be sufficient for providers to increase the quality of care that they provide. Since the care available to low-income families has been documented to be below quality standards, educators and policy makers may want to consider higher subsidies or other provisions for increasing access to quality child care for low-income families than currently provided by existing policies.

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[8] None of the children in this study were enrolled at this child care center.

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