

**Motu Note 48**

How do childcare experiences differ  
by ethnicity and for families with  
previous childcare access issues?

**Motu** economic & public policy research

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### **Disclaimer**

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**Abstract**

This is the third in a series of five reports that together use the Growing Up in New Zealand longitudinal survey data to explore how the inability to access affordable childcare affects the long run labour market outcomes of mothers. This report investigates how the use of and satisfaction with childcare differ for families with different characteristics. Particular focuses are ethnic differences and differences by whether the family previously had issues with access to childcare. We find strong ethnic differences in the use of childcare at 2 years and 54 months, with Māori and Pasifika being less likely than Europeans to use regular childcare, but using it for more hours each week. Non-European families tend to be less satisfied with their childcare experiences even after controlling for parental characteristics, which may indicate a childcare system that caters preferentially to the European majority. Families that previously had access issues have lower average socioeconomic status, which is reflected in their childcare experiences, but not all the differences in their childcare experiences can be explained by their background characteristics. This suggests the unseen factors that led to their access issues may affect their childcare even after the access issues appear resolved.

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## **1 Introduction**

When New Zealand parents are unable to find suitable, affordable childcare, it is disproportionately the mothers who take time out of the labour force to care for the children. This inevitably reduces mothers' labour supply, and has the potential to negatively affect their careers in the long term, for instance, if their human capital erodes while they are not working.

This is the third in a series of five reports that together use Growing Up in New Zealand data to explore how the inability to access affordable childcare affects the long run labour market outcomes of mothers. The first two reports investigated how common issues with access to childcare are, who experiences such issues, and how persistent these issues are. This report investigates the characteristics of childcare used at 2 years and at 54 months, and how these differ by parental characteristics such as ethnicity and by earlier childcare situation.

This analysis sheds light on how different types of parents use childcare differently, as a result of both their preferences and the options available to them. Of particular interest in this report is whether parents who previously experienced issues with access to childcare have different childcare experiences once they secure it. This sheds light on whether those who appear to have resolved their issues with access to childcare have genuinely done so. As discussed at length in the second interim report, we are able to measure only imperfectly whether access issues have been resolved. If parents who previously experienced access issues have disproportionately bad experiences with childcare or low satisfaction with it, this might suggest they have become resigned to using unsuitable or inadequate childcare through lack of other options.

Subsequent reports in this series will investigate how access to childcare issues are related to mothers' current work, and how access issues are related to mothers' labour market outcomes in the long term.

The next section outlines the policy environment faced by the cohort of children studied. Section 3 gives a brief description of the data, construction of the sample used in this report, and the main variables of interest. Section 4 presents four sets of results. The first set of outcomes of interest is characteristics of and experiences with childcare at 2 years; we examine differences in these by ethnicity and by childcare situation at 9 months. The second set of outcomes of interest is characteristics of and experiences with childcare at 54 months; similarly, we examine differences in these by ethnicity and by prior childcare situations, with a particular interest in whether the child was not in care due to access issues at either 9 months or 2 years. Section 5

draws together the main conclusions on childcare differences by ethnicity and for those with earlier access issues.

## **2 Policy setting**

The children studied in this report were born between April 2009 and March 2010. The focuses of the report are their childcare experiences at 2 years old, which was between April 2011 and March 2012, and 54 months old, which was between October 2013 and September 2014.

The parents of these children were eligible for a maximum of 14 weeks of paid parental leave (PPL), the value of which was equal to their pre-birth weekly earnings, capped at the average New Zealand wage.<sup>1</sup> PPL has subsequently increased, reaching 26 weeks in June 2020.<sup>2</sup> These changes may have affected the parental leave decisions of later cohorts of mothers, but because PPL is still only 6 months, their effects on mothers' work and childcare at 9 months and 2 years are likely to be limited.

At 9 months and 2 years, the children were too young to be receiving the universal 20 Hours ECE subsidy for attending early learning services, though they may have been receiving it at 54 months; this subsidy is available for children aged three to five only. Additionally, low income parents in the cohort studied could have been eligible for MSD's Childcare Subsidy, which is administered through Work and Income. This income-tested subsidy is available for children who are not yet of school age who attend an approved early childhood programme for at least three hours per week.<sup>3</sup> While the 20 Hours ECE subsidy is automatically applied, parents must know about the MSD Childcare Subsidy and manually apply for it. Prior studies show not all eligible parents know about this subsidy, and among those who do, the bureaucracy that must be dealt with to get it can be a major barrier.<sup>4</sup>

## **3 Data**

### **3.1 Growing Up in New Zealand longitudinal survey**

This report uses data from the Growing Up in New Zealand (GUiNZ) survey run out of the University of Auckland. This longitudinal survey focuses on 6,846 children born in the Auckland, Waikato, and Counties-Manukau regions in April 2009 to March 2010 and their families. The participating families were selected to be roughly ethnically and socioeconomically

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<sup>1</sup> Forbes (2009).

<sup>2</sup> <https://www.business.govt.nz/news/paid-parental-leave-changing-2020/> accessed 21 September 2021.

<sup>3</sup> <https://www.workandincome.govt.nz/products/a-z-benefits/childcare-subsidy.html> accessed 21 September 2021.

<sup>4</sup> Statistics New Zealand (2017).

representative of the overall New Zealand population. Further details of the study can be found in Morton et al. (2013).

### 3.2 Sample construction

Because the focus of this research is mothers, all analysis is at the family level, meaning multiple births to one mother are combined into one observation. Analysis is conducted on two slightly difference samples, one used to examine childcare characteristics at 2 years, and the other used to examine childcare characteristics at 54 months. The first analysis sample is limited to families that meet several criteria:

- the mother was present in the antenatal survey (conducted approximately 3 months before the child's due date);
- the same mother was present in the antenatal, 9-month, and 2-year surveys; and
- the childcare situation at 9 months and 2 years is fully known (whether the child was in regular childcare, if so then the number of hours of care each week, and if not then the main reason why not).

The second analysis sample is a subset of the first, but also requires the mother to be present in the 54-month survey and for the childcare situation at 54 months to be fully known.

Table 1 compares the characteristics of all GUiNZ mothers (first column), those present in the first three surveys (second column), the analysis sample for examining childcare at 2 years (third column), mothers present in the first three surveys and the 54-month survey (fourth column), and the analysis sample for examining childcare at 54 months (fifth column). The 6,821 mothers in the full GUiNZ sample fall by 750 to 6,071 mothers who are present in the first three survey waves, and by another 100 to the first analysis sample of 5,971 for whom full information on childcare situation at 9 months and 2 years is available. A total of 5,724 mothers are present in the first three surveys waves and the 54-month survey; restricting to the subset of these with full childcare information at 9 months, 2 years, and 54 months reduces the sample by 90 observations to 5,634.

The table shows mothers in the two analysis samples are similar to the full GUiNZ population in terms of age, whether the GUiNZ child was their first child, and deprivation index. However, the ethnic breakdown of the samples is quite different. Mothers who identify most strongly as European constitute 52.9% of the full GUiNZ population compared with 57.0% and 58.9% of the analysis samples, those who identify as Māori constitute 13.9% of all GUiNZ mothers and 13.0% and 12.6% of analysis mothers, and those who identify as Pasifika constitute 14.7% of all GUiNZ mothers and 12.8% and 11.8% of analysis mothers. Mothers in the analysis

samples are also disproportionately likely to live with a partner, 91.3% and 91.8% compared with 90.4% of the full population.

Table 1: Characteristics of full GUINZ population and analysis samples

	All GUINZ mothers	Mothers present in antenatal, 9-month, and 2-year surveys		Mothers present in antenatal, 9-month, 2-year, and 54-month surveys	
		All	With non-missing childcare information	All	With non-missing childcare information
Mother's age	30.0	30.3	30.3	30.5	30.5
First child	41.8%	42.2%	42.1%	42.2%	42.2%
Mother's self-prioritised ethnicity:					
European	52.9%	56.5%	57.0%	58.5%	58.9%
Maori	13.9%	13.2%	13.0%	12.8%	12.6%
Pasifika	14.7%	12.9%	12.8%	11.9%	11.8%
Asian	14.7%	13.7%	13.6%	13.3%	13.2%
MELAA	2.1%	2.0%	2.0%	1.8%	1.8%
Other ethnicity	0.2%	0.2%	0.2%	0.2%	0.2%
New Zealander	1.2%	1.3%	1.3%	1.3%	1.3%
Missing ethnicity	0.3%	0.3%	0.2%	0.3%	0.2%
Mother lives with a partner	90.4%	91.3%	91.3%	91.8%	91.8%
Partnership status missing	9.6%	9.7%	9.6%	9.6%	9.4%
Deprivation Index	6.0	5.9	5.9	5.8	5.8
Observations	6,821	6,071	5,971	5,724	5,634

Notes: Antenatal characteristics of mothers in the full GUINZ sample, sample linked between two combinations of survey waves, and two analysis samples.

Within the two analysis samples, some of the analysis restricts to families with children currently in childcare or currently in childcare for at least 8 hours per week.<sup>5</sup>

### 3.3 Main variables of interest

#### 3.3.1 Childcare situation at 9 months and 2 years

The main explanatory variables of interest in this report are the ethnicity of the mother, reported antenatally, and the previous childcare situation. When examining childcare at 2 years, the previous childcare situation is the situation at 9 months; when examining childcare at 54 months, the previous childcare situation summarises information from 9 months and 2 years. In each of the 9-month and 2-year survey waves, children are classified as being in regular childcare, not in regular childcare due to parental preferences, or not in regular care due to

<sup>5</sup> The restriction to children in childcare at least 8 hours per week is because many of the questions about childcare characteristics at 2 years are asked only if the child is in care at least this amount.

access issues. The regular childcare can be formal or informal, and includes care by relatives or friends. It excludes only care by the mother or her partner.

Two main differences should be noted between the variables for childcare situation at 9 months and at 2 years. First, at 9 months, a child is classified as not being in care due to access issues if their main reason for not being in regular childcare is (i) cost, (ii) no spare places, (iii) not available when I need it, (iv) transport difficulties, (v) not available locally, (vi) poor quality of care, or (vii) does not suit our beliefs. At 2 years, the wordings on some of these options have been cosmetically altered, and health concerns is an additional option.

Second, in the 9-month survey, a child is classified as not in care due to preferences if the main reason for not being in care is (i) does not need it or (ii) do not want baby cared for by strangers. At 2 years, (i) too young and (ii) mother does not want/need it are additional options.

For analysing childcare at 54 months, we summarise childcare situations at 9 months and 2 years by defining four types of family, those whose children were (i) in care at both 9 months and 2 years, (ii) in care at either 9 months or 2 years, and not in care due to preferences the other of these times, (iii) not in care due to preferences at both 9 months and 2 years, and (iv) not in care due to access at 9 months, 2 years, or both of these times.

This report uses two different measurements of ethnicity to examine differences in childcare by ethnic group. Both are based on information gathered on the mother's ethnicity in the antenatal survey. Some of the analysis by ethnicity uses total response ethnicities, where an individual is included in the ethnic group if they report it as their only ethnicity or as one of their ethnicities. For other analysis, we use self-prioritised ethnicities, which allocate each individual to the one ethnic group with which they identify most strongly.

### *3.3.2 Characteristics of childcare at 2 years*

This section describes the characteristics of childcare at 2 years that we examine. Mothers of children who are in regular care at 2 years are asked a range of questions about the main childcare arrangement. Most questions are asked only if the child's main childcare arrangement is for at least 8 hours per week.

**Formal versus informal care:** Mothers whose GUINZ child is in their main childcare arrangement at least 8 hours per week are asked the type of this childcare arrangement. We categorise each type as formal or informal. Formal types of care are: kindergarten, daycare centre, home-based programme, kōhanga reo, and Pacific Islands centre. Informal types of care are: nanny, grandparent, other relative, gym, leisure or community centre, and other person (eg., friend, neighbour).

**Hours in childcare:** Mothers are asked the number of hours each week their child spends in their main childcare arrangement. For some of the analysis we include all values, and for some we focus only on children in care at least 8 hours per week.

**Childcare subsidy:** Mothers whose child is in their main childcare arrangement at least 8 hours per week are asked whether they receive a childcare subsidy. Because some types of care may not involve a cost to the parents (eg., care by a relative), we look at receiving a childcare subsidy in the context of whether the parents pay for the childcare.

**Cost of childcare:** Mothers whose child is in their main childcare arrangement at least 8 hours per week are asked the weekly cost of this childcare arrangement. We include zeros in the analysis.

**Child-to-adult ratio:** We calculate the child-to-adult ratio in the child's main childcare arrangement from three questions. The first two questions ask the number of children under two years and two years old and over usually present in the same room at the care arrangement. We add these values together to get the number of children present. The third question asks the number of adults usually with the child when they are at care. The child-to-adult ratio is the number of children divided by the number of adults. A higher child-to-adult ratio suggests less potential for the child to receive individual attention, and is more commonly associated with formal care.

**Frequency of communication from childcare provider:** This variable is calculated from two questions asked of mothers whose child is in their main childcare arrangement at least 8 hours per week. The questions ask how often carers at the main childcare arrangement report to the mother about the child's (i) day (eg., sleeping, feeding, changing routines) and (ii) development (eg., physical, social, language). Mothers respond to each question on a scale of 1 ("Never") to 5 ("Daily"). We take the average over the two responses. For graphical purposes (though not in the tables), we group responses into  $\leq 3$  ("Not often"),  $>3$  but  $\leq 4$  ("Often"), and  $>4$  ("Very often"). Prior research has found "school-initiated practices to inform, empower and involve parents" are positively associated with children's educational outcomes (Spera et al., 2009), so frequency of communication might be considered one measure of childcare quality.

**Satisfaction with childcare arrangement:** Mothers whose child is in their main childcare arrangement at least 8 hours per week are asked how satisfied they are with the main care arrangement. The response scale ranges from 1 ("Very dissatisfied") to 5 ("Very satisfied"). For graphical purposes (though not in the tables) we group responses 1-3 together as "Not high" satisfaction and refer to 4 as "High" and 5 as "Very high". This measure can be viewed as a

summary of the parents' perception of the quality of the childcare and its appropriateness for their child, potentially making some allowance for its cost.

### *3.3.3 Characteristics of childcare at 54 months*

This section describes the characteristics of childcare at 54 months that we examine. Mothers of children who are in regular care at 54 months are asked a range of questions about their childcare arrangement(s). These questions are asked and analysed for all children in regular care regardless of the number of hours they spend in it each week. Some of the questions relate to the main care arrangement only, this being the one in which the child spends most hours each week.

**Formal versus informal care:** Mothers are asked the type of their main childcare arrangement; we categorise each type as formal or informal. Formal types of care are: kindergarten, ECE service, childcare centre, preschool, playcentre, home-based care programme, kōhanga reo, Pacific Islands early childhood centre, and creche. Informal types of care are: nanny, grandparent, other relative, gym, leisure or community centre, and other person (eg., friend, neighbour).

**Whether parents pay for care:** Mothers whose children are in regular care are asked how much they pay on average each week for all the childcare arrangements their child attends. We take all positive values as paying for childcare.

**Cost of childcare:** As well as considering whether parents pay for childcare, we look at the weekly amount paid for all childcare arrangements, including zeros. We group amounts into categories for the graphs, but retain exact values for the tables.

**Choice of childcare:** Mothers whose children are in regular care are asked whether they felt they had a choice in the main type of childcare arrangement they chose. Mothers who had a choice were more likely to have been able to select a childcare arrangement that suited the needs and preferences of them and their child.

**Satisfaction with communication:** Mothers whose children are in regular care are asked how satisfied they are with communication between themselves and their child's main childcare provider. Mothers respond on a scale of 1 ("Very satisfied") to 5 ("Very dissatisfied"), but for analysis we reverse the order of the responses so 5 represents "Very satisfied". For graphical purposes, we group (recoded) responses 1-3 together as "Not high" satisfaction and refer to 4 as "High" and 5 as "Very high". As noted previously, communication with parents is an important aspect of childcare quality.

**Satisfaction with effect of care on child's development:** Mothers whose children are in regular care are asked how satisfied they are with the effect of their child's main care

arrangement on their child's (i) independence, (ii) social skills: playing, joining in, relationships with others, (iii) development of language and communication, (iv) development of cultural awareness and/or belonging, (v) pre-writing/writing skills, (vi) pre-reading/reading skills, (vii) skills with numbers, (viii) physical or motor skills, (ix) interest in music or singing, and (x) interest in learning and exploring. Each element is scored on a scale of 1 ("Very satisfied") to 5 ("Very dissatisfied"), but for analysis we reverse the order of the responses so 5 represents "Very satisfied". We then average over all ten responses. For graphical purposes, we group (recoded) responses  $\leq 3$  together as "Not high" satisfaction and refer to responses  $> 3$  but  $\leq 4$  as "High" and responses  $> 4$  as "Very high".

## **4 Results**

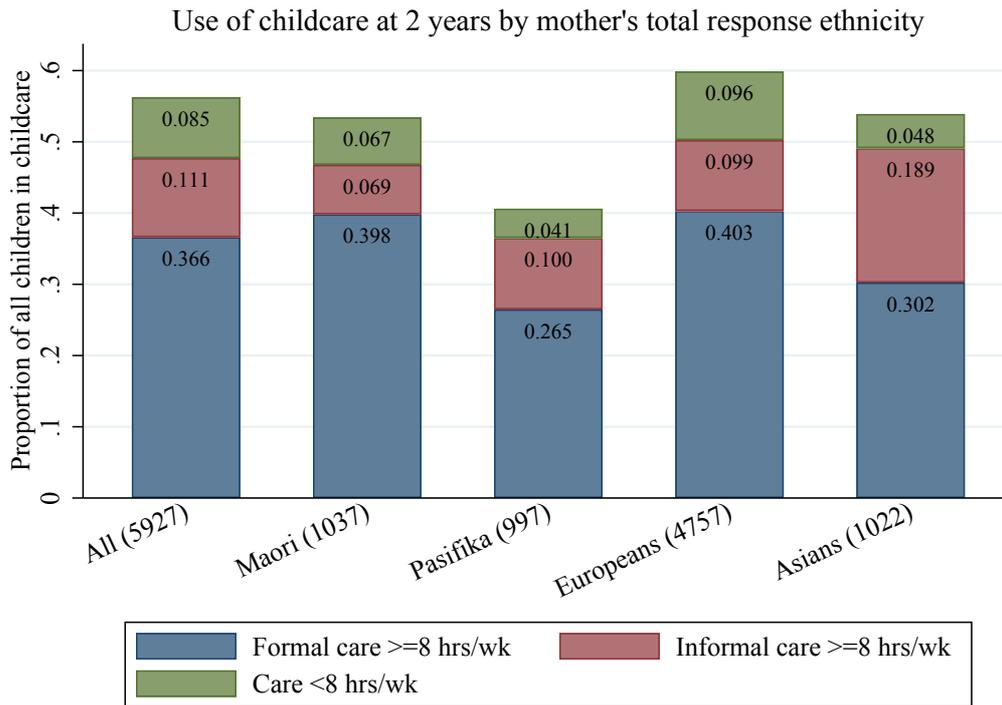
In this section, we focus on children who are in childcare, and explore how the characteristics of their childcare differ by either ethnicity or previous childcare situation. Sections 4.1 and 4.2 focus on childcare characteristics at 2 years, and use the first of the two analysis samples, mothers present in the antenatal, 9-month, and 2-year surveys where we have full information on the child's childcare situation at 9 months and 2 years. Sections 4.3 and 4.4 focus on childcare characteristics at 54 months, and use the second analysis sample, which also requires mothers to also be present in the 54-month survey and to provide complete information on childcare situation at that age. In all sections, specific outcome variables are available for only a subset of these samples.

Two important points should be noted with regard to these results. First, children in childcare are not representative of all children, especially at 2 years when childcare use is still well below universal. In particular, among those who previously had issues accessing affordable childcare, more advantaged families are more likely to have resolved their issues, enabling their child to enter childcare. Second, where we show differences in childcare characteristics between ethnicities or by prior childcare situation, these differences are not necessarily causal and should be interpreted as correlations only.

### **4.1 Characteristics of childcare at 2 years for the full population and by ethnicity**

This section examines the characteristics of childcare at 2 years and how these differ by ethnicity.

Figure 1: Total, formal, and informal childcare at 2 years by ethnicity



Notes: The fraction of mothers whose GUINZ children are in formal care at least 8 hours per week, in informal care at least 8 hours per week, and in either type of care for fewer than 8 hours per week at 2 years old. Mothers are included in all the ethnicities they report. Fractions of the population are given in the bars and the total numbers of mothers in the ethnic groups are given under the horizontal axis.

Figure 1 shows the proportion at 2 years of children in formal care at least 8 hours per week, informal care at least 8 hours per week, and either type of care fewer than 8 hours per week, with the remainder not being in any regular care. In the full population, 37% are in formal care for at least 8 hours, 11% in informal care at least 8 hours, and 8.5% in care fewer than 8 hours. The first row of Table 2 shows informal care as a proportion of total care for children in care at least 8 hours per week. As suggested by the figure, formal care predominates, with only 23% of these children in informal care.

Table 2: Characteristics of childcare at 2 years by ethnicity

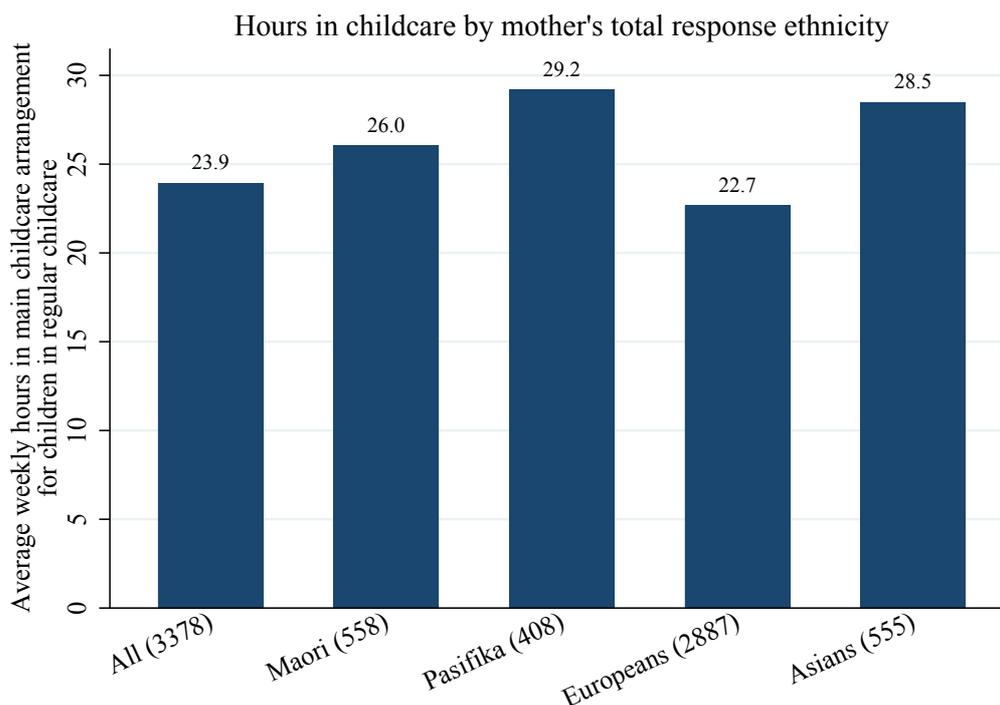
Childcare characteristic at 2 years	Mother's ethnicity (total responses)				
	All	European	Māori	Pacific	Asian
Informal care	0.233 (0.423) 2,828	0.198 (0.399) 2,390	0.148** (0.356) 485	0.275*** (0.447) 364	0.384*** (0.487) 502
Weekly hours in care	27.3 (12.5) 2,872	26.1 (11.9) 2,429	29.1*** (12.2) 489	32.0*** (12.5) 367	30.8*** (12.6) 506
Receive childcare subsidy	0.291 (0.454) 2,841	0.294 (0.456) 2,408	0.460*** (0.499) 485	0.414*** (0.493) 360	0.250** (0.433) 500
Don't receive a childcare subsidy and don't pay for care	0.138 (0.345) 2,841	0.102 (0.302) 2,408	0.120 (0.325) 485	0.242*** (0.429) 360	0.262*** (0.440) 500
Weekly cost of care (\$)	132 (126) 2,818	139 (129) 2,384	92.0*** (95.9) 483	73.6*** (83.8) 364	114*** (107) 502
Child-to-adult ratio in care	3.07 (2.16) 2,749	3.17 (2.05) 2,329	3.14 (1.98) 457	2.84*** (2.26) 344	2.79*** (2.49) 496
Frequency of communication from care provider (1-5)	4.30 (0.889) 2,835	4.30 (0.857) 2,404	4.10*** (0.997) 481	4.19** (1.07) 363	4.39** (0.869) 502
Satisfaction with care arrangement (1-5)	4.56 (0.680) 2,868	4.60 (0.661) 2,424	4.47*** (0.769) 488	4.46*** (0.777) 367	4.39*** (0.721) 506

Notes: This table gives the mean, standard deviation (in parentheses), and observation count (number of mothers) for a range for characteristics of childcare at 2 years for all mothers (first column) and mothers of each common ethnicity (subsequent columns). The sample is restricted to mothers whose children are in childcare at least 8 hours per week at 2 years. Asterisks denote statistically significant differences from the mean for European mothers: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Figure 1 also shows how informal and formal care differ by ethnicity. Formal care for at least 8 hours per week is highest among Māori and Europeans (each 40%) and lowest for Pasifika (27%). Asians are the greatest users of informal care for at least 8 hours per week (19%), compared with 7% for Māori and 10% for Pasifika and Europeans. Pasifika have the lowest overall proportion in care, at 41%, compared with 53% for Māori, 54% for Asians, and 60% for Europeans.

The first row of Table 2 also shows within children in care at least 8 hours per week how the use of informal care varies by ethnicity. Asterisks denote statistically significant differences of Māori, Pasifika, and Asians from Europeans. Māori are significantly less likely than Europeans to use informal as opposed to formal care, whereas Pasifika are significantly more likely and Asians are nearly twice as likely.

Figure 2: Average weekly hours in childcare at 2 years by ethnicity



Notes: Average weekly hours in the main childcare arrangement among children in childcare at 2 years old. Under 8 hours is included. Mothers are included in all the ethnicities they report. Numbers of hours are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 2 shows average weekly hours in care overall and for each common ethnicity. These values include children in care for fewer than 8 hours per week, but exclude children not in care. On average, children are in childcare for 24 hours each week. There is considerable variation between ethnicities, with Pasifika, who have the lowest rates of using care, using it for the most hours each week, 29 on average. Asians use childcare for a similar number of hours each week, Māori for 26 hours on average, and Europeans for only 23 hours.

The second row of Table 2 shows average hours in care overall and by ethnicity for children in care at least 8 hours per week. The ethnic comparisons are similar, with Pasifika, Māori, and Asians using childcare for more hours each week than Europeans. All these differences are statistically significant.

The first two columns of Appendix Table 1 extend this analysis by asking whether these ethnic gaps can be explained by differences in other parental characteristics. These columns present the results of OLS regressions of weekly hours in childcare on ethnicity dummy variables (here self-prioritised ethnicity, so each individual is allocated to one ethnicity only), with the second column also controlling for a range of characteristics of the mother.<sup>6</sup> The sample is again children in care at least 8 hours per week. The results show Māori, Pasifika, and Asians use childcare for 5 to 7 more hours each week than do Europeans, and at most an hour and a half of the difference is explained by the mothers' other characteristics. The unexplained difference remains statistically significant in every case.

The extent to which these ethnic differences in childcare use are related to ethnic differences in mothers' work patterns will be explored in the next report.

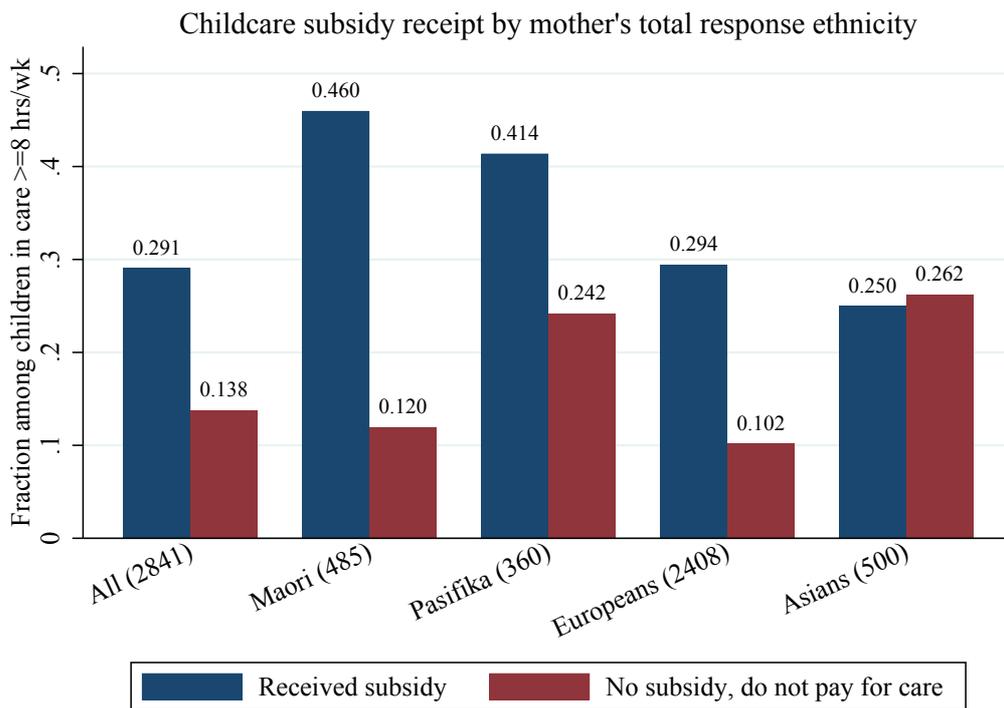
Figure 3 shows, among families with children in care at least 8 hours per week, the proportion that receive a childcare subsidy and the proportion that do not but that do not pay for their childcare. Overall, 29% of such families receive a childcare subsidy, and 14% do not but do not pay for care. Rates of receiving a subsidy are highest for Māori, at 46%, then Pasifika at 41%, Europeans at 29%, and Asians at 25%. Table 2 shows that all these ethnic differences are statistically significant.

The figure also shows ethnic differences in rates of not paying for care are not purely the inverse of subsidy receipt. Both Māori and Europeans have low rates of not paying for care (12% and 10% respectively), whereas Pasifika and Asians have much higher rates of not paying for care (24% and 26% respectively). Table 2 shows the rates of not paying for care are not significantly different for Māori compared with Europeans, but the rates for Pasifika and Asians are statistically significantly higher than the rate for Europeans.

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<sup>6</sup> Mother's characteristics included are age, qualifications, migrant status, partnership status, antenatal labour force status, whether she received a benefit antenatally, antenatal household income, whether the pregnancy was planned, the child's birth order, and contemporaneous deprivation index and urban/rural location.

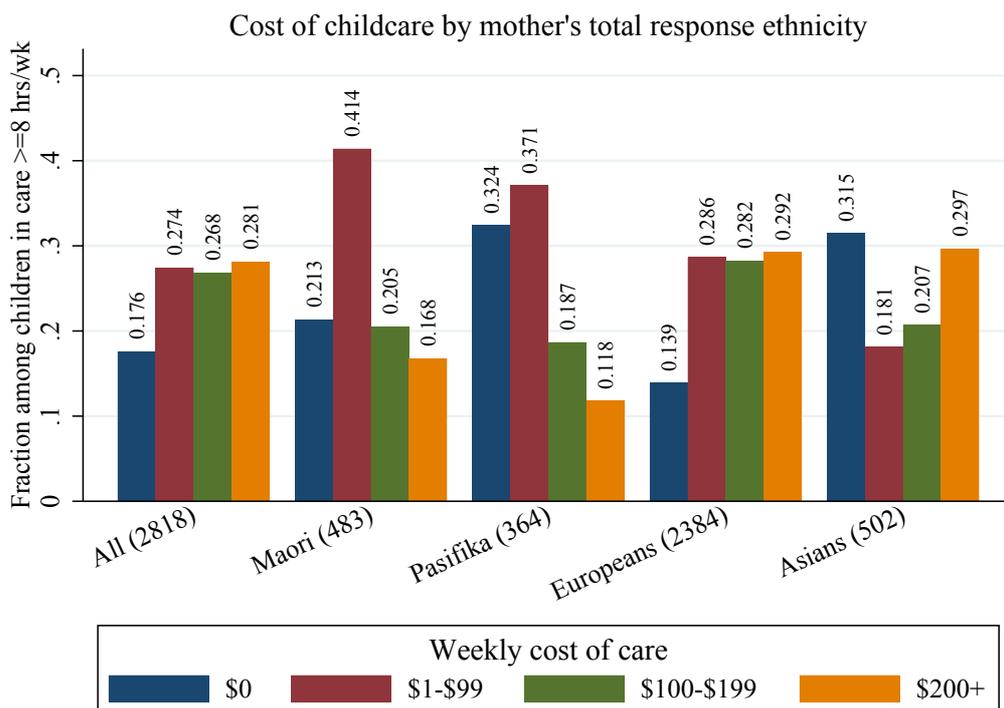
Figure 3: Childcare subsidy receipt at 2 years by ethnicity



Notes: The fraction of mothers who receive a subsidy for their GUINZ child's care (blue) and who do not receive a subsidy but do not pay for care (red) among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 4 shows the distribution of weekly cost of childcare at 2 years for those in care at least 8 hours per week overall and by ethnicity. Māori and Pasifika have high rates of paying under \$100, Asians are likely to pay either nothing or \$200 or over, and Europeans are unlikely to pay nothing, but otherwise pay a wide range of positive amounts. Table 2 compares the averages of weekly cost of childcare. For the population as a whole, the average cost of childcare is \$132 per week. This cost is highest for Europeans, at \$139, and statistically significantly lower for Māori (\$92), Pasifika (\$74), and Asians (\$114). Note this is despite Europeans using the fewest weekly hours of care.

Figure 4: Weekly cost of childcare at 2 years by ethnicity



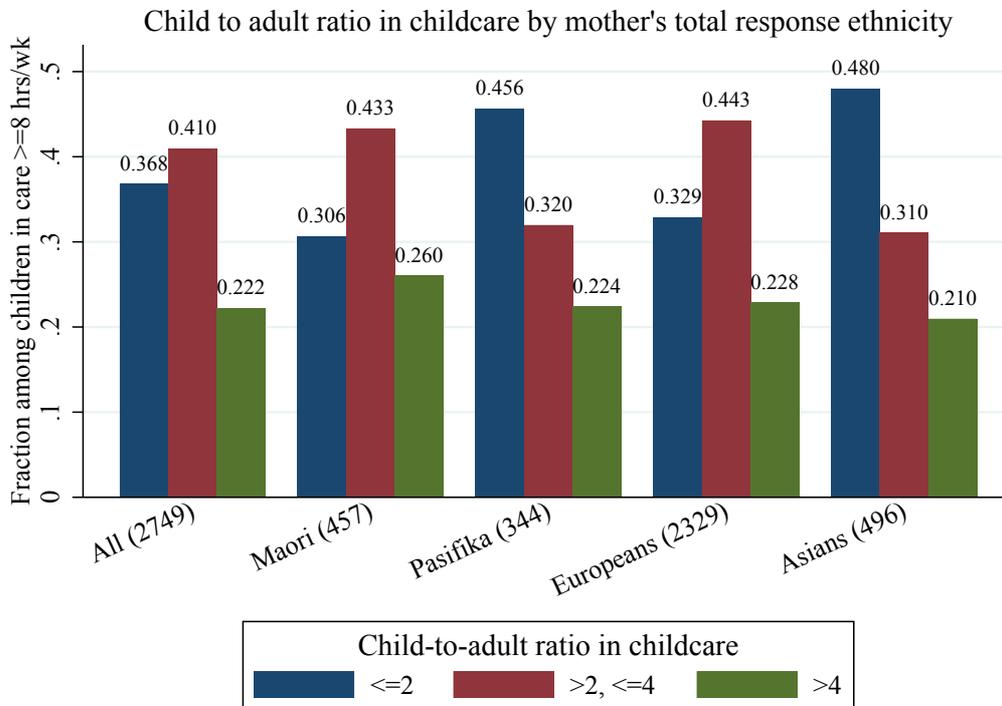
Notes: The fraction of mothers who pay each weekly amount for their GUiNZ child’s main childcare arrangement among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Columns (3) and (4) of Appendix Table 1 regress the cost of care on the mother’s ethnicity and, in column (4), a range of the mother’s characteristics. These regressions show, in terms of raw costs, Māori pay \$65 less than Europeans on average, Pasifika \$79 less, and Asians \$36 less. Controlling for personal characteristics reduces these differences to \$14 for Māori, \$30 for Pasifika, and \$27 for Asians, though all these differences remain statistically significantly different to zero. This shows that a substantial reason European mothers spend more on childcare is because they have other characteristics associated with high childcare expenditure, but such characteristics do not fully explain ethnic differences.

Figure 5 shows the distribution of the ratio of children to adults in childcare overall and by ethnicity for children in childcare at least 8 hours per week. Overall, 37% of children have two or fewer children per adult at their childcare, 41% have more than two but no more than four, and 22% have more than four. Asians and Pasifika are particularly likely to have no more than two (48% and 46% respectively), whereas Māori and Europeans are more likely to have more than two but fewer than four (43% and 44% respectively). Table 2 shows how the average child-to-adult ratio in childcare differs by ethnicity. It is insignificantly different for Māori compared with

Europeans (3.14 compared with 3.17), but significantly lower for Pasifika (2.84) and Asians (2.79) than for Europeans.

Figure 5: Ratio of children to adults in childcare at 2 years by ethnicity

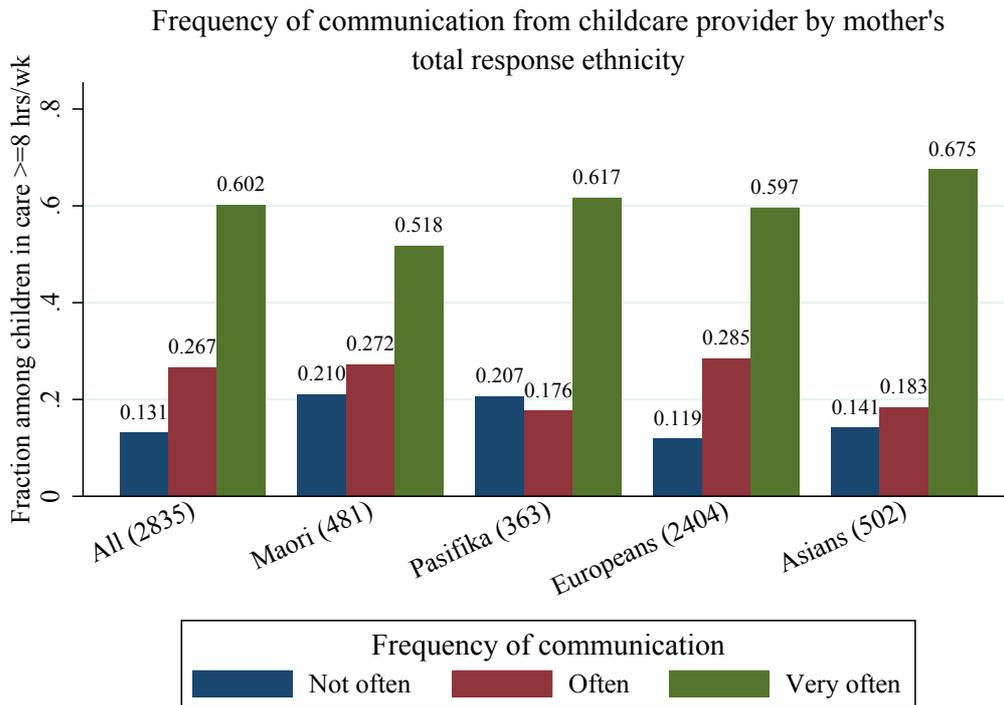


Notes: The fraction of mothers whose child has each child-to-adult ratio in their main childcare arrangement among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Appendix Table 1 regresses the child-to-adult ratio on mother's ethnicity and parental characteristics. It shows the difference between the ratio for Pasifika and for Europeans decreases to 0.24 after controlling for parental characteristics and is no longer statistically significant. The difference for Asians versus Europeans decreases slightly to 0.49 after controlling for parental characteristics and remains statistically significant.

Formal care has a much higher average child-to-adult ratio than informal care, and we showed above that Europeans and Māori are more likely than other ethnicities to use formal care, whereas Asians have a very high rate of using informal care. This likely contributes to ethnic differences in child-to-adult ratios in childcare.

Figure 6: Communication with childcare provider at 2 years by ethnicity

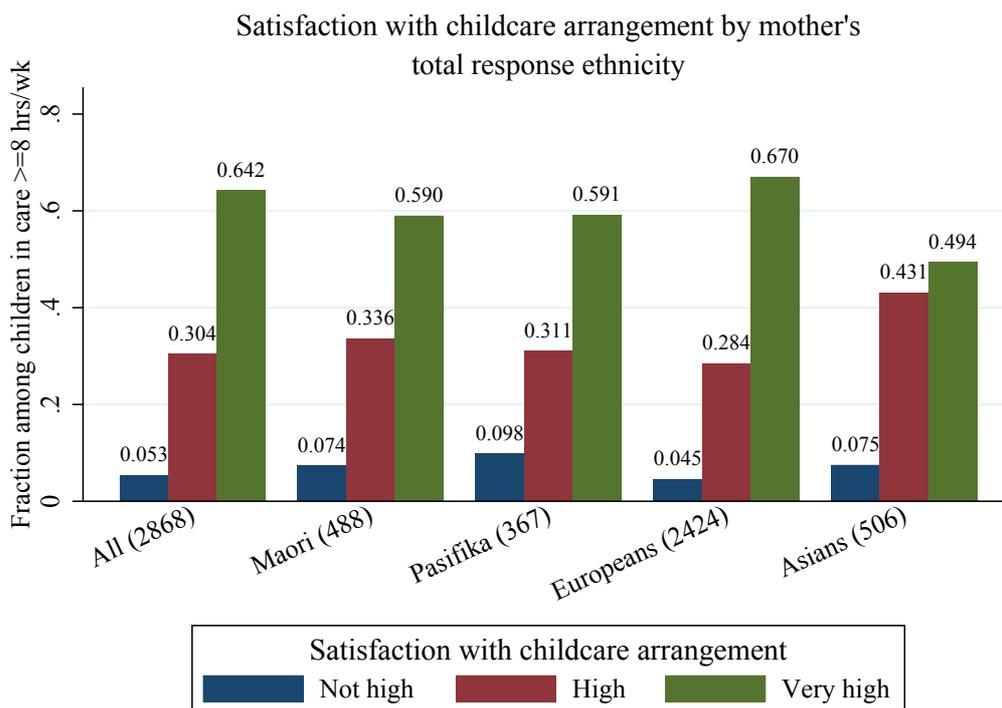


Notes: The fraction of mothers reporting each frequency of communication from their child's main childcare provider among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 6 shows the distribution of mothers' frequency of communication with the childcare provider. Overall, 13% report infrequent communication, 27% report frequent communication, and 60% report very frequent communication. Some ethnic differences are present. In particular, Māori are most likely to report infrequent communication (21%) and least likely to report very frequent communication (52%). Table 2 shows averages of the frequency of communication on a scale of 1 to 5 by ethnicity. Compared with its frequency for Europeans (4.3), communication is statistically significantly less frequent for Māori (4.1) and Pasifika (4.2), and significantly more frequent for Asians (4.4).

Informal care tends to be associated with higher frequency of communication than formal care; this would help explain why Asians have a higher frequency of communication than Europeans, but not why Pasifika have a lower frequency. However, within formal care, higher cost care tends to be associated with more frequent communication, and Pasifika pay the least for care, so this may be a contributing factor.

Figure 7: Satisfaction with childcare at 2 years by ethnicity



Notes: The fraction of mothers reporting each level of satisfaction with their child's main childcare arrangement among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

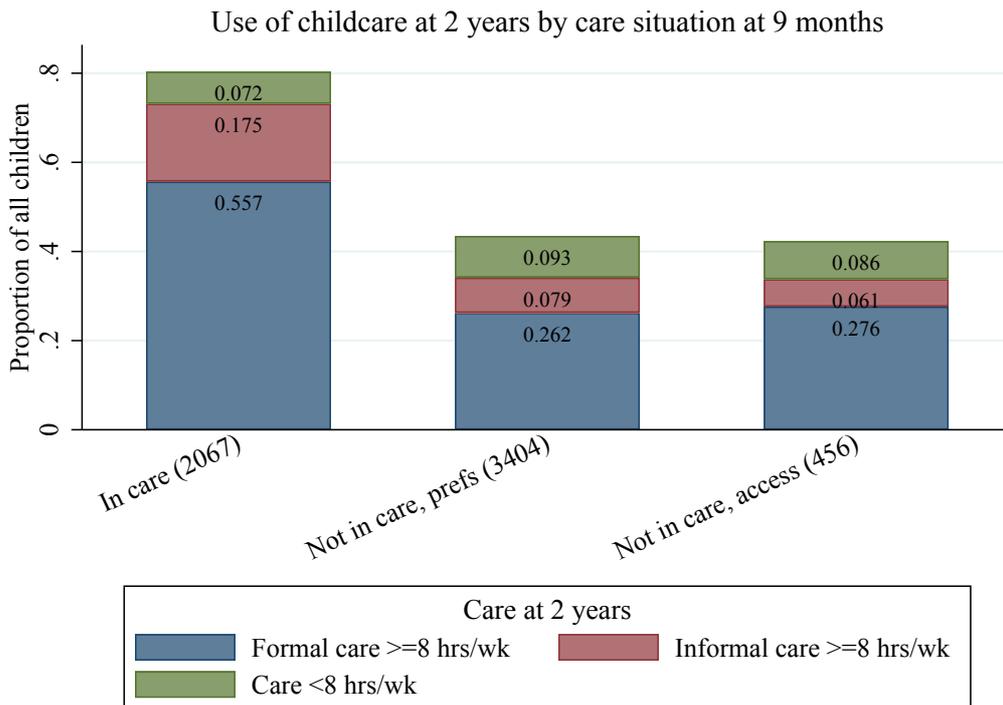
Figure 7 shows the distribution of mothers' satisfaction with their main childcare arrangement for those whose children are in care at least 8 hours per week. In general, satisfaction is high, with 64% reporting very high satisfaction, 30% reporting high satisfaction, and only 5.3% reporting satisfaction that is not high. The proportion reporting satisfaction that is not high is greatest among Pasifika (9.8%), intermediate for Māori (7.4%) and Asians (7.5%), and lowest for Europeans (4.5%). Table 2 compares the average satisfaction for each ethnicity on a scale of 1 to 5. Satisfaction is statistically significantly lower for Māori, Pasifika, and Asians than for Europeans. This same pattern is evident in regressions (columns 7 to 9 of Appendix Table 1), and ethnic differences decrease only modestly when controlling for mother's characteristics, weekly hours spent in childcare, and weekly cost of childcare. This suggests that even among socioeconomically similar parents who pay a similar amount for childcare, Māori, Pasifika, and Asians are significantly less satisfied with the care their children receive than are Europeans. Although not providing proof, this result is consistent with a childcare system that is designed to cater to the European majority and that fits the needs of other ethnicities less well.

## 4.2 Differences in characteristics of childcare at 2 years for families with resolved access issues

This section examines the characteristics of childcare at 2 years and how these differ by childcare situation at 9 months.

Figure 8 shows, for families in each childcare situation at 9 months, the proportions at 2 years where the child is in formal care at least 8 hours per week, in informal care at least 8 hours per week, and in either type of care fewer than 8 hours per week. The remainder are not in any regular care. It shows childcare use overall is highest by a wide margin for children who were in care at 9 months, at 80%, compared with 43% for those not in care due to preferences and 42% for those not in care due to access. Those previously in care are slightly less likely than other groups to be in care for fewer than 8 hours per week.

Figure 8: Total, formal, and informal childcare at 2 years by childcare situation at 9 months



Notes: The fraction of mothers whose GUINZ children are in formal care at least 8 hours per week, in informal care at least 8 hours per week, or in either type of care for fewer than 8 hours per week at 2 years old. Mothers are categorised by their childcare situation at 9 months. Fractions of the population are given in the bars and the total numbers of mothers in the groups are given under the horizontal axis.

Table 3: Characteristics of childcare arrangement at 2 years by care situation at 9 months

Childcare characteristic at 2 years	Childcare situation at 9 months		
	In care	Not in care due to preferences	Not in care due to access
Informal care	0.239 (0.426) 1,512	0.231 (0.422) 1,162	0.182 (0.387) 154
Weekly hours in care	29.6 (12.3) 1,529	24.6*** (12.4) 1,187	25.6*** (11.5) 156
Receive childcare subsidy	0.270 (0.444) 1,514	0.310** (0.463) 1,174	0.346** (0.477) 153
Don't receive a childcare subsidy and don't pay for care	0.139 (0.346) 1,514	0.136 (0.343) 1,174	0.137 (0.345) 153
Weekly cost of care (\$)	144 (133) 1,510	119*** (116) 1,159	117** (116) 149
Child-to-adult ratio in care	3.13 (2.26) 1,465	2.95** (1.96) 1,135	3.36 (2.57) 149
Frequency of communication from care provider (1-5)	4.30 (0.878) 1,506	4.28 (0.907) 1,174	4.35 (0.869) 155
Satisfaction with care arrangement (1-5)	4.58 (0.675) 1,527	4.56 (0.683) 1,186	4.50 (0.715) 155

Notes: This table gives the mean, standard deviation (in parentheses), and observation count (number of mothers) for a range for characteristics of childcare at 2 years for children in different childcare situations at 9 months. The sample is restricted to mothers whose children are in childcare at least 8 hours per week at 2 years. Asterisks denote statistically significant differences from the mean for those who were in care at 9 months: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

The high use of childcare at 2 years among those who used it at 9 months is consistent with those who preferred to use childcare at 9 months or needed it so they could work exhibiting the same preferences or need at 2 years. Many parents who preferred to keep their child at home at 9 months could be expected to decide that by two years their child was old enough for childcare outside the household. This is consistent with what we see: nearly half of such children have moved into regular childcare. That a similar proportion of children who were

previously not in care due to access are in care at 2 years suggests a considerable proportion of access issues present at 9 months are resolved by 2 years. The previous interim report discussed the persistence of access issues in more detail.

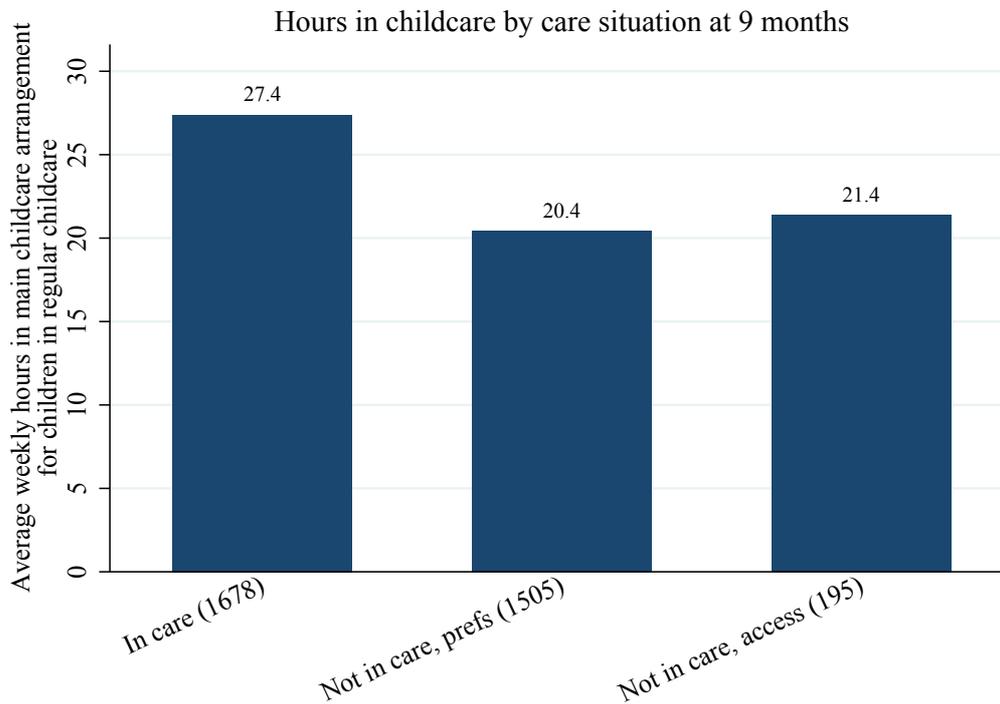
The first row of Table 3 shows, among those who are in care at least 8 hours per week at 2 years, the proportion in informal care. This is very similar for those previously in care (24%) and previously not in care due to preferences (23%), and lower for those previously not in care due to access (18%), though this difference is not statistically significant. The direction of this difference is consistent with those who previously reported access issues having fewer options for informal care such as by grandparents, which some parents might be more comfortable with when their child is young.

Figure 9 shows the average hours children spend in childcare each week at 2 years by their childcare situation at 9 months. All children in regular childcare at 2 years are included. This average is highest for those who were previously in childcare, at 27 hours, and similar for those previously not in care due to preferences (20 hours) and previously not in care due to access (21 hours). Table 3 shows these averages when restricting to children who are in care at least 8 hours per week. In this group, those previously in care average 30 hours, those previously not in care due to preferences 25 hours, and those previously not in care due to access 26 hours. The averages for both the latter groups are statistically significantly different to the average for the first group.

The first two columns of Appendix Table 2 regress hours in childcare at 2 years on childcare situation at 9 months and, in the case of column 2, a set of controls for parental characteristics, including ethnicity. Again, the sample is limited to children in care for at least 8 hours per week. These regressions show little of the difference in hours between those in care at 9 months and not in care at 9 months is explained by differences in parental characteristics; the gap remains at nearly 4 hours after controls are included. However, the small difference in hours between those previously not in care due to preferences and those previously not in care due to access is fully explained by differences in parental characteristics between these groups.

Differences in hours worked by the mother are expected to play a role in the differences in hours in childcare between these groups. This will be explored in Interim Report 4.

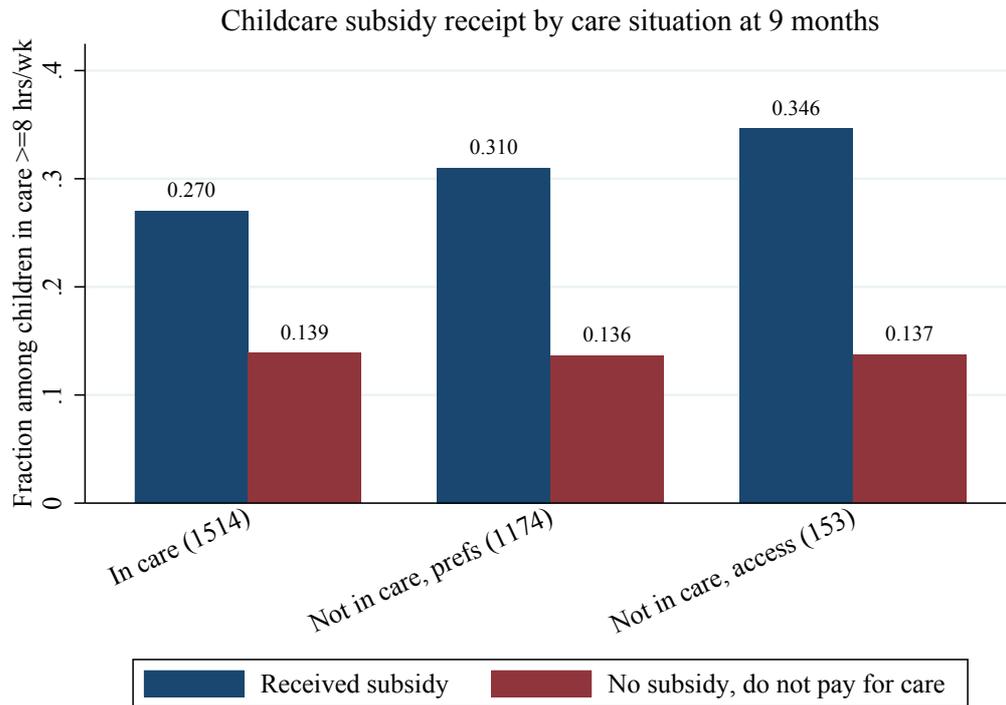
Figure 9: Average weekly hours in childcare at 2 years by childcare situation at 9 months



Notes: Average weekly hours in the main childcare arrangement among children in childcare at 2 years old. Under 8 hours is included. Mothers are categorised by their childcare situation at 9 months. Numbers of hours are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 10 again focuses on children in childcare at least 8 hours per week, and shows the proportion of families that receive a childcare subsidy and proportion that do not but do not pay for childcare by childcare situation at 9 months. It shows the percentage that do not pay for childcare is very similar for all three groups, ranging from 13.6% to 13.9%, but the percentage receiving a childcare subsidy varies widely. It is lowest for those previously in care (27%), intermediate for those previously not in care due to preferences (31%), and highest for those previously not in care due to access (35%). Table 3 shows both groups previously not in care are statistically more likely to receive a childcare subsidy than those previously in care. This is consistent with the childcare subsidy being targeted at low- and medium-income families, and such families being both less likely to prioritise the mother returning to work over providing childcare and more likely to face childcare access issues.

Figure 10: Childcare subsidy receipt at 2 years by childcare situation at 9 months



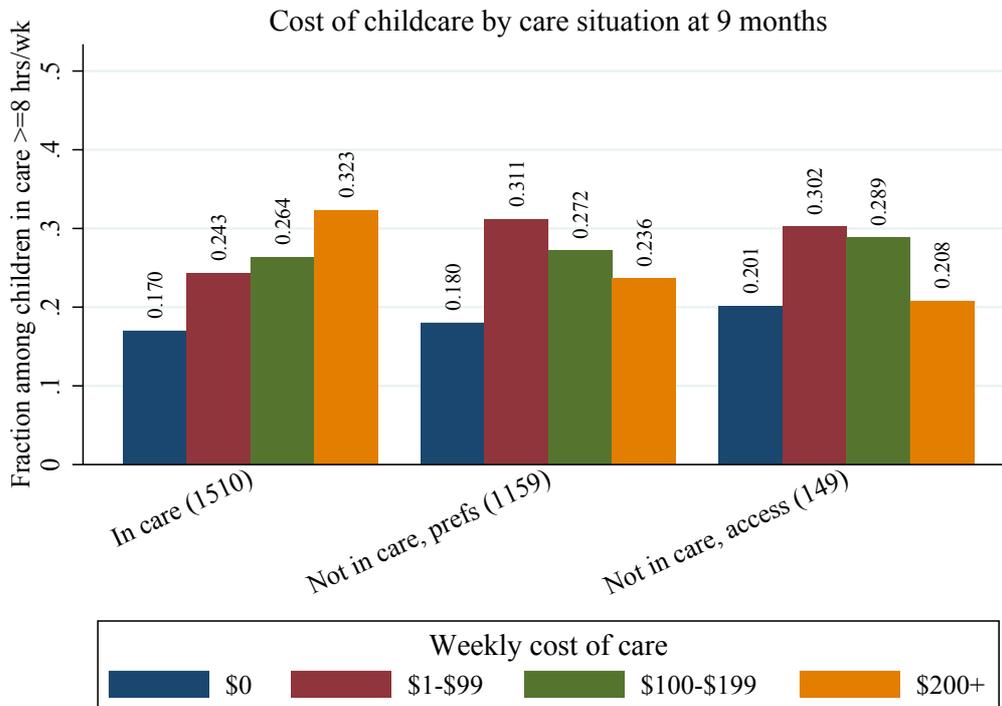
Notes: The fraction of mothers who receive a subsidy for their GUiNZ child’s care (blue) and who do not receive a subsidy but do not pay for care (red) among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are categorised by their childcare situation at 9 months. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 11 shows the distribution of costs of childcare paid at 2 years by families in different childcare situations at 9 months. The sample is limited to children in care at least 8 hours per week. Families whose children were previously in childcare tend to pay more for care, with 32% paying at least \$200 per week. In comparison, only 24% of those previously not in care due to preferences and 21% of those not in care due to access pay this amount. Those previously in care also use childcare for more hours per week on average, which likely contributes to the higher amount they pay.

Table 3 shows the average cost is \$144 for those previously in care, \$119 for those previously not in care due to preferences, and \$117 for those previously not in care due to access, and the first group is statistically significantly different to the other two groups. However, Appendix Table 2 shows the weekly difference in childcare costs between those previously in care and those previously not due to preferences falls to \$14 per week when parental controls are added, and the difference between those previously in care and those previously not in care due to access is fully explained by the parental characteristics of these

groups. That is, parents with access issues at 9 months pay less for childcare at 2 years only because they have other characteristics that are associated with paying less for childcare, such as lower antenatal household income.

Figure 11: Weekly cost of childcare at 2 years by childcare situation at 9 months



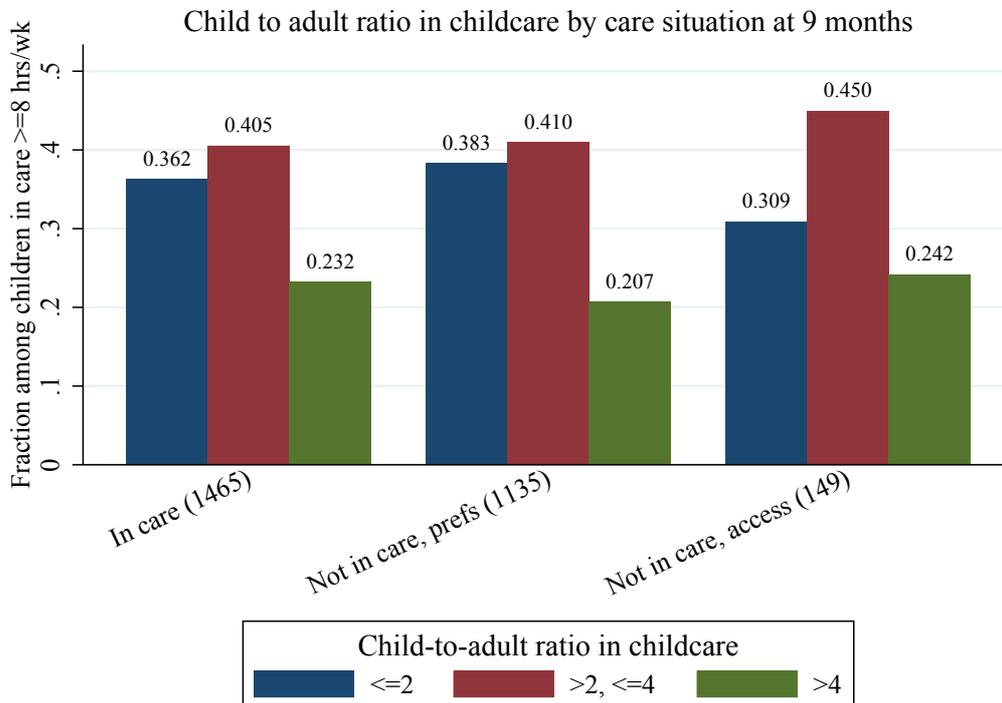
Notes: The fraction of mothers who pay each weekly amount for their GUINZ child’s main childcare arrangement among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are categorised by their childcare situation at 9 months. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 12 shows the distribution of the child-to-adult ratio in childcare at 2 years by childcare situation at 9 months. The sample is limited to children in care at 2 years for at least 8 hours per week. The figure shows children who were previously not in care due to preferences are less likely than other groups to have a child-to-adult ratio of 2 or lower, and are more likely to have ratios from 2 to 4 and above 4. As shown in Table 3, the average ratio is 3.13 for children previously in care, 2.95 for children previously not in care due to preferences (significantly lower than for children previously in care), and 3.36 for children previously not in care due to access (not significantly different to children previously in care).

Columns (5) and (6) of Appendix Table 2 present the results of regressions that investigate the extent to which these differences can be explained by parental characteristics. They show

controlling for parental characteristics does not narrow the gap in child-to-adult ratio between children previously in care and children previously not in care for either reason. In fact, both gaps increase somewhat when controls are added. This means families whose children were not in care due to preferences have other characteristics that tend to be associated with a higher child-to-adult ratio, but in fact use care with a relatively low ratio. It may be that such families have the flexibility to keep their child out of care if desired and will use care only if it meets their requirements. In contrast, families whose children were previously not in care due to access have characteristics that tend to be associated with a slightly lower child-to-adult ratio, but in fact use care with a relatively high ratio (though the small number in this sample means this difference is not statistically significant). This is consistent with such families being more limited in the care they can access and making do with less suitable or lower quality childcare. In addition, informal care tends to have a lower child-to-adult ratio than does formal care, and this is likely to play role in the differences between groups.

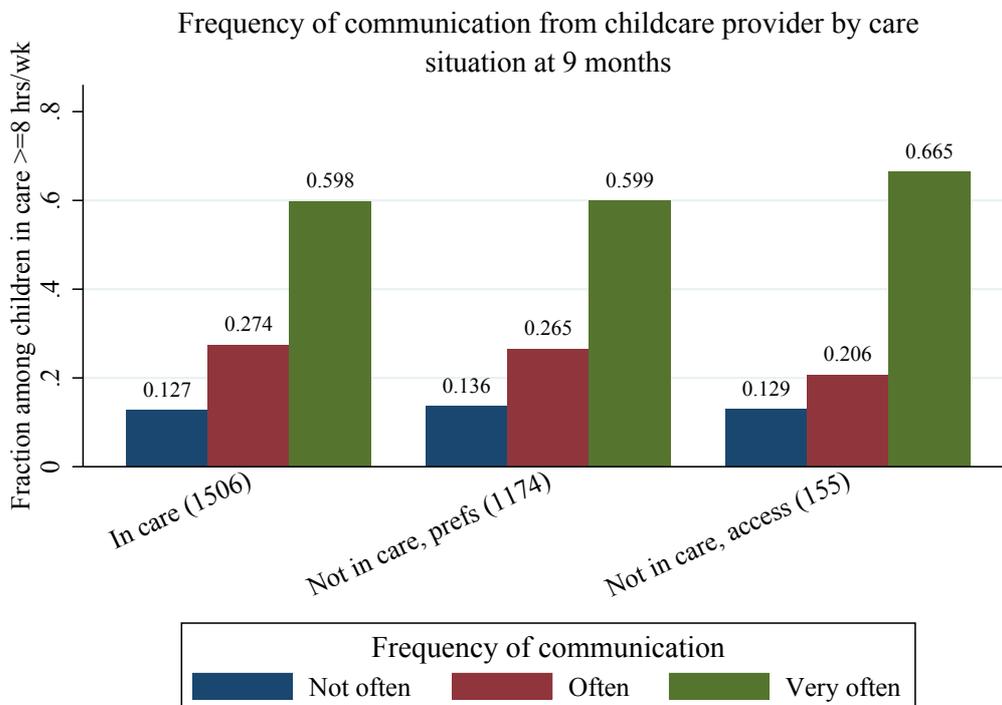
Figure 12: Ratio of children to adults in childcare at 2 years by childcare situation at 9 months



Notes: The fraction of mothers whose child has each child-to-adult ratio in their main childcare arrangement among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are categorised by their childcare situation at 9 months. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 13 shows the distribution of frequency of communication from the childcare provider at 2 years by childcare situation at 9 months, again limiting the sample to children in care for at least 8 hours per week at 2 years. It shows in general communication is very frequent, particularly for children with previous access issues. However, Table 3 shows none of the differences between groups are statistically significant; on a 1-5 scale, frequency of communication averages 4.30 for children previously in care, 4.28 for children previously not in care due to preferences, and 4.35 for children previously not in care due to access. These results provide no evidence that families that previous experienced access issues end up using a care provider that is less communicative.

Figure 13: Communication with childcare provider at 2 years by childcare situation at 9 months

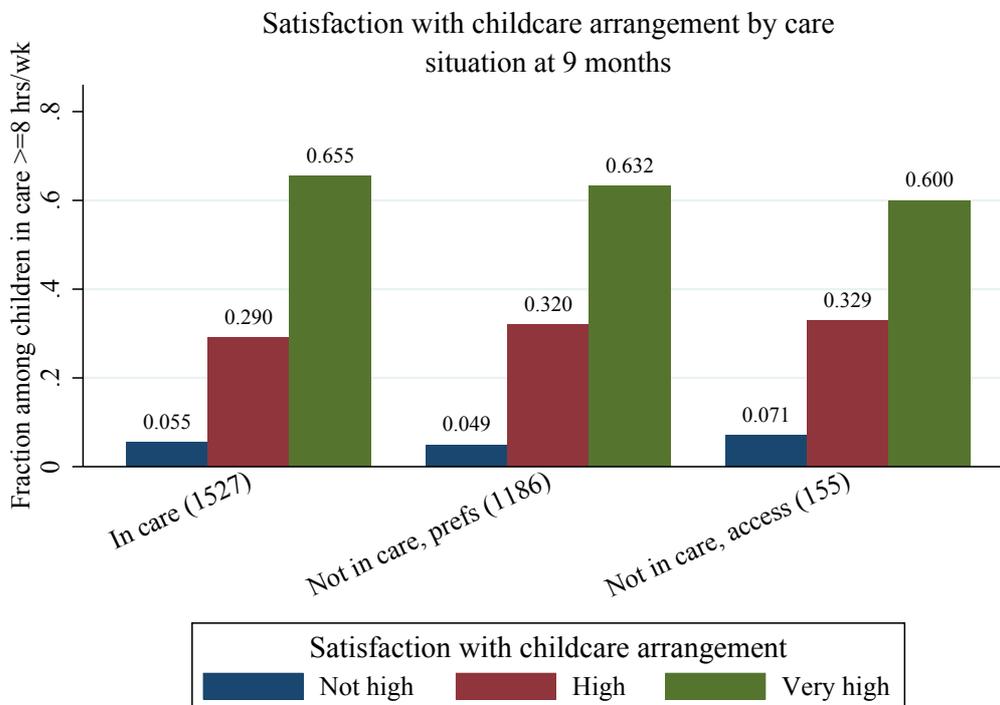


Notes: The fraction of mothers reporting each frequency of communication from their child’s main childcare provider among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are categorised by their childcare situation at 9 months. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 14 shows how the distribution of overall satisfaction with the family’s childcare arrangement at 2 years varies with childcare situation at 9 months. The sample is children in care at least 8 hours per week at 2 years. All three groups show generally high satisfaction with their childcare arrangement, though those previously not in care due to access are slightly more likely

to report satisfaction that is not high and slightly less likely to report very high satisfaction. However, Table 3 shows none of the differences in satisfaction between groups are statistically significant (average satisfaction for the groups ranges from 4.50 to 4.58 on a scale of 1-5), and this remains the case in regressions (Appendix Table 2) when controls for parental characteristics, hours per week in childcare, and weekly cost of childcare are added as controls. Overall, we find no evidence that families who had childcare access issues at 9 months that were resolved by 2 years are significantly less satisfied with their child’s care at 2 years than are families that did not report such issues.

Figure 14: Satisfaction with childcare at 2 years by childcare situation at 9 months



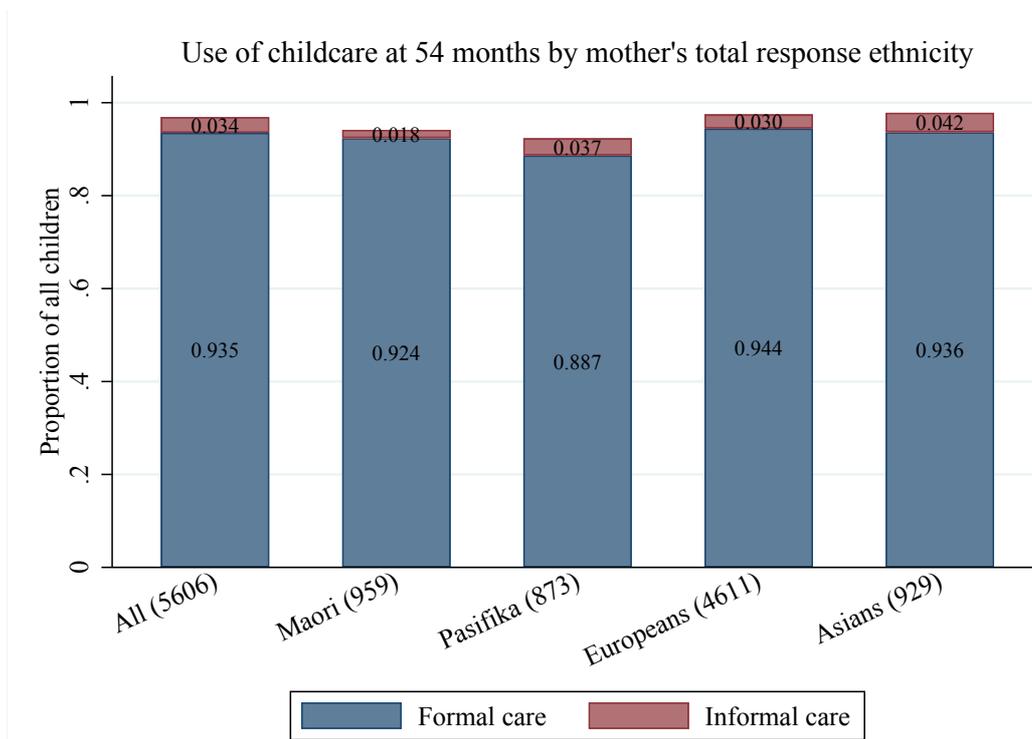
Notes: The fraction of mothers reporting each level of satisfaction with their child’s main childcare arrangement among children in their main care arrangement at least 8 hours per week at 2 years old. Mothers are categorised by their childcare situation at 9 months. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

### 4.3 Characteristics of childcare at 54 months for the full population and by ethnicity

This section shows the characteristics of childcare at 54 months and how these vary with the mother’s ethnicity.

Figure 15 shows the proportions of families that use formal childcare and use informal childcare at 54 months, with the remainder using no childcare. Proportions are presented overall and by ethnicity. At this age, the overwhelming majority of children are in childcare, and nearly all of it is formal care. In the full population, 94% are in formal care and 3% in informal care. These values vary somewhat by ethnicity. Pasifika are least likely to have their child in formal care, at 89%, and Europeans most likely, at just over 94%. Use of informal care ranges from 2% for Māori to 4% for Asians.

Figure 15: Total, formal, and informal childcare at 54 months by ethnicity



Notes: The fraction of mothers whose GUINZ children are in formal care or in informal care at 54 months old. Mothers are included in all the ethnicities they report. Fractions of the population are given in the bars and the total numbers of mothers in the ethnic groups are given under the horizontal axis.

The first row of Table 4 focuses on children who are in childcare at 54 months and looks at how the percentage in informal care varies by the mother’s ethnicity. As the figure above suggests, it shows Māori families (959) are significantly less likely than European families to use informal care, conditional on using care at all, and Asian families are weakly significantly more likely than European families to use informal care.

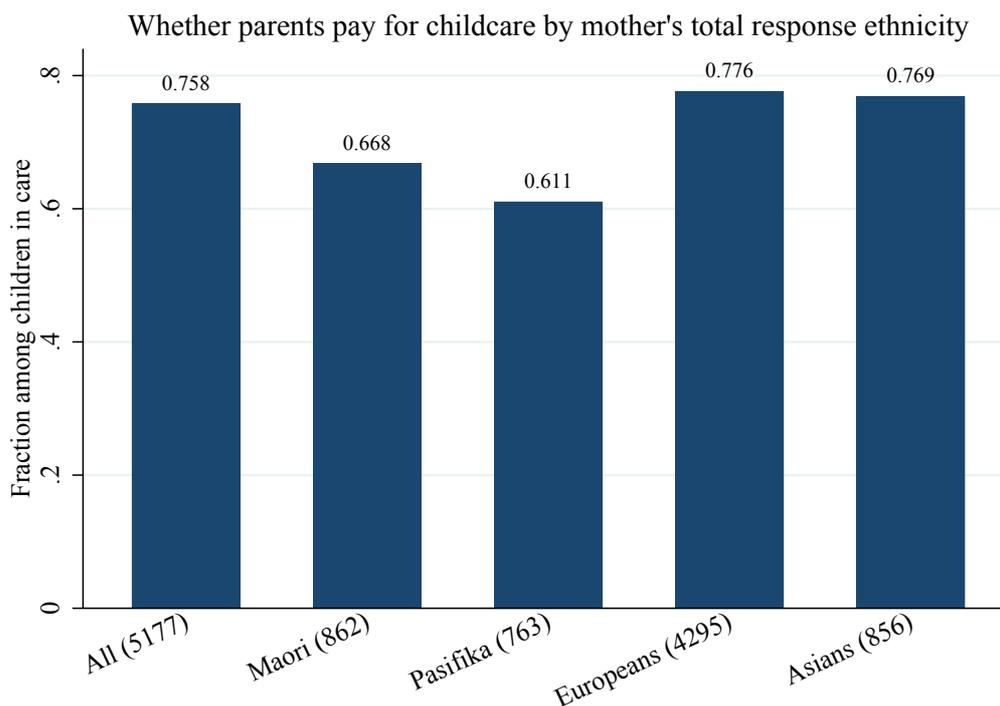
Table 4: Characteristics of childcare arrangement at 54 months by ethnicity

Childcare characteristic at 54 months	Mother's ethnicity (total responses)				
	All	European	Māori	Pacific	Asian
Informal care	0.0348 (0.183) 5,432	0.0309 (0.173) 4,494	0.0188** (0.136) 903	0.0397 (0.195) 806	0.0429* (0.203) 909
Weekly cost of care (\$)	67.6 (96.9) 5,177	69.4 (101) 4,295	45.7*** (61.7) 862	36.0*** (52.5) 763	71.9 (77.2) 856
Mother had a choice in care type	0.883 (0.322) 5,455	0.909 (0.288) 4,505	0.874*** (0.332) 904	0.834*** (0.372) 809	0.856*** (0.352) 915
Satisfaction with communication with childcare provider (1-5)	4.61 (0.639) 5,446	4.63 (0.631) 4,496	4.55*** (0.707) 904	4.58* (0.644) 806	4.54*** (0.620) 914
Satisfaction with effect of childcare on child's development (1-5)	4.25 (0.529) 5,410	4.28 (0.520) 4,477	4.23*** (0.572) 897	4.22*** (0.541) 797	4.17*** (0.520) 901

Notes: This table gives the mean, standard deviation (in parentheses), and observation count (number of mothers) for a range for characteristics of childcare at 54 months for all mothers (first column) and mothers of each common ethnicity (subsequent columns). The sample is restricted to mothers whose children are in childcare at 54 months. Asterisks denote statistically significant differences from the mean for European mothers: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Figure 16 shows the proportion of families that pay for their childcare at 54 months overall and by ethnicity, limiting to those that use some kind of childcare. It shows 76% of families overall pay for care, with paying for care high among Europeans (78%) and Asians (77%), and lower among Māori (67%) and Pasifika (61%).

Figure 16: Payment for childcare at 54 months by ethnicity

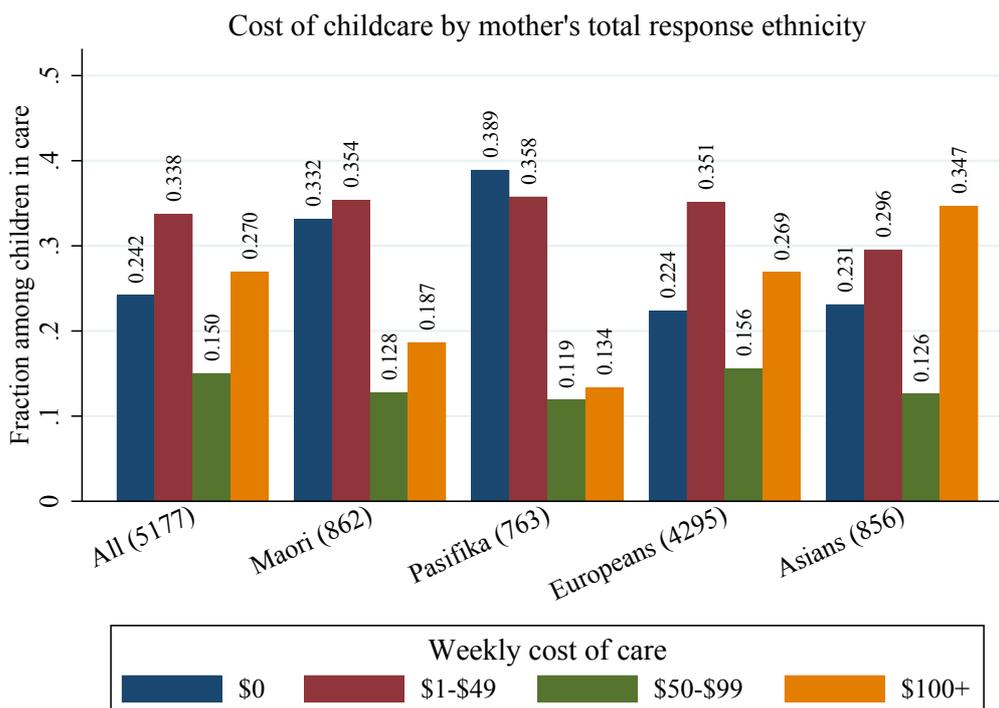


Notes: The fraction of mothers who pay for their GUINZ child's main childcare among children in care at 54 months old. Mothers are included in all the ethnicities they report. Fractions of the population are given in the bars and the number of mothers in each sample is given under the horizontal axis.

Even among families that pay for childcare, the weekly cost varies considerably. Figure 17 shows the distribution of weekly cost of childcare at 54 months overall and by ethnicity, including zeros but excluding families that do not use childcare. It shows ethnic differences at every point in the distribution, but particularly at the upper end. Overall, 27% of families pay at least \$100 per week for childcare, but this falls to 19% for Māori, 13% for Pasifika, and rises to 35% for Asians. The average weekly cost of childcare, presented in Table 4, ranges from \$36 for Pasifika to \$72 for Asians. Māori and Pasifika pay statistically significantly less on average than Europeans, but the difference between Asians and Europeans is not significant.

The first two columns of Appendix Table 3 regress the weekly cost of childcare on ethnicity and a collection of controls for other parental characteristics. They show the lower amounts Māori and Pasifika pay for care relative to Europeans are fully explained by the other characteristics of the families, such as qualifications, deprivation index in their area, antenatal household income, rurality, and antenatal labour force status.

Figure 17: Weekly cost of childcare at 54 months by ethnicity

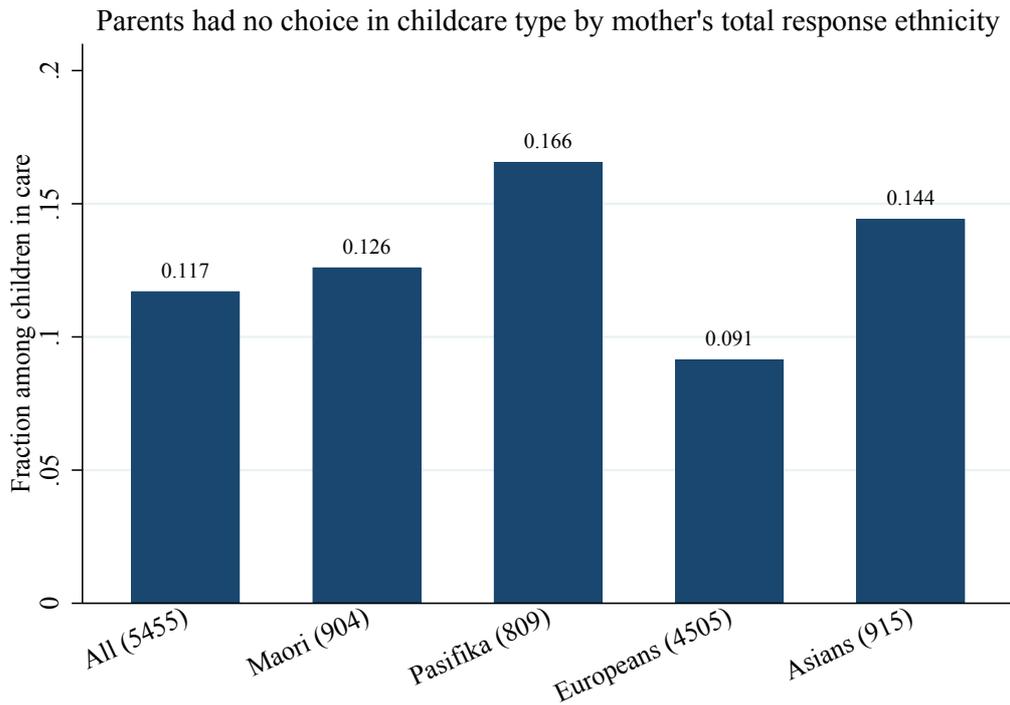


Notes: The fraction of mothers who pay each weekly amount for their GUiNZ child’s main childcare arrangement among children in care at 54 months old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 18 shows the proportion of mothers overall and among each common ethnicity who felt they didn’t have a choice in the type of childcare they used for their child at 54 months. Most mothers who use childcare at this time felt they did have a choice of the type they used, with only 12% reporting they didn’t have a choice. However, this proportion was particularly low for Europeans at only (9%), and was higher for Māori (13%), Asians (14%) and Pasifika (17%).

Table 4 shows the differences between Europeans and Māori, Asians, and Pasifika are all statistically significant. Columns (3) and (4) of Appendix Table 3 show the gap between Europeans and Māori is fully explained by parental characteristics, but the gaps between Europeans and Asians and between Europeans and Pasifika are not. After controlling for a range of parental characteristics, self-prioritised Pasifika remain 6.5 percentage points less likely than Europeans and Asians 5.8 percentage points less likely than Europeans to report having a choice. In contrast, the gap between Māori and Europeans has narrowed to 1.3 percentage points and is statistically insignificant.

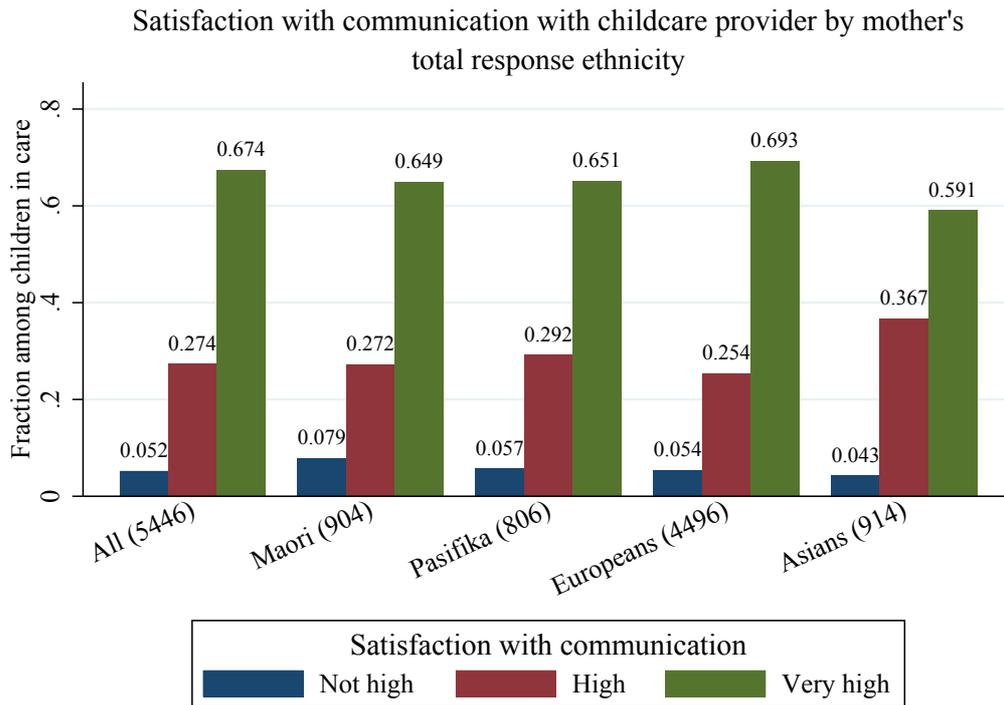
Figure 18: Parents' choice of childcare at 54 months by ethnicity



Notes: The fraction of mothers who report feeling they had no choice in the main type of childcare their GUINZ child attends among children in care at 54 months old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 19 shows how satisfied parents are with the communication with their childcare provider at 54 months overall and by ethnicity. In general, satisfaction with communication is high, with 67% of all mothers reporting they are very satisfied and only 5% reporting they are not satisfied. Māori mothers have the highest rate of reporting not being satisfied (8%), but Asian mothers are least likely to report very high satisfaction (59%). Table 4 shows average satisfaction with communication with the childcare provider on a scale of 1 to 5. Satisfaction with communication is statistically significantly lower for Māori, Pasifika, and Asians than for Europeans. Columns (5) and (6) of Appendix Table 3 show Māori and Asians remain significantly less satisfied with communication from their childcare provider than Europeans once parental characteristics are controlled for, but the difference between Europeans and Pasifika decreases in size and loses significance.

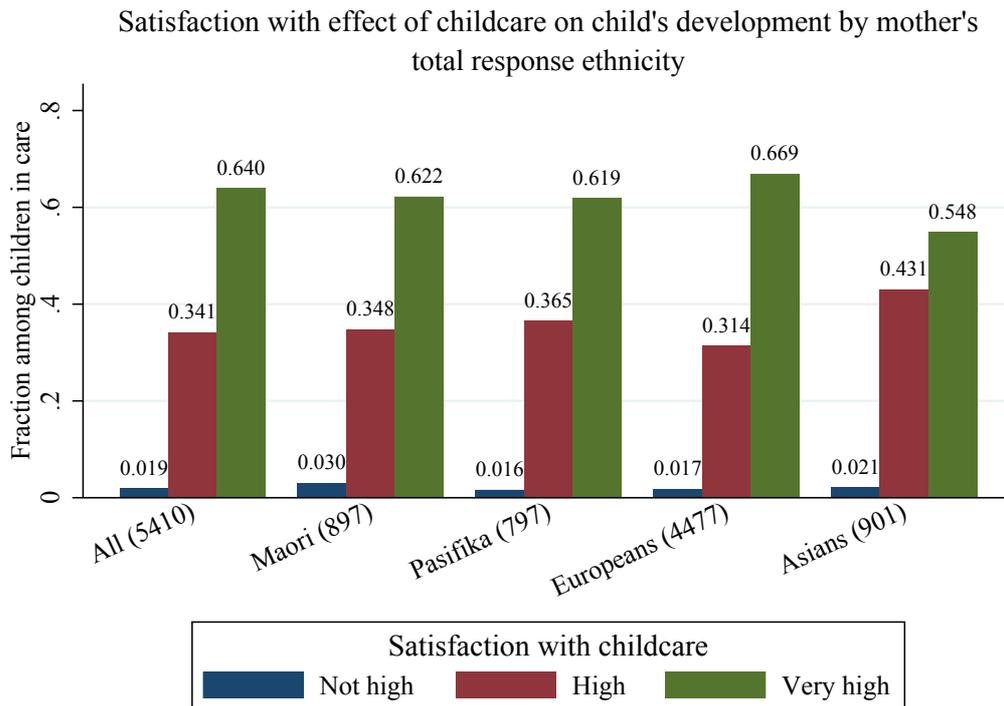
Figure 19: Parents’ satisfaction with communication with their childcare provider at 54 months by ethnicity



Notes: The fraction of mothers who report each level of satisfaction with the communication with their GUINZ child’s main childcare provider among children in care at 54 months old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 20 shows how parents’ satisfaction at 54 months with the effect of childcare on their child’s development across a range of spheres varies by ethnicity. Again, the majority of parents report high satisfaction (64%) and only a tiny fraction report not being satisfied (2%). The proportion with high satisfaction is highest for Europeans (67%) and lowest for Asian (55%). Table 4 shows that, using a scale of 1 to 5, Māori, Pasifika, and Asians are all significantly less satisfied on average than are Europeans. The final two columns of Appendix Table 3 show the gap between Māori and Europeans halves and becomes statistically insignificant when we control for other parental characteristics, the gap between Pasifika and Europeans decreases slightly but remains significant, and the gap between Asians and Europeans increases in magnitude and remains highly significant. That is, Pasifika and Asians are significantly less satisfied with how childcare has affected their child’s development than are similar Europeans. Although ethnic differences in expectations about the role of childcare could contribute to these differences, they remain a sign that childcare providers may cater less well to non-Europeans.

Figure 20: Parents' satisfaction with the effect of their childcare arrangement on their child's development at 54 months by ethnicity



Notes: The fraction of mothers who report each level of satisfaction with the effect of childcare on their child's development among children in care at 54 months old. Mothers are included in all the ethnicities they report. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

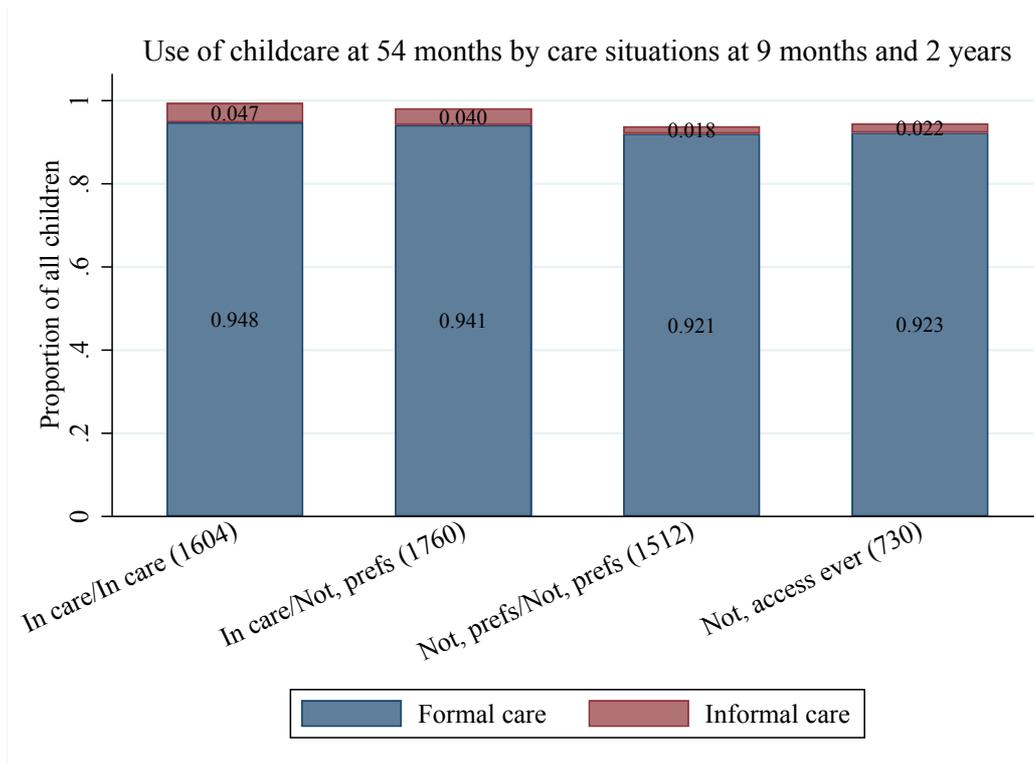
#### 4.4 Differences in characteristics of childcare at 54 months for families with resolved access issues

This section examines how the childcare use and experience at 54 months of families that previously experienced childcare access issues differ from those of other families. We categorise families into four groups based on childcare situations at 9 months and 2 years: i) *in care/in care* (in care at both 9 months and 2 years), ii) *in care/not, prefs* (in care at either 9 months or 2 years and not in care due to preferences at the other of the two ages), iii) *not, prefs/not, prefs* (not in care due to preferences at both 9 months and 2 years), and iv) *not, access ever* (not in care due to access at 9 months and/or 2 years, and in any situation at the other of the two ages).

Figure 21 shows the proportion of children in formal and informal care at 54 months, with the remainder not in any regular care, for each prior childcare situation. Use of childcare at this age is very high regardless of previous access issues, with *not, prefs/not, prefs* families being least likely to use care, at 94%. For all groups, the vast majority of children in childcare are in formal care, though use of informal care is higher among *in care/in care* families (4.7%) and *in*

care/not, prefs families (4.0%) than among not, prefs/not, prefs families (1.8%) and not, access ever families (2.2%). Notably, both informal and formal childcare use at 54 months are similar for not, prefs/not, prefs families and not, access ever families, despite many not, access ever children having been in childcare at either 9 month or 2 years.

Figure 21: Total, formal, and informal childcare at 54 months by earlier childcare situations



Notes: The fraction of mothers whose GUINZ children are in formal care or in informal care at 54 months old. Mothers are categorised by their childcare situations at 9 months and 2 years. Fractions of the population are given in the bars and the total numbers of mothers in the ethnic groups are given under the horizontal axis.

The first row of Table 5 focuses on children in childcare at 54 months and gives the proportion in informal care. It shows the differences in use of informal care between not, prefs/not, prefs families and in care/in care families, and between not, access ever families and in care/in care families are both statistically significant.

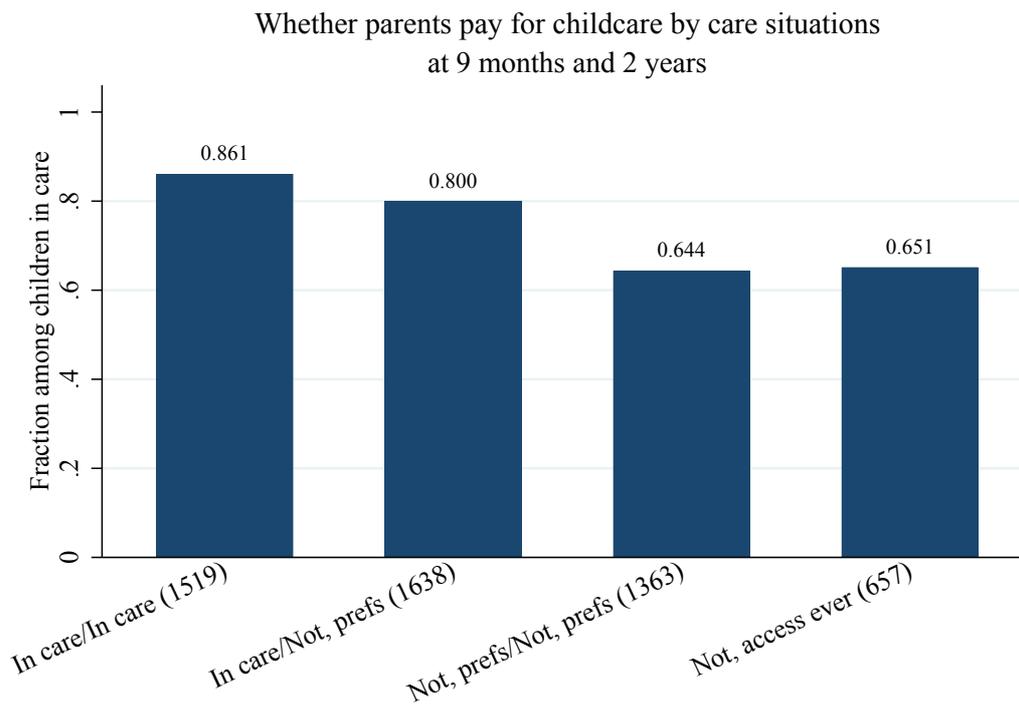
Table 5: Characteristics of childcare arrangement at 54 months by care situations at 9 months and 2 years

Childcare characteristic at 54 months	Childcare situations at 9 months and 2 years			
	In care both surveys	In care one survey, not in care due to preferences one survey	Not in care due to preferences both surveys	Not in care due to access at least one survey
Informal care	0.047 (0.212) 1,595	0.041 (0.199) 1,728	0.019*** (0.137) 1,419	0.023*** (0.151) 690
Weekly cost of care (\$)	103 (112) 1,519	75.9*** (106) 1,638	31.3*** (59.2) 1,363	41.2*** (59.9) 657
Mother had a choice in care type	0.880 (0.325) 1,603	0.895 (0.307) 1,732	0.887 (0.317) 1,429	0.851* (0.356) 691
Satisfaction with communication with childcare provider (1-5)	4.57 (0.668) 1,600	4.61** (0.616) 1,730	4.67*** (0.600) 1,428	4.56 (0.697) 688
Satisfaction with effect of childcare on child's development (1-5)	4.26 (0.509) 1,588	4.26 (0.521) 1,722	4.25 (0.543) 1,413	4.19*** (0.564) 687

Notes: This table gives the mean, standard deviation (in parentheses), and observation count (number of mothers) for a range for characteristics of childcare at 54 months for children in different childcare situations at 9 months and 2 years. The sample is restricted to mothers whose children are in childcare at 54 months. Asterisks denote statistically significant differences from the mean for those who were in care at 9 months and 2 years: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Figure 22 shows among families that use childcare at 54 months the proportion that pay for the care by previous childcare situation. *In care/in care* families are most likely to pay, at 86%, and *not, prefs/not, prefs* families and *not, access ever* families are least likely, at 64% and 65% respectively. Again, these latter two family types appear very similar.

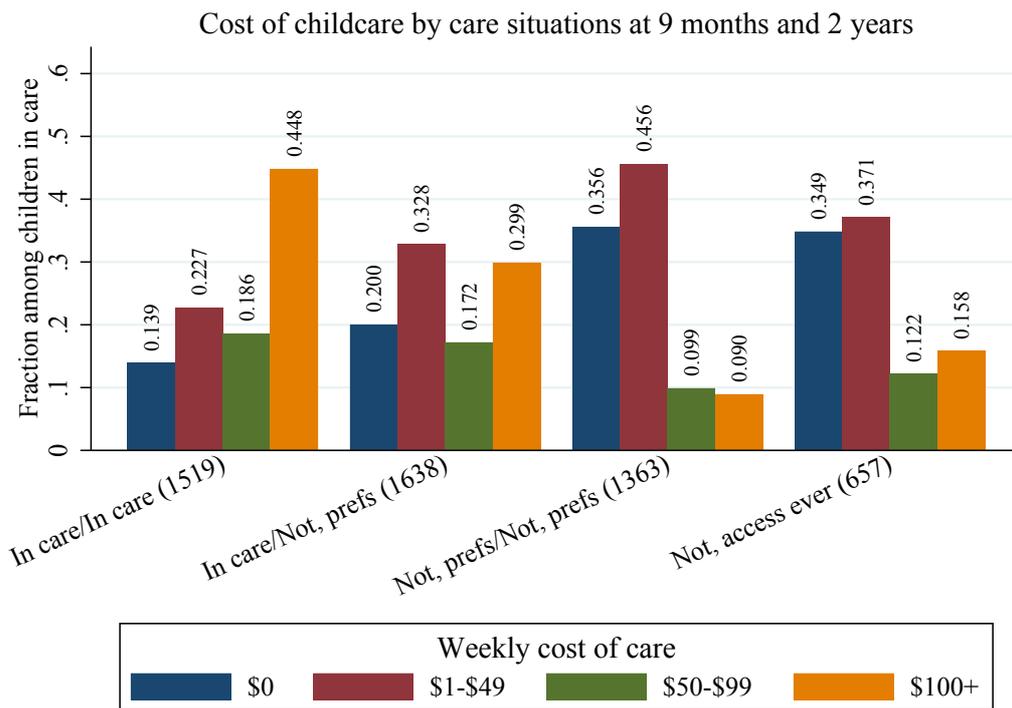
Figure 22: Payment for childcare at 54 months by earlier childcare situations



Notes: The fraction of mothers who pay for their GUINZ child's main childcare among children in care at 54 months old. Mothers are categorised by their childcare situations at 9 months and 2 years. Fractions of the population are given in the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 23 shows the distribution of the weekly cost of childcare at 54 months, excluding families that do not use childcare but including those that use care but do not pay for it. Unsurprisingly, families that previously used care tend to pay more for care at 54 months than families that did not, particularly if they used care both previous periods. Information on the number of hours of care used each week is not available at 54 months; some of the higher cost of care paid by *in care/in care* families is likely due to them using care for more hours each week. The averages of these cost distributions are given in Table 5. They vary dramatically. *In care/in care* families pay an average of \$103 per week, *in care/not, prefs* families \$76, *not, prefs/not, prefs* families \$31, and *not, access ever* families \$41. The differences from *in care/in care* families are all statistically significant.

Figure 23: Weekly cost of childcare at 54 months by earlier childcare situations



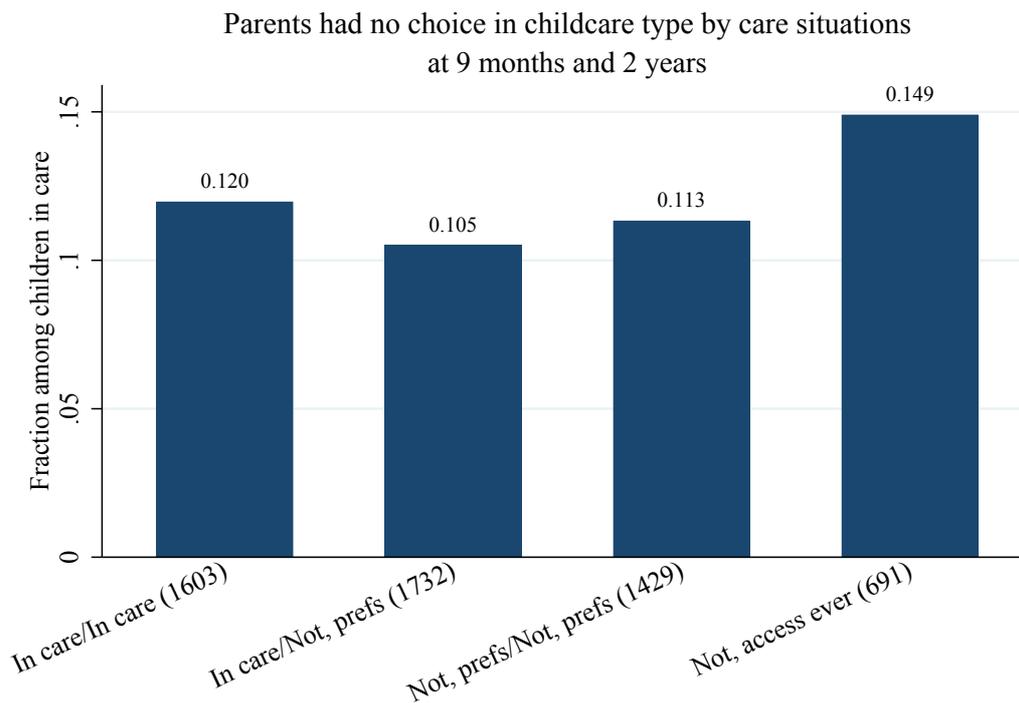
Notes: The fraction of mothers who pay each weekly amount for their GUiNZ child’s main childcare arrangement among children in care at 54 months old. Mothers are categorised by their childcare situations at 9 months and 2 years. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

The first two columns of Appendix Table 4 investigate the extent to which differences in weekly cost of childcare between these groups can be explained by the characteristics of parents in the group. It shows the differences between *in care/in care* families and other families decrease by up to 40% when controls for parental characteristics are added, but all remain large and statistically significant. The regressions show that, conditional on parental characteristics, *not, access ever* families pay \$16 per week more than *not, prefs/not, prefs* families. Although this should not be considered proof, it is consistent with families that previously reported access issues having to pay more to access the same care than do families that previously chose not to use childcare due to preferences. The two groups may use care for a different number of hours each week; we are unable to observe this in the data.

Figure 24 shows the proportion of mothers who reported feeling they didn’t have a choice in the type of childcare they used at 54 months. This shows a different pattern to previous variables, with *in care/not prefs* families and *not, prefs/not, prefs* families (both 11%) less likely to report not having a choice than *in care/in care* families (12%), and *not, access ever* families most likely to report not having a choice (15%). Table 5 shows only *not, access ever* families are

statistically significantly different to *in care/in care* families. However, Appendix Table 4 shows the story changes when controls for parental characteristics are added. When comparing parents who are otherwise similar, *in care/in care* families are similar to *not, access ever* families in their access to multiple types of childcare, and *in care/not prefs* families and *not, prefs/not, prefs* families both are around 2 percentage points more like to have a choice (statistically significant).

Figure 24: Parents' choice of childcare at 54 months by earlier childcare situations

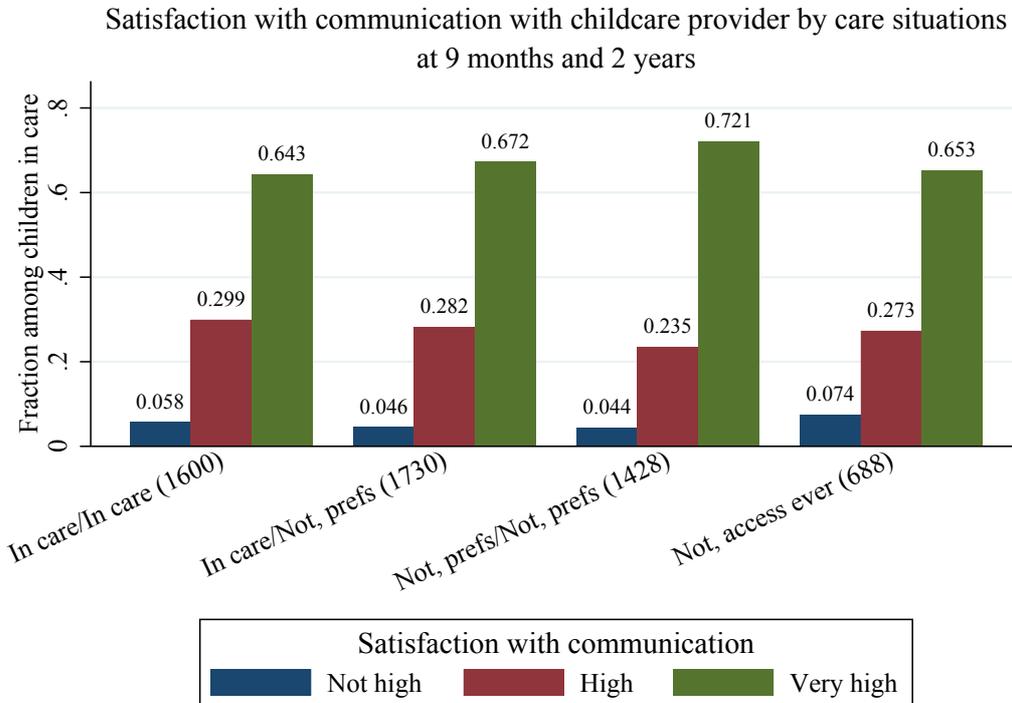


Notes: The fraction of mothers who report feeling they had no choice in the main type of childcare their GUINZ child attends among children in care at 54 months old. Mothers are categorised by their childcare situations at 9 months and 2 years. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 25 shows the distribution of mothers' satisfaction with communication from their childcare provider at 54 months. Satisfaction is generally high regardless of prior childcare situation, though is most likely to be low for *not, access ever* families (7.4%). Table 5 compares average satisfaction with communication on a 1-5 scale for the four types of family. *Not, access ever* families (4.56) are almost identical on average to *in care/in care* families (4.57), whereas *in care/not, prefs* families (4.61) and *not, prefs/not, prefs* families (4.67) are significantly more satisfied. Appendix Table 4 shows controlling for parental characteristics, so as to compare

similar parents who differ only in terms of prior childcare situation, makes very little difference for the comparisons between groups.

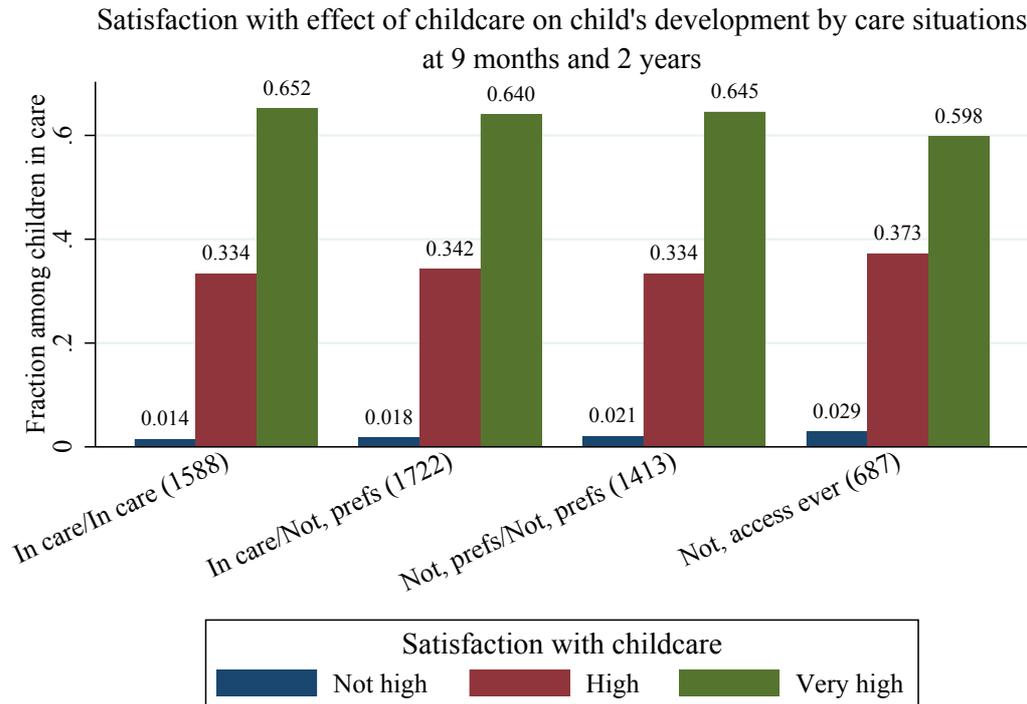
Figure 25: Parents' satisfaction with communication with their childcare provider at 54 months by earlier childcare situations



Notes: The fraction of mothers who report each level of satisfaction with the communication with their GUINZ child's main childcare provider among children in care at 54 months old. Mothers are categorised by their childcare situations at 9 months and 2 years. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

Figure 26 shows the distribution of parents' satisfaction with the effect of childcare on their child's development at 54 months. Differences between groups with different previous childcare situations are relatively minor. Table 5 shows only *not, access ever* families are significantly differently satisfied to *in care/in care* families. On a scale of 1-5, the former have satisfaction of 4.19 on average compared with 4.25 to 4.26 for the other family types. However, controlling for parental characteristics, as in Appendix Table 4, halves this difference and makes it insignificant.

Figure 26: Parents' satisfaction with the effect of their childcare arrangement on their child's development at 54 months by earlier childcare situations



Notes: The fraction of mothers who report each level of satisfaction with the effect of childcare on their child's development among children in care at 54 months old. Mothers are categorised by their childcare situations at 9 months and 2 years. Fractions of the population are given above the bars and the number of mothers in each sample is given under the horizontal axis.

## 5 Discussion

### 5.1 Ethnic differences in childcare experiences

Ethnicities differ substantially in their use of childcare and their experiences with it. Some of these differences mirror differences in advantage more broadly, but many differences remain even after controlling for a wide range of parental characteristics including deprivation index and household income.

When the child is two years old, Māori and Pasifika show many similarities in their childcare use. Compared with Europeans, both are less likely to use childcare, but tend to use it for more hours each week if they do use it. Despite using childcare for more hours, both pay substantially less for it each week than do Europeans, and are more likely to receive the Childcare Subsidy. Compared with Europeans, both also report less frequent communication from their childcare provider, which can be an indication of lower quality, and less overall satisfaction with their childcare. This last difference remains statistically significant even after

controlling for parental characteristics, weekly hours of childcare, and weekly cost of childcare. The main difference between Māori and Pasifika is that, conditional on using at least 8 hours of childcare each week, Māori are significantly less likely than Europeans to use informal care, whereas Pasifika are significantly more likely.

Asians have some similarities to Māori and Pasifika in their use of childcare at 2 years, but in some ways they are very different. Like Māori and Pasifika, Asians are less likely than Europeans to use childcare, and if they use it they use it for more hours each week. Like Pasifika but not Māori, Asians are more likely than Europeans to use informal care. Asians pay more each week for care than do Māori and Pasifika, though less than Europeans, and have the lowest rate of receiving the Childcare Subsidy. They have the lowest child-to-adult ratio in childcare, and this rate is lower than for Europeans even when controlling for parental characteristics; their high rate of informal care likely contributes to this difference. Unlike Māori and Pasifika, they report more frequent communication from their childcare provider than do Europeans, but this doesn't translate into higher overall satisfaction. Like Māori and Pasifika, they report lower overall satisfaction than do Europeans with their childcare arrangement, even after controlling for parental characteristics, weekly hours of childcare, and weekly cost of childcare.

At 54 months, Pasifika are still the least likely to have their child in childcare and Māori are still most likely to use formal care as opposed to informal. Māori and Pasifika are substantially less likely than Europeans and Asians to pay for childcare. Māori and Pasifika also pay much lower weekly amounts for childcare on average, but this difference is fully explained by ethnic differences in other parental characteristics. Māori, Pasifika, and Asians are all significantly more likely than Europeans to report not having a choice of the type of childcare they use, though the Māori-European difference can be explained by parental characteristics. Māori, Pasifika, and Asians also fall behind Europeans in their satisfaction with communication from the childcare provider and their satisfaction with the effect of childcare on their child's development; nearly all these gaps remain statistically significant after controlling for parental characteristics, though are smaller in magnitude than at 2 years.

Purely in terms of whether parents use childcare and if so how many hours they use it for each week, ethnic differences are salient, with Europeans more likely than Māori and Pasifika to use childcare, but tending to use it for fewer hours each week. This could suggest many Māori and Pasifika choose not to use regular childcare in situations where Europeans would. The interaction between childcare and the mother's work will be explored in the next report. However, an alternative explanation is that Māori and Pasifika have more options for low-hour irregular care by whānau that they do not report as regular childcare arrangements.

The gaps between Europeans and other ethnicities in satisfaction with their childcare, which are evident at both 2 years and 54 months, are a concerning sign. They suggest that existing options for childcare are better suited to the preferences of European parents and fall short for parents of other ethnicities even among those with the same financial means. However, these findings are not definitive evidence that the existing childcare system caters preferentially to the European majority. It may be that unobserved differences between families of different ethnicities, such as different expectations about the learning childcare should provide, contribute to or drive ethnic gaps in satisfaction.

## 5.2 Differences in childcare experiences for families with previous access issues

Families whose children were in childcare at 9 months are heavy users of childcare at 2 years, with 80% using regular childcare and those who use it using it for a high number of hours each week. Commensurate with their high average socioeconomic status, these families are less likely to receive the Childcare Subsidy than are families that did not use childcare at 9 months, and pay more each week for childcare.

Among families that did not use childcare at 9 months due to preferences, only 43% use regular childcare at 2 years. If they do use childcare, they use it for fewer hours each week on average, likely reflecting the preferences and flexibility that led them to not use childcare previously. Compared with those who previously used childcare, they pay substantially less for care each week and have a lower child-to-adult ratio in care. Neither difference is fully explained by parental characteristics, which may suggest families that previously opted out of using childcare continue to have the flexibility to use childcare only if they find a quality provider at a reasonable cost.

Families that previously did not use childcare due to access issues use care at a similar rate to families that did not due to preferences, and use it for a similar number of hours. They pay \$117 per week for childcare, compared with \$119, but their greater socioeconomic disadvantage means parental characteristics fully explain the difference between what they pay and what families that previously used care pay. Families with previous access issues have the highest child-to-adult ratio in childcare, and this cannot be explained by the parents' characteristics.

However, frequency of communication with the childcare provider and overall satisfaction with the childcare arrangement at 2 years do not significantly differ with previous childcare situation.

At 54 months we compare the childcare use of families based on their childcare situation at 9 months and 2 years, distinguishing those who were i) always previously in care, ii) previously in care once and not due to preferences once, iii) always previously not in care due to preferences, and iv) not in care due to access at least once. Families with previous access issues tend to most resemble families that never used care because they preferred not to. Both types have comparatively low rates of using both informal and formal care, and, conditional on using childcare, both are relatively more likely to use formal care. They also have low rates of paying for childcare and pay a low average weekly amount for care. In raw terms, those with previous access issues pay \$41 per week, those previously never in care because they preferred not to be pay \$31, and those always in care pay \$103. These differences decrease when parental characteristics are controlled for, but do not disappear. Notably, when comparing families with previous access issues with similar families that always preferred to not use childcare, those with access issues pay \$16 more per week for childcare. Although not definitive, this is consistent with families with previous access issues having to pay more to get the same childcare at 54 months, or families with a low preference for care having the flexibility to use it only if it's cheap.

In some ways, families with previous access issues are similar at 54 months to those that always previously used care. Once we control for parental characteristics, both these types of families are more likely than other types to report they didn't have a choice of what type of childcare to use, and report lower satisfaction with communication with their childcare provider. Families with previous access issues also have comparatively low satisfaction with the effect of childcare on their child's development, but this is largely explained by parental characteristics.

Overall, families that previously experienced issues with access to childcare are more likely to be disadvantaged and tend to have childcare use and experiences that mirror those of socioeconomically disadvantaged families. However, their childcare experiences are not fully explained by their observable characteristics, suggesting some of the unseen challenges that caused them to have access issues in the first place continue to constrain their access to affordable childcare that suits the needs of their child.

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**Appendix Table 1: Regressions of childcare characteristics at 2 years on parental characteristics**

Dependent variable:	Weekly hours in childcare		Weekly cost of childcare (\$00s)		Ratio of children to adults in childcare		Satisfaction with childcare arrangement (1-5)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mother's self-prioritised ethnicity (omitted category: European)									
Maori	5.214*** (0.702)	5.200*** (0.760)	-0.652*** (0.072)	-0.143** (0.073)	-0.113 (0.129)	-0.070 (0.143)	-0.191*** (0.039)	-0.140*** (0.043)	-0.134*** (0.044)
Pacific	7.086*** (0.809)	5.940*** (0.882)	-0.787*** (0.083)	-0.304*** (0.084)	-0.321** (0.148)	-0.238 (0.165)	-0.232*** (0.045)	-0.206*** (0.050)	-0.201*** (0.051)
Asian	7.144*** (0.689)	5.572*** (0.850)	-0.355*** (0.070)	-0.270*** (0.081)	-0.553*** (0.124)	-0.486*** (0.156)	-0.281*** (0.038)	-0.294*** (0.048)	-0.292*** (0.049)
MELAA	4.811*** (1.578)	3.533** (1.638)	0.134 (0.165)	0.215 (0.161)	0.176 (0.298)	0.200 (0.316)	-0.190** (0.087)	-0.200** (0.093)	-0.208** (0.095)
Other	0.508 (4.955)	-1.273 (4.873)	-0.131 (0.502)	-0.067 (0.462)	-0.548 (0.881)	-0.541 (0.887)	-0.149 (0.274)	-0.163 (0.275)	-0.173 (0.274)
New Zealander	0.076 (1.850)	-0.167 (1.823)	-0.112 (0.199)	-0.066 (0.184)	-0.032 (0.345)	-0.073 (0.348)	0.147 (0.102)	0.150 (0.103)	0.150 (0.109)
Mother's age antenatally (omitted category: Under 25)									
25 to 34		-0.172 (0.777)		0.075 (0.074)		-0.075 (0.144)		0.064 (0.044)	0.059 (0.044)
35 and over		-1.225 (0.881)		0.292*** (0.084)		-0.142 (0.164)		0.063 (0.050)	0.059 (0.050)
Mother's qualifications antenatally (omitted category: No qualifications)									
School qualifications		0.644 (1.313)		0.100 (0.128)		0.350 (0.248)		-0.070 (0.074)	-0.074 (0.076)
Post-school qualifications		0.775 (1.287)		0.090 (0.125)		0.428* (0.242)		-0.098 (0.073)	-0.113 (0.074)
Bachelor's degree		-0.293 (1.336)		0.285** (0.130)		0.331 (0.251)		-0.088 (0.075)	-0.106 (0.077)
Higher degree		-0.791 (1.377)		0.389*** (0.134)		0.262 (0.258)		-0.060 (0.078)	-0.078 (0.079)
Child is mother's first		0.075 (0.494)		0.009 (0.047)		-0.076 (0.092)		-0.034 (0.028)	-0.040 (0.028)
Mother's migration status (omitted category: NZ born)									
Migrated to NZ as child		1.210 (0.843)		0.050 (0.081)		-0.121 (0.157)		0.061 (0.048)	0.065 (0.048)
Migrated to NZ as adult		2.545*** (0.697)		0.124* (0.067)		-0.014 (0.129)		0.021 (0.039)	0.037 (0.040)
Mother partnered antenatally		-1.915* (0.993)		0.093 (0.095)		-0.014 (0.183)		0.037 (0.056)	0.033 (0.056)
Pregnancy was planned		-2.124*** (0.541)		-0.004 (0.052)		0.092 (0.101)		-0.011 (0.031)	-0.007 (0.031)
Deprivation Index for mother at 2 years		0.145 (0.090)		-0.046*** (0.009)		-0.006 (0.017)		-0.004 (0.005)	-0.002 (0.005)
Mother lives in a rural area at 2 years		-4.240*** (0.850)		-0.448*** (0.083)		-0.033 (0.163)		-0.021 (0.048)	-0.014 (0.049)
Mother's labour force status antenatally (omitted category: Employed)									
Unemployed		-2.643** (1.242)		-0.147 (0.119)		-0.250 (0.231)		-0.116 (0.070)	-0.125* (0.071)
Student		-0.032 (0.840)		0.024 (0.081)		0.176 (0.157)		-0.050 (0.047)	-0.048 (0.048)
Not in workforce		-4.017*** (0.687)		-0.214*** (0.066)		0.117 (0.128)		-0.022 (0.039)	-0.017 (0.039)
Antenatal household income (\$00,000s)		3.380*** (0.620)		0.727*** (0.059)		0.121 (0.115)		0.024 (0.035)	0.035 (0.036)
Mother received any benefit antenatally		-0.674 (1.030)		-0.055 (0.099)		-0.051 (0.191)		-0.071 (0.058)	-0.070 (0.059)
Weekly hours in main care arrangement									-0.002 (0.001)
Weekly cost of main care arrangement (\$00s)									0.001 (0.012)
R-Squared	0.062	0.110	0.055	0.215	0.009	0.016	0.030	0.042	0.044
Observations	2,864	2,864	2,810	2,810	2,741	2,741	2,860	2,860	2,808

Notes: Each column in this table presents the results of an OLS regression of a childcare characteristic at 2 years on parental characteristics. The sample is restricted to children who were in childcare at least 8 hours per week at 2 years. Dependent variables are given in the column headers. All refer to the main childcare arrangement. Dummy variables (not shown) are included to capture missing controls. Standard errors are given in parentheses. Asterisks denote: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

**Appendix Table 2: Regressions of childcare characteristics at 2 years on childcare situation at 9 months**

Dependent variable:	Weekly hours in childcare		Weekly cost of childcare (\$00s)		Ratio of children to adults in childcare		Satisfaction with childcare arrangement (1-5)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Childcare situation at 9 months (omitted category: In care)									
Not in care, prefs	-4.948***	-3.952***	-0.243***	-0.138***	-0.179**	-0.208**	-0.022	-0.018	-0.022
	(0.474)	(0.465)	(0.049)	(0.045)	(0.085)	(0.088)	(0.026)	(0.027)	(0.027)
Not in care, cost/acc	-4.013***	-3.875***	-0.270**	-0.018	0.226	0.271	-0.074	-0.039	-0.059
	(1.031)	(0.994)	(0.108)	(0.097)	(0.186)	(0.187)	(0.057)	(0.057)	(0.058)
Parental characteristic controls		Yes		Yes		Yes		Yes	Yes
Weekly hours in care and cost of care									Yes
R-Squared	0.038	0.135	0.010	0.218	0.003	0.020	0.001	0.043	0.046
Observations	2,872	2,872	2,818	2,818	2,749	2,749	2,868	2,868	2,816

Notes: Each column in this table presents the results of an OLS regression of a childcare characteristic at 2 years on childcare situation at 9 months. The sample is restricted to children who were in childcare at least 8 hours per week at 2 years. Dependent variables are given in the column headers. All refer to the main childcare arrangement. Parental characteristic controls are as in column 2 of Appendix Table 1. Dummy variables (not shown) are included to capture missing controls. Standard errors are given in parentheses. Asterisks denote: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

**Appendix Table 3: Regressions of childcare characteristics at 54 months on parental characteristics**

	Weekly cost of childcare (\$00s)		Mother felt she had a choice of childcare type		Satisfaction with communication with the childcare provider (1-5)		Satisfaction with effect of childcare arrangement on child's development (1-5)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mother's self-prioritised ethnicity (omitted category: European)								
Maori	-0.355*** (0.042)	-0.001 (0.043)	-0.044*** (0.014)	-0.013 (0.015)	-0.102*** (0.027)	-0.073** (0.030)	-0.074*** (0.022)	-0.038 (0.025)
Pacific	-0.432*** (0.043)	-0.050 (0.048)	-0.107*** (0.014)	-0.065*** (0.017)	-0.047* (0.028)	-0.036 (0.033)	-0.079*** (0.023)	-0.060** (0.028)
Asian	-0.044 (0.040)	0.045 (0.049)	-0.072*** (0.013)	-0.058*** (0.017)	-0.155*** (0.026)	-0.146*** (0.034)	-0.158*** (0.022)	-0.173*** (0.028)
MELAA	0.255** (0.103)	0.312*** (0.101)	-0.064* (0.033)	-0.044 (0.034)	-0.065 (0.065)	-0.072 (0.069)	-0.121** (0.054)	-0.148*** (0.057)
Other	-0.252 (0.302)	-0.307 (0.283)	-0.111 (0.101)	-0.109 (0.101)	-0.202 (0.213)	-0.186 (0.213)	-0.111 (0.167)	-0.117 (0.167)
New Zealander	-0.132 (0.118)	-0.012 (0.110)	0.007 (0.038)	0.015 (0.038)	-0.030 (0.075)	-0.035 (0.076)	0.048 (0.063)	0.053 (0.063)
Mother's age antenatally (omitted category: Under 25)								
25 to 34		0.009 (0.041)		0.004 (0.014)		0.027 (0.028)		-0.000 (0.024)
35 and over		0.087* (0.047)		0.001 (0.016)		0.051 (0.033)		0.017 (0.027)
Mother's qualifications antenatally (omitted category: No qualifications)								
School qualifications		0.081 (0.061)		0.000 (0.021)		0.007 (0.043)		-0.038 (0.036)
Post-school qualifications		0.029 (0.060)		-0.001 (0.021)		-0.025 (0.042)		-0.041 (0.035)
Bachelor's degree		0.100 (0.064)		0.014 (0.022)		-0.027 (0.045)		-0.063* (0.037)
Higher degree		0.261*** (0.067)		0.013 (0.024)		-0.053 (0.047)		-0.079** (0.039)
Child is mother's first		0.041 (0.028)		-0.000 (0.010)		-0.071*** (0.020)		0.010 (0.016)
Mother's migration status (omitted category: NZ born)								
Migrated to NZ as child		0.071 (0.047)		-0.003 (0.016)		0.044 (0.032)		0.024 (0.027)
Migrated to NZ as adult		0.097** (0.040)		-0.012 (0.014)		0.020 (0.028)		0.036 (0.023)
Mother partnered antenatally		-0.023 (0.056)		0.033* (0.019)		0.030 (0.039)		0.007 (0.032)
Pregnancy was planned		-0.027 (0.030)		-0.003 (0.010)		0.011 (0.021)		0.040** (0.017)
Deprivation Index for mother at 54 months		-0.054*** (0.005)		-0.007*** (0.002)		-0.004 (0.004)		-0.001 (0.003)
Mother lives in a rural area at 54 months		-0.291*** (0.043)		-0.044*** (0.015)		0.016 (0.031)		-0.024 (0.026)
Mother's labour force status antenatally (omitted category: Employed)								
Unemployed		-0.207*** (0.056)		0.015 (0.020)		-0.014 (0.040)		-0.051 (0.033)
Student		-0.021 (0.051)		-0.001 (0.018)		-0.009 (0.035)		-0.020 (0.029)
Not in workforce		-0.213*** (0.034)		0.002 (0.012)		0.037 (0.023)		-0.015 (0.019)
Antenatal household income (\$00,000s)		0.428*** (0.036)		0.014 (0.012)		0.040 (0.025)		0.018 (0.020)
Mother received any benefit antenatally		0.048 (0.050)		-0.018 (0.018)		-0.001 (0.035)		-0.055* (0.029)
R-Squared	0.031	0.163	0.015	0.033	0.008	0.016	0.012	0.020
Observations	5,164	5,164	5,442	5,442	5,433	5,433	5,397	5,397

Notes: Each column in this table presents the results of an OLS regression of a childcare characteristic at 54 months on parental characteristics. The sample is restricted to children who were in childcare at 54 months. Dependent variables are given in the column headers. All refer to the main childcare arrangement. Dummy variables (not shown) are included to capture missing controls. Standard errors are given in parentheses. Asterisks denote: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

**Appendix Table 4: Regressions of childcare characteristics at 54 months on childcare situations at 9 months and 2 years**

Dependent variable:	Weekly cost of childcare (\$00s)		Mother felt she had a choice of childcare type		Satisfaction with communication with the childcare provider (1-5)		Satisfaction with effect of childcare arrangement on child's development (1-5)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Childcare situations at 9 months and 2 years (omitted category: In care both surveys)								
In care one survey, not in care due to preferences one survey	-0.268*** (0.033)	-0.188*** (0.031)	0.015 (0.011)	0.021* (0.011)	0.049** (0.022)	0.048** (0.022)	0.002 (0.018)	0.006 (0.019)
Not in care due to preferences both surveys	-0.714*** (0.035)	-0.529*** (0.034)	0.006 (0.012)	0.024** (0.012)	0.100*** (0.023)	0.102*** (0.024)	-0.011 (0.019)	0.004 (0.020)
Not in care due to access at least one survey	-0.615*** (0.043)	-0.366*** (0.042)	-0.029** (0.015)	0.005 (0.015)	-0.007 (0.029)	0.017 (0.030)	-0.071*** (0.024)	-0.034 (0.025)
Parental characteristic controls		Yes		Yes		Yes		Yes
R-Squared	0.087	0.202	0.002	0.034	0.004	0.020	0.002	0.020
Observations	5,177	5,177	5,455	5,455	5,446	5,446	5,410	5,410

Notes: Each column in this table presents the results of an OLS regression of a childcare characteristic at 54 months on childcare situations in the 9-month and 2-year surveys. The sample is restricted to children who were in childcare at 54 months. Dependent variables are given in the column headers. All refer to the main childcare arrangement. Parental characteristic controls are as in column 2 of Appendix Table 1. Dummy variables (not shown) are included to capture missing controls. Standard errors are given in parentheses. Asterisks denote: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

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