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## Article

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# Does better, cheaper day care make for more satisfied parents?

By Georg F. Camehl, Juliane F. Stahl, Pia S. Schober and C. Katharina Spieß

Following the major expansion of day care provision in Germany in recent years, the quality of these programs has increasingly also been the subject of public debate. When evaluating the quality of German day care centers, experts have frequently concluded that there is considerable room for improvement. Apart from considering expert opinions, it is also interesting to look at how parents rate the quality of day care centers and whether this differs according to level of income or education. The present article primarily focuses on parental satisfaction with various quality aspects. To determine this, data from an extension study are analyzed for the first time, surveying parents from the Socio-Economic Panel (SOEP) study and the Families in Germany (*Familien in Deutschland*, FiD) study whose children attend a day care center. We examine satisfaction with different aspects related to organization, equipment and resources, pedagogic staff, activities with the children, cooperation with parents, and, specifically, cost. A supplementary analysis on potential willingness to pay, depending on household income, provides us with additional information on the extent to which parents would be prepared to pay more for a day care place for their child. The analyses show that while parental satisfaction is generally high, satisfaction is lowest with cost and with opportunities for parental involvement in the day care center. With regard to overall satisfaction with the day care center, however, cost plays no role at all – here the key factors are staffing and particularly parents' perceptions of whether their wishes are taken into consideration. When parents are asked about the maximum amount they would be willing to pay for day care, the higher-earning parents are generally prepared to pay more for a place for their child than they have done to date.

In recent years, Germany has invested massively in expanding the number of day care places for children under the age of three. As of August 1, 2013, in Germany every child aged over 12 months is legally entitled to a place in a day care institution. Since around 33 percent of all under-threes now attend day care, recent discussions have focused increasingly on its quality.<sup>1</sup> Criticism is frequently voiced that groups are too large and the child-to-educator ratio does not comply with expert recommendations. The NUBBEK study<sup>2</sup> on early childhood education and care, for example, shows that quality varies considerably between day care centers, and overall quality could only be rated as mediocre. Other studies demonstrate that, in many facilities, the meals provided are not nutritionally balanced and do not always comply with the standards of the German Nutrition Society (DGE).<sup>3</sup> Moreover, in recent years, there have been heated discussions about the qualifications and further training of the pedagogic staff working in early childhood education and care. New study programs and staff training initiatives have been developed as a result.<sup>4</sup> There are also major regional differences in the quality of day care centers which are increasingly the subject of public and political debate: inter alia the German central government and federal state governments are in the process of conducting talks on introducing nationwide quality standards.<sup>5</sup>

<sup>1</sup> German Federal Statistical Office (Statistisches Bundesamt), Statistiken der Kinder- und Jugendhilfe. Kinder und tätige Personen in Tageseinrichtungen und in öffentlich geförderter Kindertagespflege (Wiesbaden: March 1, 2015).

<sup>2</sup> W. Tietze, F. Becker-Stoll, et al., Nationale Untersuchung zur Bildung, Betreuung und Erziehung in der frühen Kindheit (NUBBEK) (Weimar/Berlin: 2013).

<sup>3</sup> See for example U. Arens-Azevêdo, U. Pfannes, et al., Is(s)it KiTa gut? KiTa-Verpflegung in Deutschland: Status quo und Handlungsbedarfe, study commissioned by the Bertelsmann Stiftung (2014).

<sup>4</sup> On this, see WIFF Initiative (training initiative for early childhood education professionals), [www.weiterbildungsinitiative.de/](http://www.weiterbildungsinitiative.de/), last accessed September 2014.

<sup>5</sup> Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ), Communiqué Frühe Bildung weiterentwickeln und finanziell sichern: 2014).

Both experts and, increasingly, policy-makers now confirm that the quality of German day care centers requires improvement. It is also interesting to see how parents rate the quality of these institutions. Parents select a day care center and, together with their children, are the consumers of this service. Further, the parental perspective is key as they have joint responsibility, along with the center staff, for the education and upbringing of the child and, as such, should work in cooperation.<sup>6</sup>

How satisfied are parents with the quality of the centers their children attend, with which aspects are they particularly (dis)satisfied, and does satisfaction vary across socio-economic groups? Moreover, are parents with children aged three and over more satisfied with different aspects than parents of under-threes? These are some of the questions addressed by the present article.<sup>7</sup>

### Previous findings on correlations between parental satisfaction and quality of day care

With regard to parental satisfaction with the quality of day care, the reports evaluating the Childcare Funding Act (*Kinderförderungsgesetz, KiföG*), including the German Youth Institute's (DIJ) *KiföG Länder* study, are an important source of information.<sup>8</sup> On average, the findings indicate a high level of satisfaction: during the period from 2009 to 2014, between 85 and 91 percent of parents with children in day care centers were either satisfied or very satisfied.<sup>9</sup> Taking account of various aspects of the service, satisfaction with cost received the lowest values but almost 50 percent of parents surveyed were still (very) satisfied with the cost of day care.<sup>10</sup> However, studies indicate that, in some cases, there are striking differences between German federal states when it comes to parental satisfaction. For instance, parents in West Germany expressed a higher level of satisfaction with group size whereas those in East Germany were more satisfied with activities and educational programs.<sup>11</sup>

Previous analyses conducted by DIW Berlin were based on data from the SOEP-related survey Families in Germany (FiD) from 2010 and included parents of children up to the age of six years. Although satisfaction levels were indeed high, fluctuations were still observed depending on the particular aspect considered—satisfaction with cost was lowest here, too.<sup>12</sup> The analyses showed that large families with at least three children as well as parents with lower levels of education tended to be more satisfied.

The comparatively high level of parental satisfaction with the quality of their child's day care center is also reflected in international literature.<sup>13</sup> In addition to the finding that mothers with more children and a lower socio-economic status are more satisfied with their child's day care,<sup>14</sup> the perceived social support provided by the day care center as well as parental involvement also proved to be important predictors of parental satisfaction.<sup>15</sup> However, it was rarely possible to observe a correlation between parental satisfaction and the actually measured quality of the day care center.

### Differences in quality aspects and cost depend on region

Since the responsibility for regulating day care in Germany primarily lies with the federal state and local governments, we would expect to see regional differences in both the quality and cost of day care. In 2013, in day care groups of under-threes, the average number of children per pedagogic staff across the different youth welfare office districts ranged from 2.3 to 9.3. From three years to school age, the average staffing ratio varied between 1 to 6.1 and 1 to 15.5.<sup>16</sup> Parental participation rights in early childhood education and care institutions are also determined on the federal state level. Primarily, parents must be consulted or at least informed about subjects such as the center's educational concept or opening times, al-

**6** The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK), *Gemeinsamer Rahmen der Länder für die frühe Bildung in Kindertageseinrichtungen* (2004).

**7** The present analysis was conducted as part of the project "Early Childhood Education and Care Quality in the Socio-Economic Panel (K2ID-SOEP)," funded by the Jacobs Foundation. See also [www.k2id.de](http://www.k2id.de).

**8** The databases used for these reports were the AID:A-Studie ("Aufwachsen in Deutschland: Alltagswelten") (Growing Up in Germany) and annual supplementary studies which include only parents with children under the age of three.

**9** Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ), *Vierter Zwischenbericht zur Evaluation des Kinderförderungsgesetzes* (Berlin: 2013); BMFSFJ, *Fünfter Bericht zur Evaluation des Kinderförderungsgesetzes* (Berlin: 2015).

**10** BMFSJ, *Vierter Zwischenbericht*; BMFSFJ, *Fünfter Bericht*.

**11** C. Alt, S. Hubert, et al., *Der U3-Ausbau: Angebote, Bedarfe und Zufriedenheit: Eine Analyse auf Basis der KiföG-Bundesländerstudie 2012* (Munich: 2013).

**12** K.-U. Müller, C. K. Spieß, et al., "Evaluationsmodul: Förderung und Wohlergehen von Kindern: Endbericht," DIW Berlin – Politikberatung kompakt 73 (Berlin: 2013).

**13** J. Barnes, P. Leach, et al., "Infant care in England: mothers' aspirations, experiences, satisfaction and caregiver relationships," *Early Child Development and Care* 176 (5) (2006): 553–573; V. Peyton, A. Jacobs, et al., "Reasons for choosing child care: associations with family factors, quality, and satisfaction," *Early Childhood Research Quarterly* 16 (2) (2001): 191–208. M. Scopelliti and T. Musatti, "Parents' View of Child Care Quality: Values, Evaluations, and Satisfaction," *Journal of Child and Family Studies* 22 (8) (2012): 1025–1038.

**14** See for example, Scopelliti and Musatti, "Parents' View of Child Care Quality," Barnes and Leach, et al., "Infant care in England."

**15** See for example, P. A. Britner and D. A. Phillips, "Predictors of parent and provider satisfaction with child day care dimensions: A comparison of center-based and family child day care," *Child Welfare* 74 (6) (1995): 1135–1168; Scopelliti and Musatti, "Parents' View of Child Care Quality."

**16** E. Strunz, *Kindertagesbetreuung vor Ort – Der Betreuungsatlas 2013. Eine Analyse lokaler Unterschiede* (Dortmund: 2014).

though, even here, differences exist depending on the federal state and also the subject matter.<sup>17</sup>

With regard to day care fees, DIW analyses confirm that there are substantial differences in the financial contributions families make and that around 18 percent of families with children attending day care are completely exempt from fees.<sup>18</sup> Within municipalities, these discrepancies arise partly as a result of a sliding scale for contributions based on criteria such as income, number of children eligible for child benefits in the family, and daily hours of attendance.<sup>19</sup> Nonetheless, Schröder et al. (2015) show that, relatively speaking, the financial burden of low-income families who are obliged to pay day care fees is greater than the relative burden of families at the upper end of the income distribution.

In May 2014, there were general exemptions from fees in six federal states although, for the majority, these exemptions only applied to the child's final year in day care before starting elementary school.<sup>20</sup> In Berlin and Rhineland-Palatinate, however, a much broader general exemption from fees has been in place for some time now.

Therefore, major regional discrepancies in quality remain and, for this reason alone, differences in satisfaction are to be expected. In addition, parents—like experts—do not perceive quality as a one-dimensional construct but they differentiate between various aspects.

### Analysis of different quality aspects

Our analyses are based on a supplementary survey of households with at least one child under the age of six which is part of the German Socio-Economic Panel (SOEP) study or the supplementary sample Families in Germany (FiD) in 2013.<sup>21</sup> Parents with a child attending

**17** Bertelsmann Stiftung, Ländermonitor Frühkindliche Bildungssysteme: Elternbeteiligung in Kitas – Beteiligungsrechte (October 2010).

**18** C. Schröder and C. K. Spieß, et al., "Private Spending on Children's Education: Low-Income Families Pay Relatively More," DIW Economic Bulletin, no. 8 (2015): 113–123.

**19** Section 90 of SGB VIII. According to Book VIII of the German Social Welfare Code, a full exemption from fees can be awarded if the parents and child cannot reasonably be expected to bear the financial burden.

**20** Bertelsmann Stiftung, Ländermonitor Frühkindliche Bildungssysteme: Rechtsanspruch des Kindes: Betreuungsplatz und -umfang (May, 2014).

**21** This survey was conducted as part of the aforementioned K2iD project. The Socio-Economic Panel (SOEP) study is the largest and longest running multi-disciplinary longitudinal study in Germany. Since 1984, the survey institute *TNS Infratest Sozialforschung* has been surveying thousands of individuals every year for the SOEP. Currently, the survey covers around 30,000 respondents in approximately 15,000 households. SOEP data provide information on, *inter alia*, income, employment, education, health, and life satisfaction. Because the same respondents are surveyed every year, this lends itself to detailed analyses not only of long-term social trends but also of the group-specific development of life courses. See G. G. Wagner, J. R. Frick, et al., "The German Socio-Economic Panel Study (SOEP) – Scope, evolution and enhancements," *Schmollers Jahrbuch* 127 (1) (2007): 139–169. In 2013, these were still two

#### Box

### Procedure for multivariate analyses

We use five multivariate linear regression models at the level of the individual child to study the connections between parental satisfaction with various aspects of the child daycare establishment, socio-economic characteristics, and the level of quality.<sup>1</sup> For the following selected aspects, we estimate linear regression models with the respective degree of satisfaction as a dependent variable: (1) number of pedagogic staff, (2) nutrition, (3) maths/science activities, (4) opportunities for parental participation in decision-making, and (5) cost. The aim of this selection is to focus on aspects associated with considerable variation in satisfaction and to study them in greater detail. We examine whether parental satisfaction varies according to the mother's level of education and net household income (the latter is indicated in units of 100 euros). We test whether these correlations are statistically significant when controlling for level of quality.

**1** If several children under six years of age were living in a household at the time of the survey, a separate questionnaire was completed for each of them.

day care were surveyed both about the quality of the day care center and about their satisfaction.<sup>22</sup> The average age of the children of parents surveyed was four years so the majority of those questioned were parents with children aged three years and over.

First, our study examines parental satisfaction with the various quality aspects—here we subdivide respondents into parents with children under three and those with children aged three and over. All responses are recorded on a scale from 0 "completely dissatisfied" to 10 "completely satisfied." In our initial analyses, we divide the satisfaction values captured in the survey into four categories: (1) dissatisfied, (2) partly satisfied, (3) satisfied, and (4) very satisfied. Our analysis focuses on the following quality aspects, each of which is measured using various criteria:

separate studies but since 2014, the FiD survey has been integrated into the SOEP, see M. Schröder, R. Siegers, et al., "Familien in Deutschland" – FiD," *Schmollers Jahrbuch* 133 (4) (2013): 595–606.

**22** One parent should complete a questionnaire for each child under school age. Overall, 84 percent of questionnaires were completed by mothers and 16 percent by fathers. In order to present representative findings for Germany, the results were adjusted for nonresponse using nonresponse weighting.

The variables used in determining the level of quality are scaled as follows: the child-to-educator ratio specifies the number of children per pedagogic staff; the nutritional aspect is binary mapped and determines whether the day care center has a pedagogic focus on health or nutrition; the frequency of science activities was recorded on a scale of 1 ("not at all") to 7 ("several times a week"); the extent to which requests and suggestions by parents with regard to opening hours, meals, educational program, etc. are taken account of by the day care center was rated by parents on a scale of 0 ("not at all") to 10 ("very much") with five such aspects being combined to generate an average value; the amount of the monthly day care fees is indicated in units of 10 euros.

In addition, every model includes the following control variables: number of hours that the child is cared for per week; number of months the child has attended the establishment; number of children in the household; parents' marital status; parental migration background if any; the child's age, and indicators as to whether or not the household is located either in East Germany or in a major city.

- 1) Organization: opening times, daily routine, nutrition, and cost.
- 2) Equipment and resources: space, garden, play and learning materials, group size, number of children per pedagogic staff.
- 3) Pedagogic staff: qualifications, regular further training, and also support tailored to children's individual needs.
- 4) Activities stimulating child development in the fields of movement, language, music or art, and math and science.
- 5) Cooperation with parents: communication between pedagogic staff and parents, opportunities to participate in decision-making, and advice or activities explicitly for parents.

In the next stage of our study, using multivariate analyses (see Box), we examine the extent to which various education and income groups differ with regard to their satisfaction with particular aspects of quality. Satisfac-

tion with quality is likely to depend on the level of quality and this was therefore included in our analysis. To capture the quality of a day care center attended by a child we use the assessment of the facility's quality provided by one of the child's parents.

In an additional step, we examine overall satisfaction with the day care center and how this relates to the level of quality and cost.

Since previous analyses have shown that satisfaction with cost is especially low, we place particular emphasis on this and conduct a separate detailed examination of the correlation between satisfaction and cost. At the same time, we also analyze whether certain groups of parents were willing to pay higher fees for their child to attend day care and the maximum amount they would be prepared to pay, respectively.

### Low parental satisfaction with opportunities for involvement

Figure 1 shows parental satisfaction with the various quality aspects for two age groups (under three or three years and over). Overall, the data confirm that parental satisfaction is predominantly high. However, there are different variances in levels of satisfaction: the smallest variance can be seen in satisfaction with daily routine and the largest in satisfaction with cost, meaning that the biggest differences can be observed here.

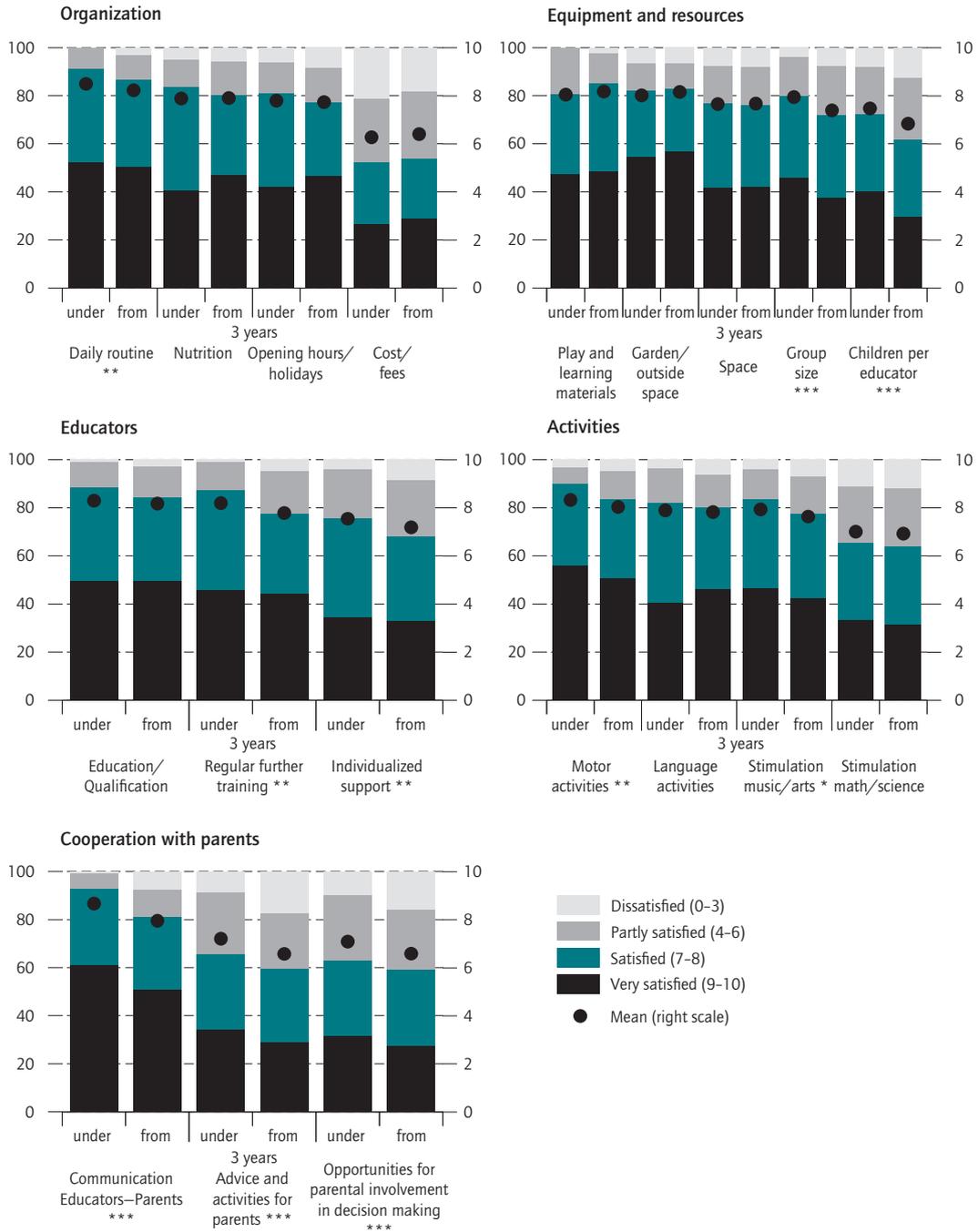
Parents in Germany are most satisfied with the daily routine in their child's day care center. Around 80 percent of parents are also (very) satisfied with opening hours and nutrition. However, with regard to equipment and resources, parents are apparently less satisfied particularly with group size and with the child-to-educator ratio. Parents are, for the most part, satisfied or very satisfied with the level of qualifications and further training of the pedagogic staff in their child's day care center. Concerning activities focused on child development, parents are least satisfied with efforts in the fields of math and sciences. Parents are also relatively dissatisfied with opportunities to consult with pedagogic staff and to participate in decision-making. Finally, parents are least satisfied with the cost.

Overall, it was evident that parents with children from three years to school age were significantly more dissatisfied with 10 of the 19 partial aspects. It is notable that parents with children aged three and over are more dissatisfied with group size. With regard to support tailored to their child's individual needs, parents with older children are more likely to desire better support and also tend to be less satisfied with the daily routine in their child's day care facility. Further, parents

Figure 1

**Parental satisfaction with selected aspects of day care quality and cost, by age of the child**

Shares in percent and means



Weighted results. Significant differences in means by child age are indicated as follows: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Sources: K<sup>2</sup>ID parent survey, SOEPv30, FiDv4.0; own calculations.

Parents are least satisfied with day care fees and with opportunities for parents to be involved in decision making.

with children from three to school age are significantly more dissatisfied with all three aspects related to cooperation with parents.

**Marked socio-economic differences in satisfaction with cost of day care**

The analyses (for a description of the methodology used, see Box) showed that households with college educated mothers are more satisfied with their day care fees than those with lower educated mothers when the same fees are payable (see Table).<sup>23</sup> In this case parents with a higher household income also report that they are more satisfied with day care costs. No significant correlations can be identified between maternal education or household income and satisfaction with the child-to-educator ratio, meals provided by the facility, science activities, or opportunities for the parents to participate in decision-making.

Similar to previous studies, our analyses indicate that parents with more children in the household tend to be more satisfied—specifically with the number of pedagogic staff, with math/science activities, and with opportunities to be involved in the center’s decision-making. With respect to parental satisfaction with math/science activities, parents living in urban areas and those whose children have already been attending their day care center for a longer time express a lower level of satisfaction. The level of the respective quality aspect for which satisfaction is captured is most strongly correlated with parental satisfaction. Thus, the fewer children per pedagogic staff, the more frequently their child participates in activities fostering math and science knowledge, the more influence parents feel they have over decision-making in the institution, and the lower the fees they pay, the more satisfied parents are with the relevant aspect. These quality differences are more crucial than socio-economic differences when it comes to explaining variation in parental satisfaction, which suggests that parents of children attending day care are ‘rational’ consumers: parental satisfaction with the service depends on how they rate the level of quality.

**Differences in overall satisfaction with the day care center depend on quality but not cost**

The level of overall satisfaction with day care centers is high, with a mean value of 8.1. Figure 2 shows the level of satisfaction with the day care center as a whole by parents whose children attend day care institutions that lie above or below the median for individual criteria, mean-

<sup>23</sup> The difference of 0.46 points corresponds to 16 percent of a standard deviation and is regarded as moderate.

Table

**Relationship of parental satisfaction with different aspects of day care quality and socio-economic factors as well as respective levels of quality**

Parameters of OLS Regressions

	Satisfaction with ...				
	... number of children per pedagogic staff	... Nutrition	... math and science activities	... Opportunities for parental involvement in decision-making	... cost/fees <sup>1</sup>
	M1	M2	M3	M4	M5
College degree	-0.166	-0.169	0.045	0.101	0.456*
Household income <sup>2</sup>	0.004	-0.005	-0.001	0.001	0.023***
No. of children in household	0.301***	0.090	0.220***	0.127*	-0.152
Duration of attendance in months	-0.006	-0.004	-0.013**	-0.005	-0.009
Town (> 10,000 inhabitants)	-0.058	-0.086	-0.501***	-0.053	0.105
Level of quality <sup>3</sup>	-0.288***	0.256	0.574***	0.671***	-0.082***
N	1,383	935	1,173	1,286	1,260
R <sup>2</sup>	0.16	0.02	0.28	0.41	0.07

Additional control variables in the model: Hours of attendance per day; single parent; migration background; age of child; East Germany. Weighted results. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

<sup>1</sup> Due to substantial exemption from fees Berlin und Rhineland-Palatinate have been excluded from the estimations of satisfaction with fees.

<sup>2</sup> The monthly net household income is measured in 100€-units.

<sup>3</sup> The level of quality refers to: M1: No. of children per educator, M2: Pedagogic focus on health or nutrition, M3: Frequency of science activities, M4: Consideration of parental wishes, M5: paid day care fees per month in 10€-units.

Sources: K<sup>2</sup>ID parent survey, SOEPv30, FiDv4.0; own calculations.

**Mothers with a college degree and parents with higher household income are more satisfied with the day care fees.**

ing that the quality achieved in respect of a particular criterion is better or worse than average. There are significant differences between the groups: the child-to-educator ratio and the degree to which parents can exert influence seem to be particularly important. For both aspects, satisfaction differs between the groups with a high and low value of around one point which represents a moderate deviation compared to a standard deviation of 2 and 2.6, respectively. Parents with higher day care costs, however, are overall not more dissatisfied with the day care center than those with lower costs.

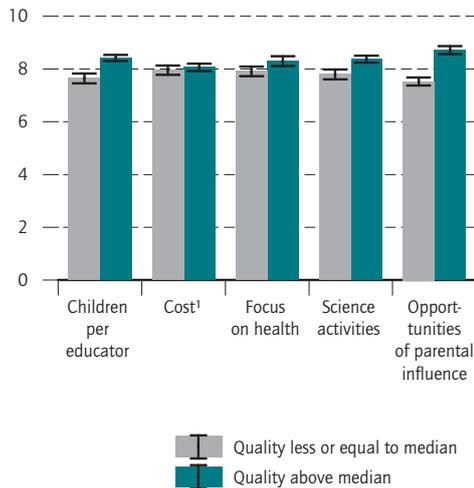
**Greater willingness to pay among higher income groups**

Previous analyses have demonstrated that as the cost of day care rises, dissatisfaction with this aspect increases, as is to be expected. Additional analyses with interaction effects between cost and household income have

Figure 2

**Predictors of parental satisfaction with day care center**

Means



1 Quality below the median refers to cost above the median; indicators of 95% confidence intervals. Weighted results.

Sources: K²ID parent survey, SOEPv30, FiDv4.0; own calculations.

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The overall satisfaction with the day care center varies in particular by child-to-educator ratio and opportunities for parents to be involved in decision-making.

shown that dissatisfaction with the cost increases less rapidly in higher-income households. This raises the question of whether the willingness to pay for attendance of a day care facility varies according to income. This question can be answered using the data of Families in Germany (FiD).<sup>24</sup> Participating households were asked to state the maximum amount they would pay per month per child, taking into account their financial situation. We compared the amounts they were willing to pay with the amounts they actually paid, differentiating between households by income quintile.<sup>25</sup>

As is to be expected due to sliding scale fees, day care costs rise with household income (see Figure 3): Households in the lowest income quintile pay 57 euros on average; for those in the highest quintile, this figure is 162 euros. The corresponding averages for the willing-

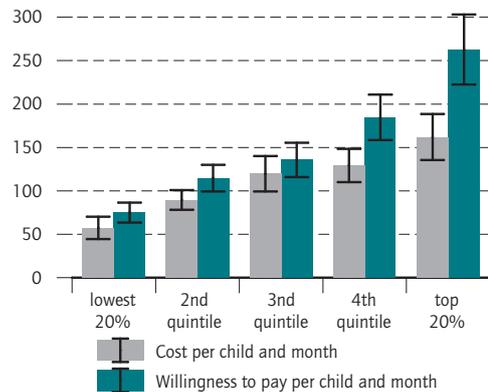
<sup>24</sup> Parents were asked in 2012 about their willingness to pay. The corresponding question was not included in the SOEP, thus reducing the number of cases for these analyses to 731 households.

<sup>25</sup> In other words, the households are grouped according to whether the monthly household income is among the bottom 20 percent, or more than the bottom 20 percent and less than the top 60 percent, and so on, ending with the top 20 percent. The average incomes for the respective quintiles are 1,622 euros, 2,512 euros, 3,217 euros, 4,018 euros, and 6,080 euros.

Figure 3

**Differences in willingness to pay for day care and current cost, by household income quintile**

In euro per month



Indicators of 95% confidence intervals. Weighted results. Data of willingness to pay from FiD 2012.

Source: FiDv4.0; own calculations.

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Higher income groups are willing to pay more for day care.

ness to pay are 75 euros and 263 euros, respectively. The difference between actual cost and willingness to pay is not statistically significant for the lower three quintiles. In other words, these three groups are either unwilling or unable to pay more than the actual amount. In the two upper income quintiles, the average willingness to pay is significantly higher than the actual cost—which is to say that, in principle, they would be willing to pay more.

**Conclusion**

The present analyses confirm previous findings of a relatively high level of parental satisfaction with day care centers as a whole. At first glance, this contradicts the judgment of experts, who describe the quality of German day care centers as mediocre at best—albeit with marked differences among the various regions and institutions.

Our analyses, however, also reveal a more nuanced picture: in particular, parents are relatively dissatisfied with the level of costs and with the extent of opportunities to participate in decision-making. The latter is worth emphasizing as cooperation between pedagogic staff and parents is especially important in respect of the educa-

tion and care mandate of day care institutions. Accordingly, it should be given greater weight in the discussion about quality. Parents are also relatively dissatisfied with the individually tailored support for children and with the child-to-educator ratio. This stands in marked contrast to their high degree of satisfaction with the level of training of pedagogic staff. It is also worth noting that among parents with children aged three years and over, a greater proportion is dissatisfied than among those with younger children. This suggests that, from a parental perspective, the need to ensure quality for children aged three and over should not be lost sight of—in recent years, most efforts have been concentrated in particular on the under-threes.

Analyses taking into account a large number of factors have shown, moreover, that the biggest differences in satisfaction are to be explained less as a result of socio-economic characteristics than of differences in the level of day care quality. Parents therefore certainly do include quality aspects in their evaluation of day care centers.

This finding is noteworthy in view of the general opinion, among experts, that German day care is not of a particularly high quality. One reason for this divergence between parental and expert opinion could be differences in the assessment of quality. For instance, parents may not fully be able to evaluate the educational quality of centers,<sup>26</sup> or they may tend to evaluate their “own” day care facility more positively as a justification in their own

<sup>26</sup> Some empirical indications of this have been found previously, especially in American studies, see N. Mocan, “Can consumers detect lemons? An empirical analysis of information asymmetry in the market for child care,” *Journal of Population Economics* 20 (4) (2007): 743–780.

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minds for having chosen it. It is important to note, however, that the quality criteria covered in the present report only capture a limited set of quality aspects evaluated by experts.<sup>27</sup>

In general, our analyses show only a few differences related to the mother’s level of education and household income: we found that given constant costs, parents are more satisfied with the fees they pay in households with college-educated mothers or with higher income. There is also clear evidence that parents with higher incomes are more willing than others to pay higher contributions than they currently do. This should give policy-makers food for thought because a general exemption from fees would also benefit high-income households, which are basically willing to accept even higher costs. Other analyses have similarly shown that day care fees are less of a burden, relatively speaking, for higher-income groups than for lower- and middle-income groups.<sup>28</sup> Such results favor a more progressive sliding scale for parents’ financial contributions to day care. This would free up public funds that policy-makers could then use to raise the mediocre quality of day care in Germany and reduce the differences in quality among the various institutions and regions. Parental satisfaction with day care centers as a whole and with individual aspects of quality would then—as our analyses suggest—increase further.

<sup>27</sup> In educational literature, the quality of day care centers is represented primarily by process-quality criteria that focus on the interaction of pedagogic staff with children. Even though the criteria examined by us have been found to correlate with process quality (see NICHD Early Child Care Research Network, “Child-Care Structure – Process – Outcome: Direct and Indirect Effects of Child-Care Quality on Young Children’s Development,” *Psychological Science* 13 (3) (2002): 199–206), they do not fully capture it.

<sup>28</sup> Schröder, Spieß, et al., “Private Spending.”

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