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Decisions & distance: The relationship between child care access and child care travel

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ABSTRACT

Child care is essential infrastructure. Without child care—or without adequate access to child care—parents and household caregivers are unable to work or conduct other critical activities, which can adversely affect their outcomes. In the U.S., child care supply has long fallen short of demand, with variations across neighborhoods that differ by income, race, and ethnicity. Yet there is relatively little research on child care access, use, and travel. In this study, we test the relationship between formal child care supply and households' use of formal care and home-to-child-care travel distances in California. Using a two-step floating catchment area method, we develop a time-weighted spatial measure of child care access and apply this measure in statistical models to predict two outcome measures: the likelihood of making a home-to-child-care trip and travel distance to the child care center, controlling for other factors. We find that child care access is associated with an increased likelihood of using formal child care—and among households that use such care, access is associated with shorter travel distances. Our analysis underscores the importance of policies to address spatial barriers to child care, particularly in neighborhoods—low-income, Latinx, non-urban—where child care supply is limited.

1. Introduction

The COVID-19 pandemic laid bare the long-standing necessity of child care as essential infrastructure. Without access to affordable child care, working is difficult or, in many cases, impossible (Boesch et al., 2021; Lee and Parolin, 2021). However, in the U.S., child care has long been in short supply with significant disparities in availability across neighborhoods that vary by income, race, ethnicity, and location (Fuller and Liang, 1993; Gordon and Chase-Lansdale, 2001; Malik et al., 2018; Queralt and Witte, 1998).

Scholarship on job access and commute travel is largely predicated on the notion that commuters travel directly from home to work. However, >25% of all work trips are chained, meaning that workers make a trip on the way to or from work (McGuckin et al., 2005). For parents and other household caregivers of young children, chained trips often include stops at child care centers. For most women with children, employment is predicated not only on their relative access to jobs but on their ability to easily access child care (Chidambaram and Scheiner, 2019; Gimenez-Nadal and Molina, 2016; Kawabata, 2014). Moreover, an adequate supply of child care likely influences a parent's ability to select into child care that best meets their needs.

A number of studies highlight spatial variation in child care access (Blumenberg et al., 2023; Davis et al., 2019; Katras et al., 2004; Malik et al., 2018; Paschall et al., 2020; Sipple et al., 2020). However, researchers have not yet used these measures to examine whether geographic disparities have meaningful consequences for families with young children. In this study, therefore, we link household-level travel survey data to a time-weighted spatial measure of child care access. These data allow us to test whether the relative supply of child care is associated with higher rates of formal child care use and—for households that use formal child care—shorter child care travel distances. The findings have implications for public investments in child care as well as transportation services and interventions to help households overcome spatial barriers to child care access.

2. Formal child care use and supply

About 50% of young children in the U.S. receive care from non-parents; among this group of children, 62% (almost 8 million children) are enrolled in center-based care (e.g., daycare centers, Head Start programs, preschools, pre-kindergartens, and other early childhood programs) (Cui and Natzke, 2021). Families with concerns about child

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care cost, location, and hours are more likely to rely on informal care; those with greater resources and flexibility tend to select center-based care (Hofferth and Wissoker, 1992; Johansen et al., 1996; Meyers and Jordan, 2006). The use of center-based care increases with the age of the child (Meyers and Jordan, 2006). However, while use of center-based care among preschoolers has increased over time, there remain significant differences by both income and race/ethnicity. Higher-income families are more likely and Hispanic families are less likely to use center-based care (Meyers and Jordan, 2006).

Among households that use formal care, price is a significant—but by no means the only—selection criteria. Location also plays an important role in the child care selection process. Indeed, Kim and Fram (2009) find that 61% of parents report location as "very important" and another 25% as "somewhat important." Although parents may prioritize location, researchers have documented an undersupply of child care relative to potential demand in many U.S. neighborhoods. Access to child care is best in high-income urban neighborhoods with concentrations of well-educated professionals (Fuller and Liang, 1996). In many low-income neighborhoods, government subsidies are associated with increased child care supply (Davis et al., 2019; Fuller and Liang, 1996; Small and Stark, 2005); nonetheless, some families in these neighborhoods still have unmet needs (Fuller and Liang, 1996; Sandstrom et al., 2018). Finally, the supply of child care also varies by type, location, and quality. Child care supply tends to be more limited for infants (Sandstrom et al., 2018) and in low- and middle-income, Hispanic, and outlying suburban and rural areas (Blumenberg et al., 2023; Davis et al., 2019; Katras et al., 2004; Malik et al., 2018; Paschall et al., 2020; Sipple et al., 2020). While families in some low-income neighborhoods may have reasonable access to child care, their care options tend to be of lesser quality than in higher-income neighborhoods (Davis et al., 2019; Fuller et al., 2002).

If neighborhood variation in child care supply is due to differences in community preferences (or demand) for formal care, variability in supply will have limited consequences for households. However, research suggests a role for other institutional factors in shaping child care supply. For example, studies that find a relationship between child care subsidies and increased demand indicate that the market may not be meeting the existing demand (Fuller and Liang, 1996). In these cases, limited access to child care may lower formal child care use (Yaeger, 1979) or perhaps increase travel costs (in terms of time and money) needed to access more distant yet higher quality centers (Davis et al., 2019).

In terms of gender, research largely supports the Household Responsibility Hypothesis, which posits that women's household responsibilities, including child care, require short commute times and so restrict their employment opportunities (Turner and Niemeier, 1997). Indeed, women tend to do more of the child-supporting travel than men (Taylor et al., 2015). Further, time devoted to childcare affects women's commuting time, but not men's (Gimenez-Nadal and Molina, 2016). Therefore, long travel times—to child care centers and then to work—may constrain women's employment choices and potentially limit their labor force participation (Breunig et al., 2011; Gilbert, 1998; Herbst and Barnow, 2008; Kawabata, 2011).

Finally, in terms of mode, households with young children exhibit high levels of automobile use (Chakrabarti and Joh, 2019; McCarthy et al., 2017). Relative to other modes, automobiles provide speed, flexibility, and comfort that allows parents and other household caregivers to manage complicated travel with children (McCarthy et al., 2017). Most families, therefore, travel by private vehicle to child care centers, many of them linking this trip to their journey to work (Habib et al., 2021). Neighborhood variation in child care supply, therefore, likely has more dire consequences for households without automobiles, particularly those who might want cars but face financial barriers to automobile ownership. Only 3 % of California households with young children (ages 0–4) do not own at least one vehicle; this rate is more than three times as high (11%) among poor households (Ruggles et al., 2021).

3. Material and methods

In this study, we examine the relationship between spatial access to child care and two outcome measures: a household's decision to send its young child or children (ages 0–4) to formal child care and the distance a household travels from home to its chosen child care facility in California.

3.1. Child care access

To create our spatial child care access metric, our independent variable of interest, we used a two-step floating catchment area (2SFCA) method. We defined a service area by a threshold travel time while also accounting for the supply of child care relative to demand (Davis et al., 2019; Luo and Wang, 2003). The measure considers a nearby child care facility as more accessible than ones farther away, ignoring locations outside of the catchment area and also considering both the travel time and distance within bordered areas (Fransen et al., 2015).

To calculate child care demand, we drew on data from the 2015–2019 5-year American Community Survey (ACS) data on the number of young children (i.e., those under the age of five) by Census block group. We generated the mean centers of 2010 block groups to represent children's residential locations. To calculate the supply of formal child care, we obtained confidential data from the California Department of Social Services (CDSS) for child care facilities licensed and operated between 2010 and 2020, including: facility type (daycare center, family daycare home, infant center, school-age daycare center, and ill center), date of opening and (if applicable) closing, address, and capacity (i.e., number of young children the center can serve). We filtered the child care center database to include those facilities that were opened and licensed during the timeframe in which the 2017 National Household Travel Survey (NHTS) data were collected; we use the NHTS to identify child care trips (see section 3.2 below). Further, we chose to use the 2015–2019 5-year ACS data to align with the 2017 NHTS data, as 2017 is the midpoint of the 2015–2019 5-year ACS. Our child care center dataset includes 40,055 facilities. To maintain confidentiality, we generated the mean center of 2010 Census blocks, which we treated as the location of child care centers within the block. We then summed the capacity of each child care center in each block to yield total child care supply per block.[1]

Using this approach (Fransen et al., 2015), we generated a supply-over-demand ratio. For each child care facility, we selected the residential locations of all young children within a threshold travel time of a facility. In this case, we used the median home-to-child-care travel time (in minutes) among households to set the threshold driving time, which, according to our analysis of the 2017 NHTS, was 10 min. We then calculated the travel time between child care facility and children's residential locations to compute the supply-over-demand ratio within the catchment area:

$$R_c = \frac{S_c}{\sum N_k \times t_{c,k}} \; with \; t_{c,k} \leq T_0 \tag{1}$$

where R_c is the supply-over-demand ratio at facility c; S_c is the supply of child care facilities; N_k is the number of children under age five within the threshold travel time (T_0) of facility c; and $t_{c,k}$ is the travel time between facility c and the child's residential location k.

We then selected all child care facilities within the threshold travel time of each young child's residential location. Using ArcGIS Pro, we calculated the travel time between the residential location and the

[1] Data on the capacity of small family child care centers (1–8 children) is confidential. We identify the capacity of these centers as 8, slightly overestimating total child care supply in such centers. For some reason not readily apparent, in some cases, CDSS marked family daycare centers as having a capacity for 6 children; in these instances, we used the CDSS figure.

selected child care facilities (based on driving time using the 2020 California road network) and summed the supply-over-demand ratio R_c at the young child's residential location:

$$A_k = \sum t_{k,c} \times R_c with\ t_{k,c} \leq T_0 \quad (2)$$

where A_k represents spatial access to formal child care at each child's residential location based on the 2SFCA method; R_c is the supply-over-demand ratio at facility c (see Eq. 1), which is located within the catchment area centered at the child's residential location k; and $t_{k,c}$ is the travel time between the child's residential location k and facility c. The larger the value of A_k, the better the spatial child care access at a child's residential location.

Because we are interested in a household's spatial access to child care at the neighborhood level, and because Census tracts are a better proxy for neighborhoods than are Census block groups, we aggregated child care access to the tract level. Aggregating from block group to tract also better maintains confidentiality of child care facility locational data. We then matched the tract-level child care access data to household-level NHTS data, which includes a Census tract identifier for each respondent.

3.2. Home-to-child-care travel

We then identified child care trips using the California "Add-On" of the 2017 NHTS from the California Department of Transportation. The confidential dataset includes the geographic information for trip locations, including latitudes/longitudes and location names. To identify child care trips, we geocoded the locations of all trip destinations with the purpose "attend childcare" or "drop off / pick up someone" and spatially matched them to our geocoded child care facility dataset. Since we sought to explore a household's spatial child care access relative to its residential location, we selected only trips originating from home. Research suggests that households tend to prefer child care closer to their homes, particularly if: they do not work, the location of their employment is unstable, or—in households with a less gendered division of labor—to maximize access for multiple working parents/household caregivers (Van Ham and Mulder, 2005). If a household had multiple home-to-child-care trips, we chose the first trip of the day (the mean departure time of these trips was about 9:00 am) to represent the household-level home-to-child-care trip, resulting in 327 observations; using the NHTS household weights, the universe is over 300,000 households (see Table 1).

3.3. Model specification

To predict child care use, we developed a binary logistic regression model weighted by household (using the final household weight and 98 replicate weights for households provided by the 2017 NHTS). If a household had a home-to-child-care trip, then we labeled that household as having made the decision to send its young child or children to formal child care. Nearly one fifth (18.9%) of the weighted sample of households with young children chose to use formal care (see Table 1).

In addition to child care access (our independent variable of interest), the model includes a number of control variables associated with child care use in the literature. We controlled for the following household structure indicators: number of young children (ages 0–4), number of workers, and whether or not it is a one-adult household (Leslie et al., 2000; Sonenstein and Wolf, 1991; Van Horn et al., 2001). Because child care access and use vary by socioeconomic characteristics of households—namely income and race/ethnicity (Davis et al., 2019; Hofferth and Wissoker, 1992; Johansen et al., 1996; Meyers and Jordan, 2006)—we included these two metrics as well. (Note that the NHTS variable of household race is the race of the survey respondent). Due to our relatively limited sample size, we created a binary metric (people of color or white). Finally, because prior research shows the importance of cars in the mobility of households with young children, including to and from

Table 1
Weighted descriptive statistics for households with young children (ages 0–4) in California.

	Households with Young Children	Households with Young Children that took a Home-to-Child-Care Trip	Households with Young Children that did not take a Home-to-Child-Care Trip
Percent of Total Households	12.4%	2.3%	10.0%
Percent of Households with Young Children	100.0%	18.9%	81.1%
Child Care Access (mean)	0.41	0.44	0.40
Child Care Access (median)	0.41	0.42	0.40
Mean household vehicle count	2.1	2.0	2.1
Household structure			
1 adult, youngest kid 0–5	6.0%	6.2%	6.0%
2+ adults, youngest kid 0–5	94.0%	93.8%	94.0%
Number of young children (mean)	1.3	1.4	1.3
Workers per household (mean)	1.5	1.6	1.5
Annual household income			
< $10,000	5.5%	3.9%	5.9%
$10,000 to $14,999	2.6%	2.9%	2.6%
$15,000 to $24,999	8.4%	5.6%	9.0%
$25,000 to $34,999	8.5%	8.9%	8.4%
$35,000 to $49,999	9.5%	7.1%	10.1%
$50,000 to $74,999	14.3%	10.3%	15.2%
$75,000 to $99,999	13.7%	11.9%	14.2%
$100,000 to $124,999	9.7%	7.6%	10.2%
$125,000 to $149,999	8.0%	10.5%	7.3%
$150,000 to $199,999	8.8%	14.0%	7.6%
$200,000+	11.1%	17.4%	9.6%
Low-income (< $35,000 annually)	25.0%	21.2%	25.9%
Household race (race of respondent)			
Latinx	38.8%	32.7%	40.2%
White	38.1%	42.5%	37.1%
Black	4.2%	3.5%	4.3%
Asian American and Pacific Islander (AAPI)	14.8%	14.1%	15.0%
Other race	4.1%	7.2%	3.4%
Population density (persons / sq. mile)	7,759	7,855	7,737
Universe (weighted sample)[a]	*1,597,190*	*301,864*	*1,295,326*
Sample	*1,730*	*327*	*1,403*

NOTES: Medians are not weighted. See Appendix A for additional descriptive statistics for key variables.

[a] The universe and sample sizes differ slightly in Table 1 (descriptive statistics) than from Tables 3 and 4 (model results) because we conducted a weighted analysis using household weights (including replicate weights) provided by the NHTS, and therefore cannot remove observations from our calculations. In Table 1, because of missing values, income and race/ethnicity have slightly lower universes and sample sizes than the rest of the variables. Contact authors for numbers.

child care centers (Habib et al., 2021), the model includes the number of household vehicles.

To examine the relationship between child care access and the distance from home to a chosen facility, we developed a second model—a weighted multivariate linear regression model (again applying the aforementioned NHTS-provided household weights). Because the trip distance distribution is right skewed and to satisfy the assumption of a normal distribution of the outcome variable, we log transformed trip distance plus one (adding one ensured that those distances that are between 0 and 1 mile did not get transformed into negative values). In addition to child care access, household income, and household race, we included travel mode and population density (persons per square mile) in the Census block group where the household resides, which prior research has shown are both associated with travel distance (Ewing and Cervero, 2010). Except for child care access, the data for the explanatory variables in each of the statistical models came from the 2017 NHTS.

4. Findings and discussion

Households with young children (ages 0–4) comprise 12.4% of all households. Table 1 presents weighted descriptive statistics for these households and for the subsets that made or did not make a home-to-child-care trip. Among households with young children, nearly one fifth (18.9%) sent their young child/children to formal care. Overall, households that sent their children to formal care have similar characteristics to those that did not—particularly in terms of household structure, with a vast majority of households containing two or more adults (94%), an average of 1.3 young children, and an average of 1.5 workers.

Yet there are also some slight, but noteworthy, distinctions between the two groups. Households that used formal care tended to have higher household incomes than those that did not, which aligns with aforementioned research (Hofferth and Wissoker, 1992; Johansen et al., 1996; Meyers and Jordan, 2006). Over a quarter of households that did not use formal care but a fifth of those that did were low-income. Further, households that used formal child care were more likely to be white than those that did not: white households made up about 38% of those with young children, but nearly 43% of those that used formal child care; conversely, Latinx households comprised nearly 39% of households with young children, but less than one third of those used formal care, again echoing prior findings (Meyers and Jordan, 2006).

In terms of child care access, as Table 1 shows, households that used formal care had a slightly higher mean child care access (0.44) than those households that did not (0.40)—yet variations by household race/ethnicity and income emerged. As Fig. 1 shows, Latinx households with young children had the lowest access (0.38), which confirms prior research on child care deserts (Malik et al., 2018) and could also help explain why these households used formal care at lower rates than others, particularly whites. In contrast, AAPI households with young children had the highest level of child care access (0.46). With the exception of Black households,[2] across racial/ethnic groups, child care access is higher among households that used formal care than those that did not. In terms of income, as Fig. 2 shows, low-income households had lower mean child care access (0.37) than higher-income households (0.42). While access increased for both low-income and higher-income households that used formal care, an income gap remained. Finally, in terms of spatial variation, households in California's rural and outlying suburban areas—almost 30% of all Census tracts in the state—have the least access (0.36 and 0.42, respectively) compared to households in urban neighborhoods (Blumenberg et al., 2023).

Among households with young children that took a home-child-care trip (Table 2), the mean trip distance was 3.7 miles (median was 2.5 miles) and the mean travel time was nearly 14 min (median was 10 min). Nearly 90% of home-to-child-care trips were made by private vehicles and nearly one tenth were made on foot. It is also noteworthy that not a single home-to-child-care trip was made using public transit. Our findings regarding the dominance of cars and absence of transit speaks to previous research on the spatial and temporal constraints that households with young children face—particularly in terms of balancing child care, job, and household responsibilities—and the advantage that cars provide in terms of balancing such obligations and reducing stress (Gu et al., 2021; Lanzendorf, 2010; McCarthy et al., 2017; Yarlagadda and Srinivasan, 2008).

Table 3 presents the results of our first statistical model: the decision of households with young children to utilize formal child care. We found that child care access had a positive and significant relationship with the household decision to use formal care, which helps explain higher levels of child care access among such households even when we disaggregate by income and race (Figs. 1 and 2). With one exception—the number of household workers, which is positively related to the use of formal child care—the other variables are not statistically significant. With more household workers, there is less in-home capacity to care for young children. Additionally, more household workers translates to more income, which other researchers have found to be associated with the decision (or the ability) to use formal child care (Hofferth and Wissoker, 1992; Johansen et al., 1996; Meyers and Jordan, 2006).

Table 4 presents the results of our second model: travel distance from home to child care. Once again, child care access is significant, and in this case, negatively associated with the distance a household travels to its chosen facility. In other words, as child care access increases, households were more likely to use formal care (Model 1)—and for those that do, travel shorter distances (Model 2). Additionally, being low-income and being a household of color were each associated with shorter home-to-child-care trip distances. Finally, travel distance to child care is negatively associated with modes other than use of a private vehicle.

We tested the robustness of our models in two ways. We calculated child care access at the block group level and found similar results: a negative yet slightly less significant (at the $p < 0.1$ level but not the $p < 0.05$ level) relationship with home-to-child-care travel distance. We also applied a second travel time threshold in our child care access measure: the mean travel time of child care trips (13.7 min) rather than the median travel time (10 min). Again, this second measure produced similar results in both models. The only noteworthy difference is that child care access became slightly less significant (with p-values of 0.050 in Model 1 and 0.040 in Model 2).

The findings suggest that greater supply (which also may be associated with the price of child care) is associated with both formal use and travel distance. Moreover, the use of an automobile is associated with longer travel distances, suggesting that households with cars have greater child care options—potentially allowing them to better select care that meets their needs. In addition to costs, data on other child care characteristics (e.g., quality and language spoken by providers) would allow us to test these relationships.

There are a few limitations to our analysis. The small sample size of households that use formal care prevented us from analyzing differences across subgroups, for example by race/ethnicity, nativity, and household structure. The absence of data on child care cost is a second

[2] The low sample size of Black households limits our ability to interpret these results.

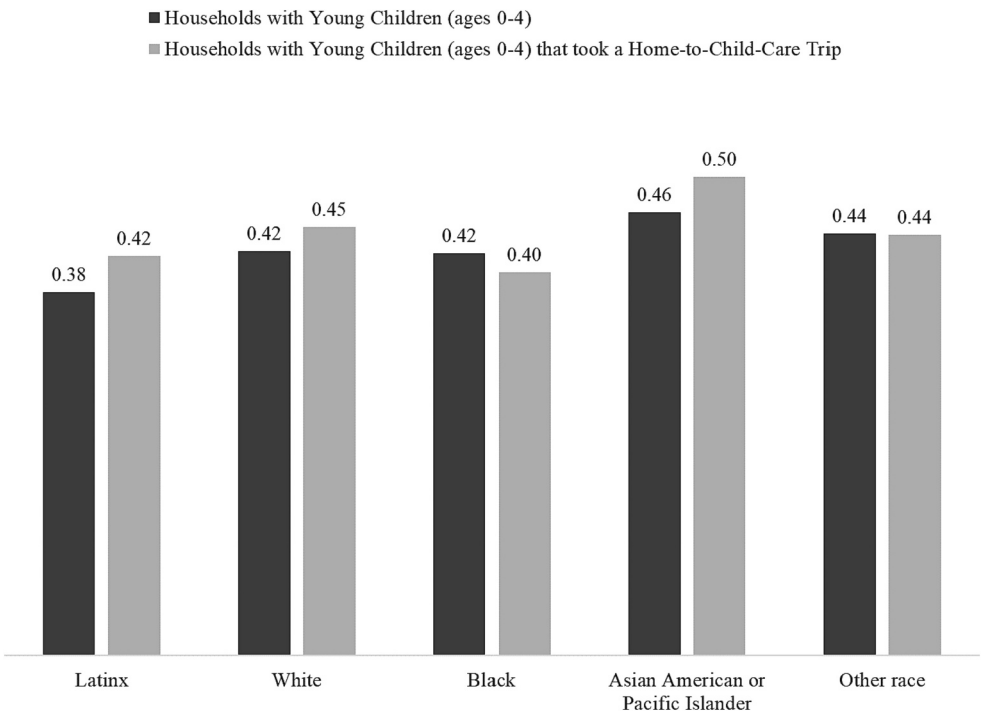

Fig. 1. Weighted mean child care access by household race/ethnicity in California.

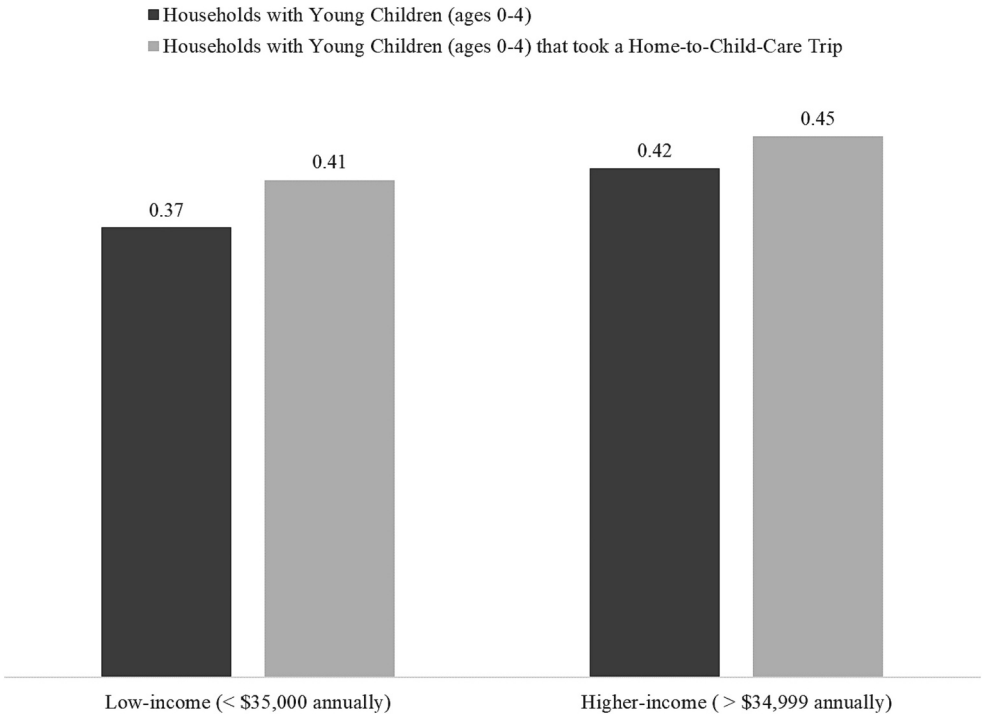

Fig. 2. Weighted mean child care access by household income in California.

limitation. We expect costs to have a strong relationship with both the use of child care and the distance that households are willing to travel to access child care. Finally, our analysis does not account for potential endogeneity: households that prefer to send their children to formal child care and, therefore, locate in neighborhoods that are adjacent to formal care providers. However, we do not think that endogeneity poses a significant issue in this study. While research suggests that households make residential location decisions based on the quality of local public schools (Goldstein and Hastings, 2019), for example, there is no theoretical or empirical evidence to suggest that households consider the location of child care facilities in residential location decision making. First, there is no guarantee that a household will secure a slot at a center even if they live nearby (unlike at a local public school). Second, households need child care centers for a relatively short amount of time (less than five years) compared to schools.

Table 2
Weighted travel statistics for households with young children (ages 0–4) that took a home-to-child-care trip in California.

Mean Home-to-Child-Care Travel Distance (in miles)	3.7
Median Home-to-Child-Care Travel Distance (in miles)	2.5
Mean Home-to-Child-Care Travel Time (in minutes)	13.7
Median Home-to-Child-Care Travel Time (in minutes)	10.0
Travel Mode (%)	
Private vehicle	89.5%
Walking	9.7%
Other (NOTE: does not include transit)	0.8%
Universe (weighted sample)	*301,864*
Sample	*327*

Table 3
Model 1: weighted logistic regression results: decision of households with young children (ages 0–4) to utilize formal child care in California.

	Odds Ratio	*P*-value	Sig.
Child care access	2.51	0.006	**
Number of household vehicles	0.84	0.050	
Household structure			
Number of young children (ages 0–4) in household	1.35	0.322	
Number of workers in household	1.27	0.026	*
One adult in household (reference: 2+ adults in household)	1.27	0.570	
Socioeconomic characteristics			
Low-income household	0.80	0.428	
Household of color (race of respondent)	0.86	0.488	
Constant	0.12		
Universe (weighted sample)	*1,567,975*		
Sample	*1,708*		

*Significance: ***p < 0.001, **p < 0.01, *p < 0.05.*

Table 4
Model 2: weighted linear regression results: distance households with young children (ages 0–4) travel from home to child care facility.

	Coef.	*P*-value	Sig.
Child care access	−0.50	0.032	*
Socioeconomic characteristics			
Low-income household	−0.26	0.008	**
Household of color (race of respondent)	−0.19	0.032	*
Travel mode (reference: Private vehicle)			
Walk	−0.69	0.000	***
Other mode (NOTE: does not include transit)	−0.51	0.148	
Population density (persons per sq. mile)	−0.00	0.106	
Constant	1.76		
R-squared	*0.2028*		
Universe (weighted sample)	*300,323*		
Sample	*323*		

*Significance: ***p < 0.001, **p < 0.01, *p < 0.05.*

5. Conclusion

Our findings suggest a role for planning and policy interventions in three areas: public investments in child care, transportation services and interventions to help households overcome spatial barriers to child care access, and improved data collection on child care travel and use.

First, additional child care subsidies are needed (Sandstrom et al., 2012). States receive resources from the federal Child Care and Development Fund (CCDF), which in California are largely used to provide child care services to families who meet certain income and need criteria (California Department of Social Services, 2023). However, current funding levels do not adequately meet the need for child care as most low-income families do not receive such subsidies. In 2015, only 15% of the 13.6 million children in the U.S. eligible for child care subsidies received one (Chien, 2019). Additional subsidies would contribute to increased formal child care use, labor force participation, and child care quality (Sandstrom et al., 2012; Tekin, 2007).

Second, transportation policy can improve child care access. Almost all of the households in our study owned at least one automobile. However, households without cars or households for whom automobile ownership is a significant financial burden would benefit from automobile subsidy programs. Studies show a strong relationship between automobile ownership and economic outcomes for low-income households (Smart and Klein, 2020). This relationship is due, in part, to the flexibility that automobiles provide in enabling parents and other household care givers to manage work and non-work responsibilities, including transporting their children to child care. Auto ownership may not be necessary. Although relatively new, subsidized carshare programs may provide households with the benefits of automobility without the cost burden of ownership. Finally, nearly 10% of the households in our sample walked their children to child care, a travel mode that is only practical if households live very close to child care centers. Local governments can incentivize the creation of child care centers as part of the development process, including developments surrounding transportation infrastructure such as rail stations (Local Investment in Child Care, 2008).

Finally, our analysis is limited by the available data. The 2017 NHTS does not allow for the easy identification of child care trips, since children under five did not fill out their own travel diaries; their travel is included as part of the trips of other household members. The survey ought to be modified to clearly identify child care trips. Moreover, data on the characteristics of child care centers—price by age group and quality of care—are not available in California, limiting the conclusions that we can draw from this analysis.

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CRediT authorship contribution statement

Evelyn Blumenberg: Conceptualization, Funding acquisition, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing. **Madeline Wander:** Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization. **Zhiyuan Yao:** Methodology, Formal analysis, Software, Validation, Visualization, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

None.

Data availability

The data that has been used is confidential.

Appendix A

Detailed Descriptive Statistics for Key Variables

	Households with Young Children					Households with Young Children that took a Home-to-Child-Care Trip					Households with Young Children that did not take a Home-to-Child-Care Trip				
	Wtd. Mean	*Med.*	*Min.*	*Max.*	*Std. Dev.*	*Wtd. Mean*	*Med.*	*Min.*	*Max.*	*Std. Dev.*	*Wtd. Mean*	*Med.*	*Min.*	*Max.*	*Std. Dev.*
Childcare access	0.41	0.41	0.00	2.05	0.22	0.44	0.42	0.00	1.35	0.20	0.40	0.40	0.00	2.05	0.22
Childcare access by race/ethnicity															
Latinx	0.38	0.38	0.00	1.28	0.18	0.42	0.40	0.04	1.03	0.19	0.37	0.37	0.00	1.28	0.18
White	0.42	0.41	0.00	2.05	0.24	0.45	0.42	0.00	1.35	0.21	0.41	0.40	0.00	2.05	0.24
Black	0.42	0.41	0.02	0.80	0.14	0.40	0.43	0.26	0.62	0.13	0.42	0.40	0.02	0.80	0.14
AAPI	0.46	0.46	0.00	1.00	0.18	0.50	0.47	0.07	0.75	0.15	0.45	0.45	0.00	1.00	0.18
Other	0.44	0.44	0.00	1.53	0.22	0.44	0.43	0.00	0.73	0.16	0.44	0.44	0.00	1.53	0.23
Childcare access by income group															
Low-income (<$35,000 annually)	0.37	0.38	0.00	2.05	0.22	0.41	0.42	0.04	1.00	0.18	0.37	0.36	0.00	2.05	0.23
Higher-income (>$34,999 annually)	0.42	0.41	0.00	2.05	0.22	0.45	0.43	0.00	1.35	0.20	0.42	0.41	0.00	2.05	0.22
Household vehicle count	2.07	2.00	0.00	9.00	0.94	2.00	2.00	0.00	6.00	0.85	2.08	2.00	0.00	9.00	0.97
Number of young children (ages 0–4)	1.30	1.00	1.00	3.00	0.48	1.36	1.00	1.00	3.00	0.50	1.29	1.00	1.00	3.00	0.48
Workers per household	1.53	2.00	0.00	6.00	0.71	1.61	2.00	0.00	4.00	0.65	1.51	1.00	0.00	6.00	0.72
Home-to-Child-Care Travel Distance (in miles)						3.70	2.47	0.04	36.96	5.11					
Home-to-Child-Care Travel Time (in minutes)						13.72	10.00	1.00	67.00	9.57					

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