Childcare Assistance Programs
Caseload Analysis

Table of Contents

Summary of Conclusions .................................................. 1
Introduction ........................................................................ 2
Total Demand for Child Care Programs ............................... 2
A Forecasting Model of Anchorage Monthly Demand ............ 6

Appendix A: Regression Statistics for the Anchorage Model .... 15
Appendix B: Child Care Assistance Client Profile .................. 17

Tables and Figures

Table 1: Summary of Demand Growth for Childcare Assistance .......... 3
Figure 1: Statewide Demand for Child Care Programs, FY92 and FY93 .... 4
Figure 2: Total Demand for Child Care Assistance
from Ten Largest Communities ............................................ 5
Figure 3: Top Ten Communities Child Care Assistance Waiting List .... 7
Figure 4: Anchorage Total Demand for Child Care Assistance .......... 8
Figure 5: Anchorage Births per Day, 1986-92 .......................... 10
Figure 6: Anchorage Elementary Enrollment .......................... 11
Figure 7: Demand, Births 3 years ago, and School Enrollments .......... 12
Figure 8: Anchorage Caseload Demand: Predicted vs. Actual ............ 14
Childcare Assistance Programs  
Caseload Analysis

Summary of Conclusions

• The total measured demand for childcare assistance includes two groups of children: (1) Children actually served by the programs, and (2) children actively on a waiting list. The data on waiting list numbers shows that total demand is more stable than numbers of children served. Wait lists have grown rapidly at certain times, most notably during the start of FY91 and during the start of FY94.

• Anchorage is the source of about half of all statewide demand for childcare assistance. The demand from Anchorage is significantly more volatile than the demand from other places.

• The ten places [see Table 1 for list] with the highest demands for childcare account for about 94 percent of statewide demand. The remaining 20 places accounted for only 6 percent of total demand. (See Figure 1).

• The data show a decline in total demand during FY91, followed by a steady increase throughout FY92 and FY93. Data for the first five months of FY94 are inconclusive due to numbers of children on the waiting lists. (See Figure 2).

• Average total demand (children served plus waiting lists) for the Top Ten Places fell slightly from 3,404 in FY91 to 3,258 in FY92, a drop of 4 percent. Since then, average annual demand has grown rapidly. The average FY93 demand was 3,850 (an 18 percent increase over FY92). The average FY94 demand (for July through November) was 4,145 (an 8 percent increase over FY93). The average number of children actually served during FY94 fell, but total demand still increased because waiting lists increased rapidly during this time.

• Although average annual demand was lower in FY92 than in FY91, monthly demand stopped falling at the end of FY91 and rose throughout FY92 and FY93. July demand from the Top Ten Places fell by 14 percent during FY91, from 3,282 in July 1990 to 2,829 in July 1991. Demand then rose by 14 percent to 3,229 in July 1992 and by another 19 percent to 3,856 in July 1993. (See Figure 2).

• The observed pattern of falling then rising demand can be explained by a simple model which relates monthly demand for childcare assistance to the number of young children in the population. The best model we could find for the Anchorage region relates demand in the current month to the number of enrolled elementary school children and to the number of births recorded three years previously by mothers living in Anchorage. This model has the advantage of using data which is actually available one year prior to the program year.

• Further statistical analysis does not seem warranted at this time, especially since waiting lists may be falling due to discouraged parents. Instead, we suggest that the model of demand as a function of previous births be tested over the remainder of the fiscal year, and perhaps extended to some of the other larger communities.
Introduction

The Department of Community and Regional Affairs provides child care assistance programs which served almost 4,000 children in FY93. The total demand for these programs has proven to be quite volatile during the past three years. This volatility causes problems for funding agencies and legislators because funds must be committed more than one year before managers learn what the actual demand will be. As a result, waiting lists have increased rapidly at times during FY91, FY93, and FY94 as demand outstripped available funding. During at least one period, however, funding was more than sufficient to meet short-term demand and monies were lapsed, making it difficult to serve all clients when demand picked up again.

In this research memorandum we examine the data on monthly and annual demand for the four major child care programs administered by the department\(^1\). We look at overall growth trends, sources of volatility, and we develop a simple statistical model that explains much of the observed changes in demand.

Total Demand for Child Care Programs

Measures of Total Demand

The total measured demand for childcare assistance includes two groups of children. First, there are those children actually served by the programs. Equally important to this analysis are all children waiting for care. We therefore combine the data on children served with the data on numbers of children on waiting lists into our measure of demand for services. It is important to remember, however, that this total measured demand is likely to understate true demand during periods when waiting lists are long. This is because getting on (and staying on) a waiting list takes some effort, and parents may not find the effort worth it when the odds of making it into the program seem very low. This phenomenon is similar to the well-known fact that official unemployment rates understate the extent of joblessness because they fail to include discouraged workers who are no longer actively looking for work.

The data on waiting list numbers shows that total demand is slightly more stable than numbers of children served. The numbers of children served actually reflect the supply of child care, rather than the demand for child care. The supply of care depends heavily on available funds, which is determined by politics as much as by demographics. For these reasons, we will focus on the total demand in the statistical analysis that follows.

Average Annual Demand and Its Sources

Table 1 presents summary figures which show the changes in average annual demand for child care programs. There are about 30 communities served by the programs, but about half of the total statewide demand comes from Anchorage, and 94 percent comes from the Top Ten Places (as measured by their levels of demand).

\(^1\)The Day Care Assistance Program is 100% State-funded. The Child Care and Development Block Grant Program is 100% federally funded. The Transitional Child Care Benefit Program and the At-Risk Assistance Program are funded from 50% State and 50% federal sources.
Table 1: Summary of Demand Growth for Childcare Assistance
(Annual Averages)

<table>
<thead>
<tr>
<th></th>
<th>FY91</th>
<th>FY92</th>
<th>FY93</th>
<th>FY94</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anchorage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children Served</td>
<td>1,516</td>
<td>1,649</td>
<td>1,873</td>
<td>1,483</td>
</tr>
<tr>
<td>Children on Waitlist</td>
<td>89</td>
<td>0</td>
<td>157</td>
<td>676</td>
</tr>
<tr>
<td>Total Demand</td>
<td>1,604</td>
<td>1,649</td>
<td>2,029</td>
<td>2,160</td>
</tr>
<tr>
<td><strong>Next Top 9 Places</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children Served</td>
<td>1,500</td>
<td>1,609</td>
<td>1,806</td>
<td>1,764</td>
</tr>
<tr>
<td>Children on Waitlist</td>
<td>300</td>
<td>0</td>
<td>15</td>
<td>222</td>
</tr>
<tr>
<td>Total Demand</td>
<td>1,800</td>
<td>1,609</td>
<td>1,821</td>
<td>1,986</td>
</tr>
<tr>
<td><strong>Total Top Ten Places</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children Served</td>
<td>3,016</td>
<td>3,258</td>
<td>3,679</td>
<td>3,248</td>
</tr>
<tr>
<td>Children on Waitlist</td>
<td>389</td>
<td>0</td>
<td>172</td>
<td>898</td>
</tr>
<tr>
<td>Total Top Ten Demand</td>
<td>3,404</td>
<td>3,258</td>
<td>3,850</td>
<td>4,145</td>
</tr>
<tr>
<td>Growth from Previous Year</td>
<td>-4.3%</td>
<td>18.2%</td>
<td>7.7%</td>
<td></td>
</tr>
<tr>
<td><strong>All Other Places</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children Served</td>
<td>data not available</td>
<td>225</td>
<td>252</td>
<td>data not available</td>
</tr>
<tr>
<td>Children on Waitlist</td>
<td>available</td>
<td>0</td>
<td>0</td>
<td>available</td>
</tr>
<tr>
<td>Total Demand</td>
<td>225</td>
<td>252</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total State of Alaska</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children Served</td>
<td>3,482</td>
<td>3,930</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children on Waitlist</td>
<td>0</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Statewide Demand</td>
<td>3,482</td>
<td>4,102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth from Previous Year</td>
<td></td>
<td></td>
<td>17.8%</td>
<td></td>
</tr>
</tbody>
</table>

** Top Ten Sources of Demand for Child Care are:
- Anchorage
- Fairbanks
- Palmer
- Juneau
- Kenai-Soldotna
- Ketchikan
- Kodiak
- Sitka
- Kotzebue
- Homer
This geographic distribution is shown graphically in Figure 1, which shows monthly data for FY92 and FY93 for the entire State of Alaska. The figure shows that much of the statewide variation in demand is due to variations in Anchorage demand. Other regions appear to have more stable levels.

**Figure 1**

Statewide Demand for Child Care Programs, FY92 and FY93

The sustained upward trend shown above in Figure 1 is deceptively simple because it neglects the data from FY91. As Table 1 shows, average annual demand for the Top Ten Places fell slightly from 3,404 children in FY91 to 3,258 in FY92, a drop of 4 percent. Since then, average annual demand has grown steadily. The average FY93 demand was 3,850 (an 18 percent increase over FY92). The average FY94 demand (for July through November) was 4,145 (an 8 percent increase over FY93). This increase occurred even though the average number of children actually served so far in FY94 is much lower than in FY93.

The average annual demand data hide a great deal of monthly variation which we examine below. The important message from the annual averages is that demand somehow fell between FY91 and FY92, then increased significantly in FY93 and through the start of FY94.

**Variations in Monthly Demand**

Figure 2 presents a more graphic picture of the volatile monthly demand for child care assistance. The figure shows monthly demand for Top Ten Places from the start of FY91 all
Figure 2

Total Demand for Child Care Assistance
Ten Largest Communities

Children

Waiting List

Children Served

Waiting List

Children Served

Jul-90
Aug-90
Sep-90
Oct-90
Nov-90
Dec-90
Jan-91
Feb-91
Mar-91
Apr-91
May-91
Jun-91
Aug-91
Jul-91
Sep-91
Oct-91
Nov-91
Dec-91
Jan-92
Feb-92
Mar-92
Apr-92
May-92
Jun-92
Jul-92
Aug-92
Sep-92
Oct-92
Nov-92
Dec-92
Jan-93
Feb-93
Mar-93
Apr-93
May-93
Jun-93
Jul-93
Aug-93
Sep-93
Oct-93
Nov-93
the way through November of FY94. The most obvious difference between this figure and the
previous one is that demand *dropped* throughout most of FY91, then began a fairly steady
increase that lasted all the way through October 1994. July demand from the Top Ten Places
fell by 14 percent during FY91, from 3,282 in July 1990 to 2,829 in July 1991. Demand then
rose by 14 percent to 3,229 in July 1992 and by another 19 percent to 3,856 in July 1993.

Figure 2 shows three important things. First, it lays out the central puzzle which this analysis
seeks to solve. That problem is to explain why demand fell in FY91 but has risen steadily ever
since. The second thing the figure shows is an apparent annual dip in demand during the
summer months. Finally, Figure 2 provides a clear illustration of how quickly waiting lists can
grow when demand exceeds the available financial capacity of the program. This change in
total waiting list size for the Top Ten Places is also shown in Figure 3.

A Forecasting Model of Anchorage Monthly Demand

Focus on Anchorage

The remainder of this report focuses on the development of a forecasting model using the
data for Anchorage only. Due to limited time and resources, we could not collect good data
and build models for multiple communities. As shown in Figure 1 above, Anchorage accounts
for about one half total demand. It can also be rigorously shown that Anchorage contributes
more volatility to the statewide total than other areas.2 We therefore decided to focus on
Anchorage first. A model that works for this region is likely to be transferable to other places
or groups of places.

Figure 4 shows the Anchorage data to be explained. There is a pronounced drop in demand
in FY91 followed by a sustained rise through September 1993. There appear to be dips in
demand during the summer months. These dips agree with economic theory since the
*margin*al cost of caring for pre-schoolers is probably lower for many parents in the summer
when they are (somehow) already dealing with school-age children not in school.

Restrictions on Data for a Forecasting Model

In order to be useful for forecasting, a model should ideally be built of explanatory variables
which are known at the time the forecast is made. Thus, for example, a model which
"explains" snowfall as a function of the appearance of snowplows on the streets is not useful
for forecasting snowfall. By the time the data (snowplows on the street) is available to put
into the model, the event (snow) has already occurred.

Unfortunately, it is unlikely that one can find good explanatory variables which can be
observed well in advance of the event one is trying to forecast. A second-best approach is to
look for variables which themselves can be forecast with reasonable accuracy. To continue
the example above, one might observe the *behavior* of the street maintenance people at the
garage on the theory that they have obtained the best possible weather forecast and if they
are preparing for a storm, there is likely to be one. In other words, a second-best but still

---

2 Considering all the data from July 91 thru November 94, Anchorage demand has a coefficient of variation of
.174, almost twice the value for the "Next Nine" places (.094).
Figure 3

Top Ten Communities Child Care Assistance Waiting List

Children Waiting for Child Care Assistance

- Jul-90
- Aug-90
- Sep-90
- Oct-90
- Nov-90
- Dec-90
- Jan-91
- Feb-91
- Mar-91
- Apr-91
- May-91
- Jun-91
- Jul-91
- Aug-91
- Sep-91
- Oct-91
- Nov-91
- Dec-91
- Jan-92
- Feb-92
- Mar-92
- Apr-92
- May-92
- Jun-92
- Jul-92
- Aug-92
- Sep-92
- Oct-92
- Nov-92
- Dec-92
- Jan-93
- Feb-93
- Mar-93
- Apr-93
- May-93
- Jun-93
- Jul-93
- Aug-93
- Sep-93
- Oct-93
- Nov-93

0 200 400 600 800 1000 1200
and the number of children waiting for Child Care Assistance.

Total demand is the sum of all Anchorage children served by Child Care Assistance Programs.

Figure 4
useful solution to the forecasting problem would be to "piggyback" the forecast of demand for child care services onto someone else's forecast of a good explanatory variable.

Originally, we speculated that the demand for child care might be closely related to some economic variables, with the most likely candidate being employment (or unemployment). However, we failed to find any good correlations between current demand for childcare and past employment. We then concluded that further pursuit of economic variables was fruitless, because even if we found good economic "predictors" of child care demand, it is highly unlikely that one could obtain these data in a timely manner when the goal is to forecast child care demand a year or several months in advance.

Explanatory Variables Considered

Employment. Of all the possible economic variables, employment was the most promising from a practical standpoint. Accurate data on wage and salary employment are reported quarterly to the Alaska Department of Labor and could probably be made available for a forecasting model with a lag of as little as six months. Economic theory also suggests that employment would directly affect the demand for child care (although in several different and potentially conflicting ways!).

To test the explanatory power of an employment variable we used total Anchorage wage and salary employment as reported to the Department of Labor through the quarterly ES-202 reports. We looked at current employment and employment 3 and 6 months prior to the month in which demand is measured. Employment was only barely significant in models which excluded births (discussed below). It was statistically insignificant in models which included births as another explanatory variable. More troubling, employment three months ago had a slight positive effect on demand, while employment 6 months ago had a negative effect. This instability in the direction of the effect is further grounds for excluding employment from the model.

Births. The simplest theoretical model of the demand for childcare is one in which total demand is simply a function of the total number of young children in the relevant age groups. This "simple" model of childcare demand therefore becomes a not-so-simple problem of forecasting a segment of the population. The population of young children changes due to births and to the migration of families to and from Anchorage. One potentially excellent predictor of the number of young children is therefore the number of births.

Monthly data on births by mother's place of residence is available with a time lag of less than one year from the Division of Vital Statistics. Figure 5 shows these data for the period 1986 through October 1992. The graph shows births per day to eliminate the effect of short and long months on the value of births per month. It also shows a 5-month moving average of monthly values. The moving average smooths out some of the random "noise" in the births data and also is consistent with the idea that it is the cumulative number of births over a certain time that determines the population of young children.

Figure 5 shows a clear decline in births in 1987 and 1988. While we have not investigated the cause of this decline, it is probably due to the decline in Anchorage's population during this period, due to the economic recession which was in full swing at the time.
Elementary School Enrollment. The Anchorage School District maintains excellent data on monthly school enrollments. These data have three advantages for this analysis. First, the school enrollment data provides one of the only available means of tracking short-term changes in population due to migration into and out of Anchorage. Second, the elementary school population is itself a population of young children and reasonably close to the target population of client children. Third, the School District works hard to prepare a forecast of upcoming enrollment which takes advantage of almost all available short-term indicators of population change and economic activity.

Figure 6 shows monthly elementary school enrollment for the same period for which we have child care demand data: July 1990 through November 1994. Shaded bars indicate summer months during which enrollment "jumps" from one school year to the next, as many parents wait until a new school year to enroll their children in a new school system. The data for these summer months is interpolated (estimated) because no direct enrollment is recorded when school is not in session.

3 For many years the School District has convened regular meetings of the so-called Anchorage Population Committee, which brings together knowledgeable people from throughout the community to share data on short-term population trends.
Figure 6 does not show any noticeable pattern of decline and increase that would match that of the child care demand data. However, the school enrollments do show an acceleration in growth during the FY92 period, during which child care demand also grew rapidly.

**Variables Selected for the Forecasting Model**

After testing several different models with various combinations of the variables above, as well as time trends and adjustments for seasonal effects, we chose a model with three explanatory variables. These are:

- School District coincident enrollment
  - SUMMER, a dummy variable to isolate the reduced demand during summer months
- Births per Day, a moving average of the 5 months of births that occurred 3 years before the month being forecast

Figure 7 shows how two of these variables relate to the dependent variable, monthly demand for child care assistance in Anchorage. (It does not make sense to show the SUMMER dummy variable since it only takes on the value of 1 or 0.) All three variables are shown relative to their own values as of July 1990. The figure shows that school enrollments are steadily rising, but rose more rapidly during FY92. Births per day and demand for care fall, then rise.
Figure 7

Demand, Births 3 yrs ago, and school enrollments (July 1990 = 1.00)
Performance of the Forecasting Model

The explanatory variables we finally selected -- School Enrollment, SUMMER, and Births of 3 years ago -- do a decent job of explaining changes in the demand for child care assistance during FY91 through the end of 1993. All three variables have coefficients of the expected sign and are statistically significant at the 99 percent level. The overall "R-squared" statistic indicates that about 70 percent of the variation in demand can be explained by the variation in the explanatory variables.

Figure 8 shows the performance of this simple model by comparing predicted demand with actual demand. "Predicted Demand" (shown in black) is what a forecaster would have predicted the level of demand to be, assuming that the forecaster had the correct data for births of three years ago and for coincident elementary school enrollment. Although the predicted values do not fall as noticeably in FY91 as the actual demand did, they do fall slightly during this period and do track the FY92 and FY93 actuals quite well.

This model is satisfying for two reasons. First, it avoids the use of a time trend as an explanation of changing demand for child care. Using time trends is always dangerous and especially so in this case where the data clearly show that the "trend" can run both upward and downward. Instead of a time trend, this model uses variables that are closely connected with the direct causes of changes in the client population. Economists would say the model has a "structural" basis, as opposed to being an "ad-hoc" collection of time trends.

The second reason this model is attractive is that one of the key variables -- births -- can be easily and accurately observed two years prior to the forecast period. The other -- elementary school enrollment -- is itself forecast by the school district using all available short-term indicators of population change.

Implications and Suggestions for Further Research

The analysis presented above indicates that the fall and subsequent rise in demand for child care services during the FY91-FY93 period can be explained at least in part by the decline in Anchorage's population (and hence births) during the 1987-88 recession. Due to the large waiting lists that were developing in early FY94, however, it may not be possible to even measure total demand accurately in the near future. If large numbers of parents become "discouraged," measured waiting list figures could significantly understate true demand.

Although it would be possible to explore further refinements to this model, such as specific links to certain types of employment, or more complicated lag structures for the BIRTHS variable, we do not feel that further statistical analysis is warranted at this time. Instead, we recommend that the model developed above be tested over the remainder of the fiscal year, and perhaps applied to one or more other communities.
**Regression Statistics for the Forecasting Model**

### Regression Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.8295</td>
</tr>
<tr>
<td>R Square</td>
<td>0.6881</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.6628</td>
</tr>
<tr>
<td>Standard Error</td>
<td>185.0972</td>
</tr>
<tr>
<td>Observations</td>
<td>41</td>
</tr>
</tbody>
</table>

### Analysis of Variance

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3</td>
<td>2796740.72</td>
<td>932246.91</td>
<td>27.2102</td>
<td>1.80959E-09</td>
</tr>
<tr>
<td>Residual</td>
<td>37</td>
<td>1267655.77</td>
<td>34260.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>4064396.49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Standard Error</th>
<th>t Statistic</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-5994.1502</td>
<td>-6.7455</td>
<td>0.0000</td>
<td>-7794.6406</td>
<td>-4193.6598</td>
</tr>
<tr>
<td>ASD Coincident</td>
<td>0.1134</td>
<td>3.6879</td>
<td>0.0007</td>
<td>0.0511</td>
<td>0.1757</td>
</tr>
<tr>
<td>Summer</td>
<td>-259.0468</td>
<td>-3.2119</td>
<td>0.0026</td>
<td>-422.4619</td>
<td>-95.6316</td>
</tr>
<tr>
<td>Births per Day MA (5)</td>
<td>375.6742</td>
<td>5.7581</td>
<td>0.0000</td>
<td>243.4809</td>
<td>507.8676</td>
</tr>
<tr>
<td>Lagged 3 yr.</td>
<td>65.2423</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Correlation

<table>
<thead>
<tr>
<th></th>
<th>Total Demand</th>
<th>ASD Coincident</th>
<th>Summer Births per Day MA (5) Lagged 3 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Demand</td>
<td>1.0000</td>
<td>0.6339</td>
<td>0.6442</td>
</tr>
<tr>
<td>ASD Coincident</td>
<td></td>
<td>1.0000</td>
<td>0.3587</td>
</tr>
<tr>
<td>Summer</td>
<td></td>
<td>-0.1058</td>
<td>1.0000</td>
</tr>
<tr>
<td>Births per Day MA (5)</td>
<td></td>
<td>0.3479</td>
<td>1.0000</td>
</tr>
<tr>
<td>Lagged 3 yr.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This page intentionally left blank
Appendix B:
Child Care Assistance Client Profile

The Child Care Assistance Program in Anchorage asked each applicant for services to complete a short questionnaire describing themselves. Questions included client age, years in Alaska, education and employment background, and reasons for using the child care assistance program. ISER received 960 completed questionnaires. We drew a sample of 192 of these for analysis.

Questionnaire Results

Age

The average client is 28.8 years old. Client ages ranged from 16 to 46 years of age. Clients aged 20 to 34 years made up 76% of our sample. (See Figure B-1 below.)

Years in Alaska

Clients in our sample had lived in Alaska an average of 14.4 years. The minimum length of residence was 2 months and the longest residency was 41 years. 82% of the clients sampled had lived in Alaska five years or more. (See Figure B-2.)
Education

In our sample, 89.6% of child care assistance clients had graduated from high school or obtained a GED certificate. 55% of the clients had gone beyond high school and received some post-secondary education.

Occupation

The questionnaire asked clients about current and previous occupations. These occupations were not analyzed, because funding did not allow for the large amount of time and resources necessary to properly analyze this data.

Reasons for Using Child Care Assistance

The clients were asked about several possible reasons for using the child care assistance program. They were given the five choices listed in Table B-1 (below), and asked to select all choices that applied to their situation. Many clients selected more than one response. Table B-1 displays single responses (found in the shaded cells) and all combination responses given by clients who selected exactly two reasons. Clients who selected three or more reasons (4% of the sample) are not included in Table B-1. For example, in the first row, 60 clients, or 31% of the sample, selected only "Went Back to Work". Those who selected both "Went Back to Work" and "Went Back to School" are found in the first row, second column (10 respondents, 5% of the sample). No clients in the sample selected both "Went Back to Work" and "Entered a Job Training Program". The twenty-two clients who answered both "Went Back to Work" and "Recently Divorced or Separated" made up 11% of the sample. Four clients (2% of the sample), selected both "Went Back to Work" and "Other". The rest of the chart can be interpreted in the same way.

<table>
<thead>
<tr>
<th>Reason for Using Child Care Assistance</th>
<th>Went Back to Work</th>
<th>Went Back to School</th>
<th>Entered a Job Training Program</th>
<th>Recently Divorced or Separated</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Went Back to Work</td>
<td>60 (31%)</td>
<td>10 (5%)</td>
<td>0 (0%)</td>
<td>22 (11%)</td>
<td>4 (2%)</td>
</tr>
<tr>
<td>Went Back to School</td>
<td>22 (11%)</td>
<td>5 (3%)</td>
<td>3 (2%)</td>
<td>3 (2%)</td>
<td></td>
</tr>
<tr>
<td>Entered a Job Training Program</td>
<td>4 (2%)</td>
<td>1 (0.5%)</td>
<td></td>
<td>1 (0.5%)</td>
<td></td>
</tr>
<tr>
<td>Recently Divorced or Separated</td>
<td></td>
<td></td>
<td>16 (8%)</td>
<td>6 (3%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td>28 (15%)</td>
<td></td>
</tr>
</tbody>
</table>

Table B-1

Combinations of Client Reasons for Using Child Care Assistance
### DCRA Child Care Assistance Program
#### Anchorage Survey Sample
#### Descriptive Statistics

<table>
<thead>
<tr>
<th>Age of Respondent</th>
<th>Years in Alaska</th>
<th>High School Graduate</th>
<th>Years of college completed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>28.8377</td>
<td>Mean 14.42014</td>
<td>Mean 0.895833</td>
</tr>
<tr>
<td><strong>Standard Error</strong></td>
<td>N/A</td>
<td>Standard Error 0.710163</td>
<td>Standard Error 0.022104</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>28</td>
<td>Median 13</td>
<td>Median 1</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>24</td>
<td>Mode 20</td>
<td>Mode 1</td>
</tr>
<tr>
<td><strong>Standard Deviation</strong></td>
<td>6.551805</td>
<td>Standard Deviation 9.840307</td>
<td>Standard Deviation 0.306275</td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td>42.92615</td>
<td>Variance 96.83165</td>
<td>Variance 0.093805</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>-0.30057</td>
<td>Kurtosis -0.65935</td>
<td>Kurtosis 4.873355</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>0.485413</td>
<td>Skewness 0.433297</td>
<td>Skewness -2.61203</td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>30</td>
<td>Range 40.83333</td>
<td>Range 1</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>16</td>
<td>Minimum 0.166667</td>
<td>Minimum 0</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>46</td>
<td>Maximum 41</td>
<td>Maximum 1</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td>5508</td>
<td>Sum 2768.667</td>
<td>Sum 172</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td>191</td>
<td>Count 192</td>
<td>Count 192</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years of Post-Graduate Education Completed</th>
<th>Total Post-Secondary Education</th>
<th>Number of Eligible Children</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>0.070313</td>
<td>Mean 2.287736</td>
</tr>
<tr>
<td><strong>Standard Error</strong></td>
<td>0.023528</td>
<td>Standard Error N/A</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>0</td>
<td>Median 2</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>0</td>
<td>Mode 2</td>
</tr>
<tr>
<td><strong>Standard Deviation</strong></td>
<td>0.326017</td>
<td>Standard Deviation 1.502297</td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td>0.106287</td>
<td>Variance 2.256896</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>25.2823</td>
<td>Kurtosis 3.723488</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>5.004399</td>
<td>Skewness 1.659924</td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>2</td>
<td>Range 8.5</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>0</td>
<td>Minimum 0.5</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>2</td>
<td>Maximum 9</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td>13.5</td>
<td>Sum 242.5</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td>192</td>
<td>Count 106</td>
</tr>
</tbody>
</table>

*** Some clients apparently understood this question to mean years of post high school graduation education. Typical replies showed zero or one for Years of College Completed, then one or two years in this category. Others answered one or two years and filled in "Travel School" or "Cosmetology School" or "Post-Secondary Education" and combined to yield the "Total Post-Secondary Education" figures.