



### BRIEF REPORT | CONSUMER EDUCATION AND PARENTAL CHOICE IN EARLY EDUCATION (CEPC)

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Sarah Kabourek



# Exploring Child Care and Early Education "Search Types": Evidence from the 2019 National Survey of Early Care and Education

Many families need nonparental child care for their children on a regular basis. There are many ways families search for child care and early education (CCEE). We know that to learn about care, families often seek advice from friends and family with children or conduct an internet search, along with other methods (Ansari et al., 2010; Dodge-Ostendorf et al., 2019; NSECE Project Team, 2014). However, less is known about how these and other sources of information may be used together in a given search. Furthermore, evidence shows that search methods vary based on context, including child age, reason for needing care, or specific information needs (e.g., NSECE Project Team 2014, Vesely, 2013). For example, a CCEE search for a child when they are an infant may look different than a search when that same child is preschool-aged. In other words, not only might individual families tend to use a distinctive set of information sources when looking for CCEE, but each search a family conducts may also be unique to the timing and context. The goal of this analysis was to 1) identify discrete CCEE search types based on the sources of information families reported using (i.e., classes of CCEE searches), and 2) explore whether search types varied systematically by content of search and family and child characteristics.

We used the 2019 National Survey of Early Care and Education (NSECE) and a data-driven analytic method – Latent Class Analysis (LCA) – to identify CCEE search types based on the sources of information families reported using during a recent CCEE search (within the past 24 months). We found five search types, defined here by the first two sources mentioned by families in a given search: 1) searches using friends and family with children, as well as a Child Care Resource & Referral Agency (CCR&R) or local community organization that helps parents find care, 2) searches using internet search tools or social media, 3) searches using providers families already knew or friends and



family with children, 4) searches using social media or friends or family with children, and 5) searches using internet search tools or friends and family with children. <sup>1</sup>

Once we identified the search types, we examined whether search types were associated with the types of information families were trying to learn (i.e., the "content" of a search). Next, we examined a set of characteristics of families and children to see if these were systematically related to search types. We found that search types varied significantly by content of the search, whether the search was for a child with a condition that affected the type of care needed, child age, and geographic location of the family conducting the search. However, search types were similar across factors such as household language, parent employment status, reason for searching for care, and type of care used at the time of the search.

#### Goals and Approach of This Study

## What are the different types of CCEE searches, and do search types vary by family and child characteristics?

To identify CCEE search types derived from the sources of information families reported using, we conducted an LCA using variables indicating whether a specific source of information was used in a family's most recent CCEE search (within the past 24 months) for a specific focal child under the age of 6.2 There were five potential sources of information used in the LCA: (1) friends and family with children, (2) providers families already knew, (3) social media to learn from people families did not already know, (4) internet search tools, and (5) CCR&R or other local organizations. Families could indicate using up to two sources; about half of families only reported using one source. However, there could also be families that used more than two sources of information. In that case, the survey recorded only the first two sources mentioned. After identifying CCEE search types using LCA, we explored whether search type varied by the content of a search and by family or child characteristics using a correlational analysis. The survey questions and family and child characteristics used in the analysis are shown in **Exhibit 1**.

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<sup>&</sup>lt;sup>1</sup> It should be noted that four of the five search types identified through LCA include "friends and family with children" as one of the first two sources mentioned.

<sup>&</sup>lt;sup>2</sup> The household respondent in the NSECE was an individual 18 years or older living in the household who had knowledge about the early care and education usage and schedule of the youngest child in the household. Based on this definition, the respondent could be the parent to the child or another relative or guardian. The household interview respondent was most commonly a parent or guardian who reported on behalf of their entire household. In this brief, we generally use the term "parents" to indicate who reported the information, but "families" to describe characteristics or decisions that would pertain to the whole family.



**Exhibit 1.** NSECE Survey Items Used in Analyses

Survey Questions	Response Items and Categories
"How did you look for providers in your last search?"  First two open response mentions coded	Friends and family with children; providers they already know; social media to learn from people they don't know; internet/web/Google search; Child Care Resource & Referral (CCR&R) agency or other local organization
"What was the specific information you tried to learn about providers?"  First three open response mentions coded	Type of care; hours of care; fees charged; geographic location; content of program; services provided; curriculum/philosophy
Parent-reported information about family and child characteristics related to child care needs	Main reason looking for child care; type of care using for child at time of search; whether a relative living nearby would be able to provide care; whether parents are employed; whether the parent(s) work non-standard hours; whether families were looking for care for multiple children; whether child has specific care needs related to a behavioral or medical condition; child age; geographic region; parent reported receiving a subsidy in the past for care
Additional family and child characteristics	Household primary language (English only, Spanish only, combination or other); household income poverty ratio; number of children in the household; child race/ethnicity

#### Background and Research Questions

There are many possible sources of information families use when searching for CCEE. Existing quantitative and qualitative research suggests that many families receive information from friends, family, co-workers, and acquaintances (Ansari et al., 2010; Dodge-Ostendorf et al., 2019; Forry et al., 2013; NSECE Project Team 2014; Pacheco-Applegate et al., 2020; Vesely 2013; Vesely et al., 2021). Several qualitative studies specifically explore the use and importance of personal connections among African American, immigrant, and Latino families (Vesely 2013; Vesely et al., 2021). Using a nationally representative sample, the 2012 NSECE showed that many families also reported using the internet to search for CCEE (NSECE Project Team, 2014). While in-person communication is widely used, there is also evidence that some families may prefer to receive information through electronic forms of communication. For example, Child Care Aware of America conducted a national, nonrepresentative poll of families about how they prefer to receive information about child care, and more families preferred email communication than any other communication method (Dodge-Ostendorf et al., 2019).

However, much of the existing evidence focuses on a single source of information (e.g., only reports on families' use of friends and family with children), or reports on families' preferences among different sources. Published studies do not say whether and how families use more than one source of information. Furthermore, we lack large scale, quantitative evidence about differences in use of information based on families' specific CCEE search. In this analysis, we identify search types using



reported use of up to two sources of information used in a search. The focus on search types, where the unit of analysis is a given CCEE search (i.e., a particular family's search for a particular child at a particular time), reflects the understanding that CCEE searches can vary based on specific family and child needs at a given point in time. Using a single search at a specific point in time, we attempt to unpack some of these factors that may be associated with that search. To investigate the two study goals, we explored three research questions, shown in **Exhibit 2**.

Exhibit 2. Research Questions



For households that report conducting a recent search, is it possible to identify common search types based on sources of information used?



To what extent are predicted search types associated with the reported content of search?



To what extent are predicted search types associated with family and child characteristics?

#### Data and Approach

The 2019 NSECE Household Survey is a nationally representative cross-sectional survey of households with children under age 13. Field interviewers asked households about a recent search for care for a randomly selected child under the age of six (this child is referred to as the "focal child" in the survey and this analysis). Given that school-age children have different care needs than children not yet in formal schooling, the current analysis is limited to households 1) with a focal child under age 6 years old and not yet in kindergarten, 2) that reported conducting a recent search for CCEE (within the last 24 months of survey administration), and 3) that reported considering more than one provider during their search. The final size of the analytic sample was 1,190 households. **Exhibit 3** shows the process of selecting the analytic sample as described in this paragraph. **Appendix B** includes descriptive information comparing our analytic sample to the overall 2019 NSECE Household Survey sample.

Importantly, the households in our analytic sample differed from the overall population of households in several ways. Compared to all households with young children in 2019, households in this analysis reported higher-incomes, were more likely to be two-parent households with both parents working, and were more likely to be English-speaking only. It is not clear how these differences between the full population and the analytic sample may influence the construction of search types as identified in this analysis. For instance, we do not know if households with lower-income and single-parent

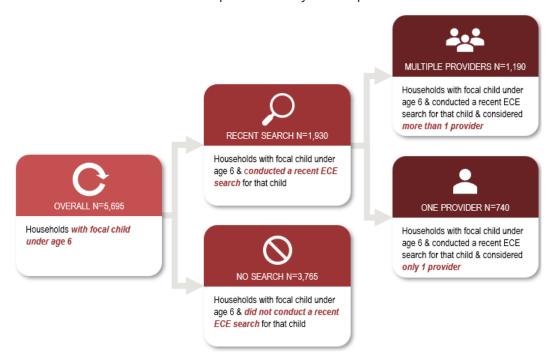
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<sup>&</sup>lt;sup>3</sup> The respondent was asked the date of their most recent search for child care for the focal child. If the search had occurred within 24 months of the survey administration date, the respondent was asked further questions about that search.



households would have different search types than would households with higher incomes. However, we do know that in 2019, households with lower-incomes, single-parent households or households where not all parents work, and non-English speaking households were less likely to have conducted a recent CCEE search in which they considered more than one provider in their search.

**Exhibit 3.** 2019 NSECE Household Sample and Analytic Sample



In this exploratory analysis we used LCA (see **Appendix A** for more information) to identify distinct search types. This is a data-driven approach that allows the researcher to identify classes (or "types") of observations based on a set of variables selected by the researcher that they anticipate will help differentiate distinct types. In our model, we used five potential sources of information (friends and family with children, providers they already knew, CCR&Rs or other local organizations, social media, and general internet search) to identify CCEE search types. We assigned each family to its highest probability search type as estimated by the LCA model (see **Appendix A** for more information).

Parents were asked, "How did you look for providers in your last search?" The first two mentions of information sources they used were recorded and coded into categories during the interview. The LCA included information sources that were reported by at least 5% of respondents to support model estimation.<sup>4</sup>

After using LCA to identify search types, we used multinomial logistic regression<sup>5</sup> to explore whether search types varied based on the content of the search and on family or child characteristics. These indicators are shown in **Exhibit 1**. Since search type and several other indicators were categorical

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<sup>&</sup>lt;sup>4</sup> Sources of information that parents reported using that were not included in analyses due to low incidence include asked a healthcare provider, clergy member, or other professional, posted an ad or responded to an ad, looked in paper directories for child care providers, looked in electronic directories for child care providers, and got help from a welfare or social services caseworker.

<sup>&</sup>lt;sup>5</sup> Multinomial logistic regression is a multivariate analysis approach observing the relationship between a set of predictors and a categorical outcome.



variables requiring the use of a reference group, post-hoc comparison tests were conducted across search types. These correlational analyses were intended to further describe the search types that emerged from the LCA. Given the exploratory nature of our analyses, we are able to describe observed differences across search types, but we are unable to speak to *why* search types vary in one way or another.

#### **Key Findings**

#### Finding #1. Five common search types were identified.

Our model identified five different search types based on families' use of up to two sources of information during their CCEE search. In each of the five search types, one primary source was used by almost all families assigned to that search type, often in combination with a second source that was also used by a large proportion of families. Overall, 49% of families in our sample reported using two sources of information. The other 51% of families reported using just one source of information. Across the search types, the number of sources used (one or two) was similarly split evenly across families within a given search type. When looking at each search type, we found that families that only reported one source of information were assigned by the LCA to the search type where that source was most prevalent. For example, families that reported only looking for information through a CCR&R (and did not report using any other source) were included in Search Type 1, where 83% of families reported using a CCR&R, and CCR&R was the most frequently reported source of information in that search type.

Below, we classify the search types and refer to each with an abbreviated name that includes the top two sources in each. **Exhibit 4** shows the five search types that emerged and the proportion of families in each search type that reported using each of the information sources. Larger circles in each cell reflect a higher percentage of families that reported using that source.

**Search Type 1 (N=101).** *Top 2: CCR&R or Friends/Family.* Within this search type, 83% of families consulted a CCR&R or other local organization. Almost a third of families (31%) asked friends and family with children. A smaller proportion reported using social media to learn from people they didn't know (13%), asking providers they already knew (3%), or using internet search tools (1%).

**Search Type 2 (N=323).** *Top 2: Internet Search or Social Media.* Almost all (94%) families in this search type reported looking for information using internet search tools. In addition to internet search tools, 23% of families in this search type also used social media to learn from people they didn't know. A smaller proportion consulted a CCR&R (10%) or asked providers they already knew (4%). No families in this search type reported asking friends and family with children as one of their first two sources of information.

**Search Type 3 (N=104).** *Top 2: Known Providers or Friends/Family.* Most families within this search type reported asking providers they already knew (84%) for information about CCEE. Additionally, many families in this search type asked friends and family with children (42%), while a smaller number reported using social media to learn about CCEE options from people they didn't know (16%). No



families in this search type reported using internet search tools or consulting a CCR&R as one of their top two sources of information.

**Search Type 4 (N=243).** *Top 2: Social Media or Friends/Family.* Families in this search type were highly likely to report searching for information about CCEE using social media "to learn from people I don't know" (93%). Additionally, 59% of families within this search type reported asking for information from friends and family with children. Just 1% of families in this search type reported using an internet search tool as one of their top two sources of information. No families in this search type reported using CCR&Rs or asking providers they already knew as one of their top two sources of information.

**Search Type 5 (N=419).** *Top 2: Friends/Family or Internet Search.* Almost all families in this search type reported using friends and family to search for information (99%). Just over half of families in this search type used internet search tools (53%). Families within this search type did not report using any other sources of information as one of their top two sources.

**Exhibit 4.** Top Information Sources Used by Families in Each Search Type

	Asked friends and family with children	Internet/ We Google/ Craigslist	to lea	l media rn from e l didn't now	provi	ked ders I already	R&l otl	sulted R or ner ization
	PAA			ă	3	Å <sub>C</sub>	(	
SEARCH TYPE1	31%	1% •	13%	•	3%	•	83%	
SEARCH TYPE2		94%	23%	•	4%	•	10%	•
SEARCH TYPE 3	42%		16%	•	84%			
SEARCH TYPE 4	59%	1%	93%					
SEARCH TYPE 5	99%	53%						

Exhibit legend and note: Circles represent proportion of families in each search type that reported using each of the sources of information.



# Finding #2. Search types varied by whether families were looking for information on types of care.

Families were asked whether they were looking for any of the following types of information in their search: type of care, hours of care, fees charged, geographic location, content of program, services provided (e.g., transportation, meals, etc.), and curriculum/philosophy (including religion).<sup>6</sup> We hypothesized that search types would vary by the information families were trying to find in the search. For example, searches using the internet may be more likely to focus on finding information about hours of care or fees, whereas searches using friends and family with children may be more likely to focus on curriculum or program philosophy. After identifying search types using LCA, we used logistic regression analyses to examine whether there was variation in the content of the search across search types.

Across the seven types of information families were asked about, we did not find evidence of a relationship between search type and six types of information. We did find a statistically significant difference across search types in whether families were looking for information about **type of care** in their search.<sup>7</sup> Search Type 1 (CCR&Rs or friends/family) was more likely to include families looking for information about type of care compared to Search Type 5 (friends/family or internet search). Additionally, Search Type 2 (internet search or social media) was less likely to include families looking for information about type of care compared to Search Type 5 (friends/family or internet search). This suggests some variation in search types in whether families were trying to learn about types of care available.

# Finding #3. Search types varied based on whether the search was for a child with a condition that affects the way care is provided<sup>8</sup>.

We also used multinomial logistic regression analyses to explore whether search types varied by characteristics of families and children<sup>9</sup>. We hypothesized that child age, care needs, parent employment status, whether the parent(s) works non-standard hours, reason for searching for care, and care use at the time of the search may be more strongly associated with some search types than others. Because of the exploratory nature of analyses, however, we did not have pre-existing hypotheses about the directionality or strength of these relationships. For ease of interpretation, **Exhibit 5** shows regression-adjusted proportions of children in each search type by whether they had a condition that affects care provision.

<sup>&</sup>lt;sup>6</sup> Survey respondents were specifically asked, "What was the specific information you tried to learn about providers?" Respondents' first three mentions of what they tried to learn were recorded and coded into categories during the interview.

<sup>&</sup>lt;sup>7</sup> Regression coefficients shown in Appendix Table A3. Models controlled for region in which family resides, whether the parent reported receiving a subsidy in the past for care, child race/ethnicity, number of children in the household, household primary language (English only, Spanish only, combination or other), and household income poverty ratio.

<sup>&</sup>lt;sup>8</sup> Survey respondents were asked whether the child has a physical, emotional, developmental, or behavioral condition that affects the way they provide care for the child. This is not necessarily an indicator of a child's disability status or whether the child has an Individualized Education Plan (IEP) or Individualized Family Service Plan (IFSP).

<sup>&</sup>lt;sup>9</sup> See Appendix A for additional details about the methodological approach, including regression coefficient tables.



**Exhibit 5.** Regression-Adjusted Proportion of Children in Each Search Type with a Condition that Affects Care Provision

	Search	Search	Search	Search	Search
	Type 1	Type 2	Type 3	Type 4	Type 5
	(6%)	(28%)	(8%)	(20%)	(37%)
Focal child of search has condition that affects care	19%*	10%	19%*	7%	5%

Note: \* highlighted cells are statistically significant findings.

Exhibit notes: Table shows the predicted proportion of families in each category and search type. Predicted proportions are based on regression models predicting search type assignment and controlling for the following parent, child, and household characteristics: parent reported main reason for searching for care, type of care used for focal child at the time of search, whether a relative nearby could provide care, whether families are employed; whether the parent(s) work non-standard hours, whether they were looking for care for multiple children at the time of their search, focal child age and whether the focal child has specific care needs related to a behavioral or medical condition, household geographic region, whether the parent reported receiving a subsidy in the past for care, child race/ethnicity, number of children in the household, household primary language (English only, Spanish only, combination or other), and household income poverty ratio.

Statistical significance was based on multinomial logistic regressions and post-hoc pairwise comparison tests across search types.

Search Type 1 (CCR&Rs or friends/family) and Search Type 3 (known providers or friends/family) were more likely than other search types to be used for a child with a condition that affects how care is provided (Exhibit 5). Nineteen percent of families in each of Search Type 1 and Search Type 3 had a child with a condition that affects care, compared to 5-10% in other search types.

#### Finding #4: Search types varied by geographical regions in which searches took place.

In the 2019 NSECE Household Survey, individual states were assigned to four geographical regions designated by the U.S. Census Bureau. We used these regions to explore whether search types varied by where within the U.S. the searches took place. Although we did not look at individual states, we hypothesized that states within the same region learn from each other and may share consumer education strategies for supporting families in their search for CCEE (e.g., support for CCR&Rs, state CCEE web sites and social media platforms). Thus, sources of information families tend to use during CCEE search may be related to geographical region.

We used multinomial regression analyses and post-hoc comparison tests to observe patterns across regions<sup>10</sup>. **Exhibit 6** shows the regression-adjusted predicted proportion of families within each search type and region. Descriptively, families in Search Type 3 (known providers or friends/family) were most likely to live in the West (43%), whereas families in all other Search Types (Search Types, 1, 2, 4, and 5) were mostly likely to live in the South. See Exhibit 6 for additional information.

<sup>&</sup>lt;sup>10</sup> Regression coefficients are shown in Appendix Table A4. Models controlled for region in which family resides, whether the parent reported previously receiving a child care subsidy, child race/ethnicity, number of children in the household, household primary language (English only, Spanish only, combination, or other), and household income poverty ratio.



Additionally, statistical comparisons found that Search Type 5 (friends/family or internet) was more likely to include families living in the Northeast compared to Search Type 1 (CCR&R or friends/family), Search Type 2 (internet search or social media), and Search Type 3 (known providers or friends/family). Furthermore, searches falling under Search Type 3 (known providers or friends/family) were more likely than searches in any other search type to include families living in the Western region (see Exhibit 6). This suggests some variation in use of sources by geographic region and may reflect availability of different consumer education materials, such as websites (highly used in Search Type 2 and Search Type 5) or CCR&Rs (highly used in Search Type 1). Future research should further investigate this possible relationship.

Aside from region and child condition, we did not find evidence of a relationship between search type and other child and family characteristics.

**Exhibit 6.** Regression-Adjusted Proportion of Families in Each Search Type by Region

Region	Search type 1 (6%)	Search type 2 (28%)	Search type 3 (8%)	Search type 4 (20%)	Search type 5 (37%)
Northeast	13%	10%	10%	20%	20%*
South	44%	42%	34%	44%	33%
Midwest	18%	25%	12%	16%	26%
West	26%	23%	43%*	21%	22%

Note: \* highlighted cells are statistically significant findings.

Exhibit notes: Table shows the predicted proportion of families in each category and search type. Predicted proportions are based on regression models predicting search type assignment and controlling for the following parent, child, and household characteristics: parent reported main reason for searching for care, type of care used for focal child at the time of search, whether a relative nearby could provide care, whether families are employed, whether the parent(s) work non-standard hours, whether they were looking for care for multiple children at the time of their search, focal child age and whether the focal child has specific care needs related to a behavioral or medical condition, household geographic region, whether the parent reported receiving a subsidy in the past for care, child race/ethnicity, number of children in the household, household primary language (English only, Spanish only, combination, or other), and household income poverty ratio.

Statistical significance was based on multinomial logistic regressions and post-hoc pairwise comparison tests across search types.

#### Limitations

Our analyses have several limitations. First, our key indicator of source of information was limited to the first two sources that families reported. Although we found that about half of families in our sample named only one search source, it could be that some of our families that selected two search sources also used other sources or methods for their search. This feature of our indicator could limit our ability to describe the full range of searches if families are using three or more sources of information.



Next, our analytic sample is a sub-sample of the 2019 NSECE. The survey items used in this analysis are about their most recent search for care for a randomly selected child under age 6 and that occurred within the past two years. A substantial fraction of the overall household sample (79%) did not report a search for the focal child's care in that time period, or reported a search but considered only one provider, and therefore were not included in our analytic sample. Respondents who did not report conducting a recent search were more likely to be in households with low-incomes, households that speak Spanish exclusively, and households that have more children (under age 13) per household, on average, compared to the respondents in our analytic sample (Appendix B). These differences between households included and not included in our analytic sample means that the findings of our analysis may not accurately reflect the experiences of households with these characteristics.

#### Summary

This analysis used the 2019 NSECE Household Survey to explore CCEE search patterns using reports of a recent CCEE search for a focal child under the age of 6. Families could indicate up to two sources of information used in their recent search. About half of the families in our sample reported using one source, and half reported using two or more sources of information. Friends and family with children was the most commonly used source of information, followed by an internet search.

Using LCA, five distinct *search types* were identified. Each search type included two primary sources of information, of which at least one was used by families in that search type. The clustering of sources suggests that CCEE searches may make use of distinct sources of information.

We tested whether search types varied by the content of searches and characteristics of families in them. We found significant relationships between search type and whether families were looking for information on type of care, families of children with a condition that affects care, and families living in the Western and Northeastern regions of the U.S. For example, families in Search Type 1 (CCR&Rs or friends/family) and Search Type 3 (known providers or friends/family) were more likely than families in any other search type to have been searching for care for a child with a condition that affects the way care is provided.

However, we found that search types were more similar than they were different in terms of the characteristics of families and children conducting the CCEE search. This suggests that families' search may have more to do with what sources they use for their CCEE search than the type of information they were looking for or other child and family characteristics. This analysis also raises new questions – for example, for searches that primarily use an internet search and friends/family, what is the interaction between the two sources? Do families place equal value on each source? These questions and others should be explored in future analyses to help support a more comprehensive understanding of search types.



#### Appendix A. Methodology

We used LCA to determine whether there were different classes (search types) based on the sources families reported using to find information about CCEE. LCA is a data reduction technique used to detect underlying factors, dimensions, or classes across a wide set of variables. We began by performing the LCA with binary indicators reflecting five possible sources of information families used to search for CCEE, and tested classes for optimal fit using the Bayesian Information Criteria (BIC) and Akaike's Information Criteria (AIC), where lower values of BIC and AIC indicate better model fit. We also examined diagnostic statistics (i.e., average latent class posterior probability and entropy) to see how accurately the LCA final model predicted class membership. Weller, Bowen, & Faubert (2020) suggest that a value of greater than 0.80 is acceptable for both measures, with higher values indicating better model fit.

Based on the empirical evidence as well as substantive fit, we selected a 5-class model. Latent Class Analysis models converged when testing 2-5 class models. We tested a 6-class model, but the model did not converge, and therefore we stopped testing after the 6-class model. Table A1 shows the fit indices for this model when testing 2-5 classes. (the LCA model did not converge beyond 5 classes). Both a 4- and 5-class solution had strong fit indices, and so we looked at differences in findings across both class solutions to determine what number of classes was most relevant based on substantive meaning. Based on both fit indices and substantive interpretation, a 5-class model appeared to be the best solution. Posterior probabilities for the 5-class model are shown in Table A2. The average posterior probability across classes is over 0.9, which indicates the model has high confidence in predicting class membership.

After selecting a final LCA model, observations (families) were assigned to one of the five search types based on the search type in which they had the highest probability of being included as estimated by the LCA. We conducted seven separate logistic regressions to test the association between content of search and predicted search types (Table A3). We then used multinomial logistic regression to test the associations between family and child characteristics and predicted search type (Table A4). The regression analyses tested if the likelihood of being in a specific search type was related to the content of the search or specific family and child characteristics while holding household characteristics constant. This approach was used to help distinguish relationships between key variables of interest and estimated search type class membership. We conducted post-hoc analyses to compare estimates across all search types.



Table A1. Model Fit Criteria for LCA

Model Number of Classes	Model Fit Criteria AIC	Model Fit Criteria BIC	Model Fit Criteria CAIC	Model Fit Criteria ABIC	Model Fit Criteria Entropy
2 classes	395.60	451.50	462.50	416.56	0.980
3 classes	258.51	344.90	361.90	290.90	0.899
4 classes	175.16	292.04	315.04	218.98	0.863
5 classes	114.36	261.73	290.73	169.61	0.874

 Table A2.
 Posterior Probability of Class Membership (5-Class Model)

Class	Proportion of Sample	Average posterior probability	Minimum	Maximum
1	9%	0.99	0.97	1.00
2	35%	0.95	0.91	1.00
3	20%	0.96	0.68	0.99
4	8%	0.97	0.92	1.00
5	27%	0.91	0.34	0.99

**Table A3.** Results of Logistic Regression Models Predicting Content of Search Based on Search Types

	Type of care	Hours of care	Fees charged	Geographic location	Content of program	Services provided	Curriculum/ philosophy
Search Type 1	0.659**	-0.199	-0.486	-0.665	0.299	1.348	-0.59
	(0.31)	(0.35)	(0.34)	(0.46)	(0.43)	(0.51)	(0.45)
Search Type 2	-0.576**	-0.0405	0.396	0.428	0.22	0.194	-0.139
	(0.23)	(0.21)	(0.23)	(0.26)	(0.30)	(0.36)	(0.31)



	Type of care	Hours of care	Fees charged	Geographic location	Content of program	Services provided	Curriculum/ philosophy
Search Type 3	0.254	0.554	0.304	0.0538	-0.149	-0.436	-0.231
	(0.35)	(0.31)	(0.35)	(0.48)	(0.38)	(0.77)	(0.39)
Search Type 4	0.164	-0.182	0.0583	-0.269	0.00419	0.548	-0.193
	(0.24)	(0.22)	(0.24)	(0.33)	(0.29)	(0.38)	(0.31)
Search Type 5 Observations	1,150	1,150	1,150	1,150	1,150	1,150	1,150

Standard errors in parentheses

The reference group for the categorical Class variable was Search Type 5 (N=419). Covariates in the model included: main reason for searching for care, type of care used for focal child at the time of search, whether respondent was looking for care for another child at the time of search, parent employment, whether the parent(s) work non-standard hours, focal child age, whether the focal child has a condition that affects the provision of care, focal child and household race/ethnicity, household primary language, number of children in the household, parental employment, household income to poverty ratio, and probability of membership in latent class.

**Table A4.** Results of Multivariate Model Examining Associations Between Search Types and Household Characteristics

	Search Type 1	Search Type 2	Search Type 3	Search Type 4	Search Type 5
Main reason parent reported looking for care					
So that I could work/change in work schedule	1.176	0.793	1.900***	1.066**	
	(0.738)	(0.421)	(0.732)	(0.527)	
To provide my child educational or social enrichment	0.942	0.159	1.991**	1.065	
	(0.839)	(0.439)	(0.785)	(0.545)	
To give me some relief	†	†	†	†	

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05



	Search Type 1	Search Type 2	Search Type 3	Search Type 4	Search Type 5
To fill in gaps left by my main provider or before/after school	†	†	†	†	
Wasn't satisfied with care	†	†	†	†	
Wanted to reduce child care expenses	†	†	†	†	
Provider stopped providing care	†	†	†	†	
Child no longer eligible for previous care (e.g., aged out or summer break)	†	†	†	†	
Region					
Midwest	-0.639	-0.314	-0.588	-0.587**	
	(0.558)	(0.302)	(0.463)	(0.296)	
Northeast	-1.214**	-1.069***	-0.376	-0.851**	
	(0.499)	(0.389)	(0.455)	(0.388)	
West	0.935**	-0.295	-0.350	-0.173	
	(0.397)	(0.285)	(0.452)	(0.322)	
Type of care parent was mostly using for focal child at time of last search					
Parental care only	-0.516	-0.632	0.0496	1.525**	
	(0.933)	(0.683)	(0.784)	(0.672)	
Home-based provider respondent had prior personal relationship with	0.00597	-0.472	-0.0307	0.906	
	(0.949)	(0.698)	(0.835)	(0.711)	
Home-based provider respondent didn't have prior personal relationship with	-0.568	-0.309	-1.655	1.414	
	(1.053)	(0.704)	(0.980)	(0.774)	
Center-based care	-0.0809	-0.582	0.0898	1.338	
	(1.035)	(0.677)	(0.885)	(0.702)	



	Search	Search	Search	Search	Search
	Type 1	Type 2	Type 3	Type 4	Type 5
Relative nearby					
Relative nearby and able to provide care	-0.424	-0.297	-0.0587	-0.308	
	(0.337)	(0.277)	(0.507)	(0.341)	
Relative nearby but unable to provide care	-0.41	0.231	0.274	0.158	
	(0.402)	(0.300)	(0.481)	(0.332)	
Parent employment					
Parent(s) work non-standard hours	-0.409	-0.00466	-0.359	0.479	
	(0.406)	(0.277)	(0.425)	(0.290)	
Household with 1 parent, 1 working	0.605	-0.639	-0.803	-0.0103	
	(0.652)	(0.524)	(0.550)	(0.441)	
Household with 2 parents, 2 working	-0.54	-0.341	-0.735	0.00881	
	(0.585)	(0.419)	(0.452)	(0.382)	
Other search factors					
Was also searching for care for another child at the time of focal child search	-0.528	-0.157	-0.361	-0.108	
	(0.377)	(0.306)	(0.424)	(0.336)	
Focal child age (in months)	-0.0959	0.233***	0.0592	-0.0522	
	(0.118)	(0.0794)	(0.0915)	-0.0775	
Focal child condition that affects provision of care	1.097**	0.623	1.193**	0.422	
	(0.48)	(0.456)	(0.477)	(0.500)	
Observations	1,150	1,150	1,150	1,150	

Standard errors in parentheses

The model also controlled for the following characteristics: household race/ethnicity, household primary language, number of children in the household, household income to poverty ratio, and probability of membership in latent class.

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05



Results of multinomial logistic regression using the LCA 3-step method. Coefficients are expressed in logged odds and reflect the expected change in the logged odds of being assigned to a class (vs. the reference class) for respondents in each category (relative to the reference group where applicable).

Note that N=1,150 (rounded to nearest 20 observations). This reflects some small amount of missingness on child race/ethnicity, condition status, and presence of a nearby relative.

† Indicates one or more cells in row that had too few responses to report (N < 5% of unweighted N)

Reference Groups: The base reference group for the outcome was Search Type 5 (N=419). The base reference group for Region was South. Main reason for care indicators were included as separate dummy variables. Type of care at time of search was included in the model as separate dummy variables.



#### Appendix B. Sample Characteristics

Our main analysis included a subsample of households in the 2019 NSECE Household Survey—specifically, those that conducted a recent search for non-parental care for a focal child under age 6 and considered more than one provider during that search (**Exhibit 2**). To support interpretation of our findings, it is important to understand potential differences of the 2019 NSECE Household Survey sample and our subsample. Significant differences would suggest our analytic sample is not representative of all households in the 2019 NSECE Household Survey. We tested for differences between families that did not conduct a recent search ("No Search"), those that could recall a recent search but considered only one provider ("One Provider"), and those that could recall a recent and considered more than one provider ("Two Providers," and our analytic sample).

**Table B1** shows weighted proportions of some key focal child, parent, and household characteristics by search behavior in the last year (i.e., if they did not conduct a search for a provider, "No Search," if they conducted a search and considered one provider, "One Provider," or if they conducted a search and considered two providers, "Two Providers").

A multinomial logistic regression model was run on search behavior, using the characteristics listed in **Table B1**, as well as community poverty density, whether the household received public assistance/welfare in the last year, and the census region of the household as covariates.

The model indicated differences among the search behavior groups by characteristics of the child and/or family, including: whether the focal child had a condition that affects the way care is provided, if anyone in the household received child care subsidies in the past 12 months, if the household had two parents and both were working, if the parent(s) worked non-standard hours, the number of children in the household, being in a Spanish-speaking household, and the ratio of household income to poverty level. In addition to differences across search behavior groups, differences were detected specifically between the "No Search" and "One Provider" households and the "No Search" and "Two Provider" households.

The "No Search" household group differed from the "One Provider" and "Two Providers" search groups. This group of households that did not report a recent search were more likely to be Spanish-speaking only and have a household income less than 100% of the federal poverty level. This group may be worth looking into in future research to understand if they experience any deterrents to conducting a search for providers. Alternatively, it may be that these households did not need to conduct a *recent* search. For example, households that did not report conducting a recent search ("No Search") had a higher number of children in the household, so they may already be using care that they had selected more than two years prior to the survey administration.

Overall, these differences mean that our analytic sample is somewhat higher-income, more likely to have a two-parent household with both parents working, and more likely to be English-speaking only. These characteristics should be considered when interpreting our final results.



**Table B1.** Characteristics of households that did not conduct a recent search, conducted a search and considered one provider, and conducted a search and considered two providers

	Category	No Search	One Provider	Two Providers* * Analytic sample
Focal child age (in months, mean)		32	31	30
Number of children under 13 living in household (mean)		2.14	1.98	1.86
Focal child race (weighted %)	White, Non- Hispanic or Latino	48%	52%	48%
	Black, Non- Hispanic or Latino	12%	14%	14%
	Asian, Non- Hispanic or Latino	4%	6%	5%
	Hispanic or Latino origin (any race or race not reported)	28%	18%	25%
	All other races or multiple races, non-Hispanic or Latino, or Missing	8%	10%	8%
Focal child condition (weighted %)	Child has condition	6%	6%	9%
Household income (ratio of annual income for the calendar year 2018 to poverty level, weighted %)	Less than 100% of the federal poverty level	27%	21%	15%
	100-199% of the federal poverty level	24%	22%	18%
	200-299% of the federal poverty level	18%	18%	18%
	300%+ of the federal poverty level	31%	39%	49%



	Category	No Search	One Provider	Two Providers* * Analytic sample
Anyone in HH received child care subsidies in the past 12 months (weighted %)		2%	7%	4%
Parent employment characteristics (weighted %)	One parent, working	17%	20%	20%
	Two parents, one working	32%	24%	21%
	Two parents, both working	27%	36%	45%
Parent working non- standard hours (weighted %)		19%	23%	30%
Household language weighted %)	English Only	73%	76%	81%
	Spanish Only	8%	5%	1%
Relatives nearby (weighted %)	Relatives nearby, able to provide care	56%	51%	44%
	Relatives nearby, unable to provide care	17%	21%	27%
	No relatives nearby	27%	28%	29%
Region (weighted %)	Northeast	16%	19%	15%
	Midwest	19%	21%	22%
	South	40%	39%	39%
	West	25%	21%	24%



#### Abbreviations

Abbreviation	Meaning
CCEE	Child Care and Early Education
NSECE	National Survey of Early Care and Education
LCA	Latent Class Analysis
CCR&R	Child Care Resource & Referral Agency
BIC	Bayesian Information Criteria
AIC	Akaike's Information Criteria



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#### Disclaimer

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#### Project Director

A. Rupa Datta

#### Contract Number:

HHSP233201500048I/75P00120F37019 NORC at the University of Chicago 55 E Monroe Street Chicago, Illinois, 60603

#### Submitted to:

Alysia Blandon, PhD, Contracting Officer's Representative
Bonnie Mackintosh, EdD, Project Officer
Shannon Warren, PhD, Project Monitor
Laura Cutler, PhD, Project Monitor
Office of Planning, Research, and Evaluation Administration for Children and Families
U.S. Department of Health and Human Services
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