TITLE PAGE

1) Title: Nutritional supplementation of girls influences the growth of their children: Prospective study in Guatemala

2) Authors: Jere R. Behrman, Maria C. Calderon, Samuel H.Preston, John Hoddinott, Reynaldo Martorell and Aryeh D. Stein

3) Authors' affiliations: Department of Economics and Population Studies Center, University of Pennsylvania (JRB); Graduate Group in Demography, University of Pennsylvania, Philadelphia, Pennsylvania (MCC); Department of Sociology and Population Studies Center, University of Pennsylvania (SHP); International Food Policy Research Institute, Washington (JH); Hubert Department of Global Health, Rollins School of Public Health, Emory University (RM, ADS).

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5) Corresponding author: Jere R. Behrman <jbehrman@econ.upenn.edu>, Economics Department, McNeil 160, 3718 Locust Walk, University of Pennsylvania, Philadelphia, PA 19104-6297, USA; phone 1 215 898 7704; fax 1 215 898 2124

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ABSTRACT

Background: Improving nutrition in early childhood improves schooling, adult health, adult skills and wage rates, but there is little evidence regarding its impact on growth of the next generation.

Objective: We assessed whether nutritional supplements given to women when they were 0-7 y old affected their children's nutritional status 29-38 years later.

Design: We studied 1,365 children under 12 y old who are the offspring of 632 Guatemalan mothers, 426 of whom had participated as children in a nutritional supplementation trial. In the trial, two villages were randomized to receive a nutritious supplement (*atole*) and two to receive a less nutritious one (*fresco*). We compared offspring anthropometric indicators to offspring of mothers with exposure to neither supplement.

Results: Offspring of women exposed to *atole*, compared with offspring of unexposed women, had 275 g (95 percent CI: 58, 492 g) higher birth weight and as children had 1.91 kg (0.43, 3.38 kg) higher weight, 0.95 (0.28, 1.63) higher BMI, 0.88 cm (0.27, 1.49 cm) greater arm circumference, and 1.38 mm (0.47, 2.28 mm) greater triceps skinfold thickness. Child height, head circumference and subscapular skinfold thickness were not associated with maternal exposure to *atole*. Offspring of women exposed to *fresco* as children did not differ from controls on any of the eight anthropometric outcomes considered. Supplementation of boys did not affect their children's anthropometry.

Conclusion: Nutritional supplementation of girls is associated with substantial increases in offspring birth weight and indicators of fatness.

TEXT

INTRODUCTION

About 200 million children under 5 y of age in developing countries are not reaching their developmental potential and as a result are likely to underperform in school and subsequently over their life course.[1, 2] Small newborn size and childhood stunting predict short stature, reduced lean body mass, less schooling, diminished intellectual functioning, and reduced wage rates in adulthood.[3, 4, 5, 6] These same factors may also affect the next generation through multiple pathways including parental phenotype, particularly the pelvic size and health and education of mothers, but also possibly through epigenetic channels.[7, 8, 9, 10]

There is little high-quality evidence for non-genetic intergenerational determinants of body size. Studies associating birth weights across generations, for example, generally do not control for intergenerationally-correlated genetic endowments or family background.[11] Likewise, the positive inter-generational association in schooling is attenuated following appropriate control for genetic, family and community background factors.[12, 13, 14] Thus, the impact of improvements in child nutrition on next-generation growth and development is unknown.

We used quasi-experimental data from Guatemala to investigate the impact of early life nutrition for women on eight anthropometric indicators of their offspring under 12 y of age: birth weight, height, weight, BMI, head and arm circumference, and triceps and subscapular skinfold thickness. We also examined parental exposures to nutritional supplementation at specific age ranges to evaluate whether critical exposure windows exist, and in particular whether the earliest 2 y of life are particularly important.[16, 17, 15, 18, 4, 5, 6]

SUBJECTS AND METHODS

Study participants and procedures

Between 1969 and 1977, the Institute of Nutrition of Central America and Panama (INCAP) undertook a study of the effect of improved energy and protein intakes on physical and mental development of children from four villages of mixed Spanish-Amerindian ethnic origin in El Progreso, Guatemala.[17, 19] Two villages, one from each pair matched on population size, were randomly assigned to receive a nutritional supplement called *atole*. *Atole* was a gruel-like drink made from Incaparina (a vegetable protein mixture), dry skimmed milk, and sugar; it provided 6·4 g protein and 380 kJ (91 kcal) energy per 100 ml. In the other two villages, residents were given *fresco*, a drink that contained no protein, and 138 kJ (33 kcal) per 100 ml from sugar. From October, 1971, both supplements were fortified with micronutrients in equal concentrations by volume. The supplements were available to all villagers twice daily throughout the study at central locations in each village but records of attendance and consumption were kept only for children younger than 7 y. INCAP also established and maintained medical services for each village. For children younger than 7 y, participation (defined as any attendance during specified age intervals) was between 65 percent and 85 percent and varied little by village or age.[20] However, for children younger than 3 y daily attendance and the daily average volume of supplement consumed were higher in villages assigned to *atole* than in those assigned to *fresco*.[20] For children under 3 y, protein, energy, and micronutrient intake from the supplements were all higher in *atole* villages.[21] For children 4-7 y, the average volume of *fresco* ingested was greater than the average volume of *atole* ingested, with the result that the energy gap from supplementation was much less than for children under 3 y, but still favored children in the *atole* villages, and the micronutrient gap from supplementation was reversed.[20] The salient difference in intakes for children 4-7 y was in protein, favoring children in the *atole* villages.[20]

We have been following this cohort of children prospectively.[19] Between January 2006 and October 2007 we collected information on the original sample members, their parents, spouses and children.[22] The sampling frame for this survey was developed based on the sample of 1,033 living individuals from the 1969-77 study (hereafter referred to as original sample members) who (1) had been interviewed in our previous survey in 2002-4;[23] (2) were living in or near one of the original study villages, or in Guatemala City or its suburbs; and (3) had a biological parent living in the above locations. 957 of these original sample members (92.6 percent) were interviewed, of whom 845 reported to have live children under 12 y of age. We attempted to obtain data on all spouses or partners, all children under 12 y of age living in the same household as original sample members, and children of original sample members who lived with a former spouse or partner. We successfully interviewed 93.9 percent of eligible original sample women, and 90.9 percent of the wives of eligible original sample men, and gathered data on 94.6 percent of the children of these women. The proportion lost to follow-up was similar between parents from the *atole* and the *fresco* villages. For this analysis, we included only the 1443 biological children of original sample members. We obtained data on 1,365 children under 12 y of age who were born to 632 mothers, 426 of whom were in the original sample and 206 of whom were wives of original male sample members but who were not themselves exposed to the nutritional supplement.

Characterization of maternal supplement exposure and type

In the more populous villages the intervention started in March 1969 and ended in February 1977; in the less populous villages the intervention started in May 1969. These definitions were used for both *atole* and *fresco*. We classified the children as born to (1) mothers exposed to *atole*; (2) mothers exposed to fresco; or (3) mothers exposed to neither supplement.

The original study enrolled all children under the age of 7 y at study launch in 1969 and newborns from birth until the study ended in 1977. Thus individuals were exposed to supplementation (*atole* or *fresco*) at different ages and for different periods of time. We defined "exposure to *atole*" as exposure to this supplement at any age under 7 y. All of the original sample members in the *atole* villages were so exposed (n=217 women). We defined "exposure to *fresco*" in a parallel manner (n=209 women). Mothers who were not exposed to either *atole* or *fresco* were born in a study village before 1962 or after 1977 or were born and raised outside of the four villages (206 women). These constitute our reference group. Among those with at least some exposure as defined above we further defined four cohorts, with exposure at ages 0-24 mo as the central defining characteristic. The four cohorts differ both in how much exposure there was in the 0-24 mo window and in the average duration of total exposure (Figure 1).

Child anthropometric outcomes

Weight (kg), was measured using a digital scale (model 1582, Tanita®, Japan) with a precision of 100 g. Head and arm circumferences (cm) to the nearest 0.1 cm were measured using a plastic inextensible measuring tape. Triceps and subscapular skinfolds thicknesses (mm) were measured using a Holtain skinfold caliper. Height was measured to the nearest 0.1 cm, with the subject bare foot and standing with their back to a stadiometer (GPM, Switzerland), for children over 36 mo of age. Length was measured to the nearest 0.1 cm using a wood stadiometer for children under 36 mo of age. Birth weight was obtained by interview of the mother. To validate these data, we compared, for 244 children, birth weights obtained from the interview and from an earlier prospective study of birth weights in the four study villages.[24] The two reports of birth weight for the same children had a Pearson correlation coefficient of 0.67.

ETHICS

All adult participants provided informed consent, and parents provided informed consent for their children. The study was approved by the Institutional Review Boards of the International Food Policy Research Institute and Emory University and Latin Ethics, an Institutional Review Board located in Guatemala City.

STATISTICS

We used linear regression to estimate the relationships between the offspring anthropometric measures and maternal exposure to the *atole* and *fresco* supplements, using offspring of unexposed women as the reference. We controlled for offspring sex and a fourth-order polynomial in child age (for measures other than birth weight), as well as a fourth-order polynomial in mother's date of birth to capture cohort and period effects on outcomes. In our basic specification, we did not control for birth weight or maternal height or schooling, as these might be pathways through which the nutritional supplements may have affected the child outcomes. We used four dummy variables to represent village fixed effects, with those who were born outside of the four villages constituting the comparison group. These village variables capture all fixed characteristics of these localities that might affect those who were born and raised in these villages. For instance, measures of grandparental schooling are higher in one of the *fresco* villages.[4] We calculated standard errors to allow for clustering at the mother level. We report parameter estimates and 95 percent confidence intervals. We use "significant" to refer to $p<0.05$. We used Stata version 10.0[25] for data analysis.

RESULTS

Table 1 provides descriptive statistics for child outcomes and some maternal characteristics disaggregated by maternal exposure to *atole*, *fresco* and not exposed. This

114 population showed evidence of linear growth retardation, with a mean height-for-age z-score
115 (using WHO[27, 28] standards) of -1.25, and 21.9 percent (279) of the children stunted.
116 Maternal childhood exposure to *atole* was associated with a 275 g (95 percent CI: 58, 492
117 g) higher birth weight, 1.91 kg (0.43, 3.38 kg) higher weight, 0.95 (0.28, 1.63) higher BMI, 0.88
118 cm (0.27, 1.49 cm) greater arm circumference, and 1.38 mm (0.47, 2.28 mm) greater triceps
119 skinfold thickness than for the controls (Table 2). There were modest and non-significant
120 positive associations of maternal childhood exposure to *atole* with height, head circumference
121 and subscapular skinfold thickness. Offspring of women exposed to *fresco* as children did not
122 differ from controls for any of the eight anthropometric outcomes considered.
123 Table 3 provides estimates for exposure to *atole* and to *fresco* characterized by exposure
124 cohort. The estimates for exposure to *atole* were all positive and were significant in 18 of the 20
125 possibilities for child birth weight, weight, BMI, arm circumference and triceps skinfold
126 thickness. For height, head circumference and subscapular skinfold thickness the associations
127 were modest and not significant for any exposure cohort. The estimates for exposure to *fresco*
128 were never significant.
129 We assessed the robustness of our basic results finding that (1) Paternal exposure to *atole*
130 or *fresco* was not associated with any of the eight offspring measures, and addition of paternal
131 characteristics did not affect the maternal estimates (Supplemental Appendix Table T2 A). (2)
132 Use of an alternate approach to estimation of standard errors[29,30] resulted in greater precision
133 (and significant effects for head circumference), so the precision of our basic estimates in Table
134 2 with clustering on mothers appear conservative (Table T2 B). (3) Adjustment for log maternal
135 height and schooling attainment did not change the estimated exposure effects substantially,
136 though one or both of these controls had significant coefficient estimates for all of the child

137 outcomes except for BMI (Table T2 C). (4) Adjustment for birth weight for the other seven
138 outcomes did not change the exposure coefficients substantially even though birth weight had
139 significant positive coefficient estimates for all but the two skinfold thickness indicators (Table
140 T2 D). (5) Dropping controls for village effects resulted in smaller confidence intervals and
141 attainment of statistical significance for height and head circumference in addition to the five
142 child outcomes for which significant coefficients are found in the basic estimates (Table T2 E).
143 (6) Testing for heterogeneous impacts by gender indicated no significant differences (Table T2
144 F). (7) Controlling for attrition using the Fitzgerald, Gottschalk and Moffitt[31, 32] methodology did
145 not change the estimates substantially (Tables T2 G-H). (8) Using the Donald-Lang[33]
146 differences-in-difference estimator based on the mother's village birth-year means (after
147 conditioning out variables that vary at the individual level), which reduces the degrees of
148 freedom from 616-626 to 112-155, does not change the estimates substantially and yields
149 estimates for birth weight and BMI that were significant ($p<0.01$), with those for weight
150 ($p<0.06$), arm circumference ($p<0.10$) and triceps skinfold thickness ($p<0.10$) somewhat more
151 imprecise (Table T2 I).

152 **DISCUSSION**

153 We report intergenerational associations of a nutritional intervention in early childhood
154 with mothers' offspring's anthropometric indicators. We find that maternal exposure to the *atole*
155 nutritional supplement at any time in the first 7 years of life had significant and substantial
156 associations with offspring birth weights and, through 12 y of age, weight, BMI, arm
157 circumference and triceps skinfold thickness. Our results were not changed substantially by
158 considering father's exposure in additional to mother's exposure, alternative approaches to
159 computation of standard errors, possible pathways for effects such as mother's height and

schooling attainment or (for the outcomes other than birth weight) birth weight, or exclusion of control for village fixed effects. They do not differ by child gender. These estimates indicate that maternal exposure to nutritional supplements during childhood was not associated with offspring height, head circumference or subscapular skinfold thickness. These results suggest strong intergenerational effects for some dimensions of child anthropometrics related to body mass and composition rather than linear growth. The birth weight results are particularly important given the strong effects of birth weight on child survival and over the life cycle.[34, 11, 35, 3] Our estimates disaggregated by ages of exposure indicate significantly greater effects for exposure when older than 2 y than for exposure during the first 2 y of life.

There has been one previous examination of aspects of this question, using data collected between 1996 and 1999 in this same longitudinal study population.[15] That study found that children born to women who received *atole* were taller (age-adjusted difference: 0.80 cm; 95 percent CI: 0.16, 1.44 cm) than were children whose mothers received *fresco*.[15] We note the similarity of the estimated impacts of mother's exposure to *atole* in the two studies, as well as the relative importance of supplementation received when the mothers were older. The confidence intervals found for height in the present study were much broader than found in the earlier study. There were several differences in the model specifications and samples used across these two analyses. The present study, in comparison with the earlier study,[15] has a larger sample of children (1,273 versus 263), larger sample of mothers (632 versus 231), broader geographical coverage (children of original sample members living in the original four villages plus elsewhere in the same department plus in the Guatemala City metropolitan area versus only living in the four villages), a different comparison for the supplementation (*atole* in comparison with no supplement and *fresco* in comparison with no supplement versus *atole* versus *fresco*), a wider

age range for children (0-12 y versus 0-3 y), and different treatment of village effects (control for being in the original four villages when the supplementation was underway versus no village controls) but fewer observations per child (one versus multiple measurements). We conclude that the differences in height attributable to maternal nutritional supplementation were modest, and detectable only with multiple observations per individual and in a model that did not adjust village fixed effects. Our results for measures of body mass were relatively larger and statistically significant even with but one observation per individual and with the inclusion of village fixed effects.

Our study has limitations. In the original INCAP longitudinal study the four villages, and not the individuals in the original sample within them, were randomized to either *atole* or *fresco* supplementation. The small number of villages does not provide enough power to estimate the effect of exposure to *atole* or *fresco* at the village level. Thus we used mother-child pairs as the unit of analysis. We exploited the fact that some of the mothers were not born in the four villages or were not not under 7 y of age during the 1969-77 supplementation period. For our more detailed characterization of exposure, we exploited the fact that the timing of exposure depends on date of birth. Further, we controlled for potentially confounding factors related to fixed village characteristics and to cohort and period effects and secular trends. Thus, while it is possible that there may be other time-varying village characteristics that are correlated with exposure to *atole* or *fresco* for which we do not control in these estimates, we perceive that the probability of significant bias is small.

Exposure of mothers to *atole* at ages older than 2 y appeared important. After about 4 y of age, a greater volume of *fresco* was ingested than *atole* and consequently, somewhat more micronutrients were contributed by the *fresco*, which had equal concentrations of these nutrients

as *atole*. Differences in energy derived from the supplements still favored *atole* after 4 y but the gap narrowed considerably; because *fresco* had no protein, the salient difference in the nutrient contribution from the supplements was in protein. We have no information on attendance and consumption of the supplements after age 7 y. While it is not possible to attribute effects of exposure to *atole* to any specific nutrient, the most likely nutrient to have produced the observed effects was protein. Also, exposure to *atole* after 3 y did not improve growth rates in either height or weight relative to exposure to fresco[26], making accelerated growth of the mother after 3 y an unlikely mechanism for the associations observed.

Strengths of our study are the nutritional intervention that was proven to have increased nutrient intakes and physical growth in children less than 3 y of age, the extended period of follow-up and the use of appropriate and robust statistical methods with a range of alternative estimates. Our analytic design uses data from all birth cohorts (as opposed to only comparing participants exposed to *atole* and *fresco* from 0–24 mo, for example) and for mothers from outside the four villages who provide a reference group.

Our estimates were significant and substantial for five offspring anthropometric indicators that represent aspects of adiposity. The offspring studied tended to be heavier on average than the WHO[27, 28] standards (mean BMI Z score of 0.21). Our results suggest that exposure to the nutritional supplements in later childhood may also have substantial effects on offspring adiposity. The first 24 months of life often have been characterized as a critical window for human capital development.[16, 17, 4, 5, 6] A recent series of reviews concluded that the first two years of life are critical for human capital development[6], that rapid weight gain after two years of age enhances risk for adiposity[6], and that complementary food supplementation is effective as a measure to prevent stunting in food insecure populations only for children younger

229 than 2 y.[36] Not only are food supplements ineffective for the prevention of stunting after age 2 y
230 but they may also increase the risk of obesity in settings where this problem is emerging as a
231 public health concern.[36] Our results add an additional concern; supplementation after age 2 y
232 may lead to increases in adiposity in the next generation. However, this concern has to be
233 tempered by the fact that birth weight also will be increased, which will result in better infant
234 outcomes to the extent that this aspect of birth weight is causally related to child well-being.
235 It is of great interest in future research to identify the pathways through which nutritional
236 supplementation of mothers when young affects their offspring. Finally, our findings underscore
237 the importance of further investigations of the long-term intergenerational effects of improving
238 childhood nutrition on their offspring in other settings.

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Table 1. Children's and mother's characteristics by exposure group in the Intergenerational Transfers Study (Guatemala, 2006-7)

	Mother Exposed to Atole			Mother Exposed to Fresco			Not Exposed (Reference Group)			Test for Difference in Means [p-value]*		
Offspring characteristics	**n**	**Mean**	**Std. Dev.**	**n**	**Mean**	**Std. Dev.**	**n**	**Mean**	**Std. Dev.**	**Fresco - Atole**	**Ref. Group - Atole**	**Ref. Group - Fresco**
Birthweight (grams) [n=1,324]	441	3,304	540	425	3,211	586	458	3,197	587	0.02	p<0.01	0.71
Height (cm) [n=1,273]	434	113.5	20.5	398	113.3	21.3	441	109.5	21.4	0.90	0.01	0.01
Weight (Kg) [n=1,349]	456	22.7	10.0	429	22.7	9.6	464	20.5	9.1	0.97	p<0.01	p<0.01
BMI [n=1,265]	432	16.8	2.6	398	16.8	2.5	435	16.3	2.2	0.80	p<0.01	p<0.01
Head circumference (cm) [n=1,349]	452	49.7	2.7	428	49.2	2.9	469	49.0	3.0	0.01	p<0.01	0.29
Arm circumference (cm) [n=1,341]	452	17.9	2.8	421	18.0	3.0	468	17.3	2.8	0.74	p<0.01	p<0.01
Triceps skinfold (mm) [n=1,350]	454	9.8	3.4	427	9.7	3.7	469	9.4	3.1	0.77	0.06	0.14
Subscapular skinfold (mm) [n=1,349]	454	6.6	2.9	427	6.8	3.1	468	6.4	2.8	0.23	0.26	0.02
(1) if male [n=1,365]	462	0.5	0.5	432	0.5	0.5	471	0.5	0.5	0.37	0.23	0.04
Age (months) [n=1,356]	457	83.5	38.2	429	86.0	39.7	470	77.6	38.9	0.33	0.02	p<0.01
Mothers' characteristics [n=632]	**n**	**Mean**	**Std. Dev.**	**n**	**Mean**	**Std. Dev.**	**n**	**Mean**	**Std. Dev.**	**Fresco - Atole**	**Ref. Group - Atole**	**Ref. Group - Fresco**
Current Age (years)	215	35.5	3.7	206	35.7	4.4	206	31.8	5.9	0.63	p<0.01	p<0.01
Height (cm)	217	151.4	5.0	209	149.7	4.9	206	150.6	4.7	p<0.01	0.09	0.07
Completed Grades of Schooling	217	4.6	3.1	209	5.3	2.9	206	5.2	3.4	0.01	0.04	0.70

* Null hypothesis is difference in means equals zero, alternative hypothesis is difference in means is different from zero.

Table 2. Association between maternal exposure to Atole or Fresco for mothers born between 1962 and 1977 and offspring anthropometric measures in 2006-7

	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Maternal exposure	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Atole	**275**	1.10	**1.91**	**0.95**	0.50	**0.88**	**1.38**	0.56
95% CI	58 , 492	-1.05 , 3.25	0.43 , 3.38	0.28 , 1.63	-0.12 , 1.11	0.27 , 1.49	0.47 , 2.28	-0.31 , 1.42
P value	0.01	0.32	0.01	0.01	0.11	p<0.01	p<0.01	0.21
Fresco	-92	0.19	0.32	-0.05	0.13	0.34	0.64	0.25
95% CI	-372 , 188	-1.94 , 2.32	-1.52 , 2.16	-1.01 , 0.91	-0.46 , 0.73	-0.57 , 1.26	-0.87 , 2.14	-0.90 , 1.40
P value	0.52	0.86	0.73	0.92	0.66	0.46	0.41	0.67
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349

Notes: Atole is a dummy variable that equals 1 for children born to mothers exposed to atole. Fresco is a dummy variable that equals 1 for children born to mothers exposed to fresco. Offspring of unexposed mothers constitutes the reference group.

Confidence intervals and p-values were calculated allowing for clustering at the mother level. Additional variables included but not reported are offspring sex, child's date of birth (for birth weight estimates) and a fourth-order polynomial in child age (for measures other than birth weight), as well as a fourth-order polynomial in mother's date of birth, four dummy variables to represent village fixed effects (reference group are mother's who were born outside of the four experimental villages) and a dummy variable for observations with missing data on mother's date of birth.

Table 3. Association between maternal exposure to Atole or Fresco for maternal birth cohorts between 1962 and 1977 and offspring anthropometric measures in 2006-7 *

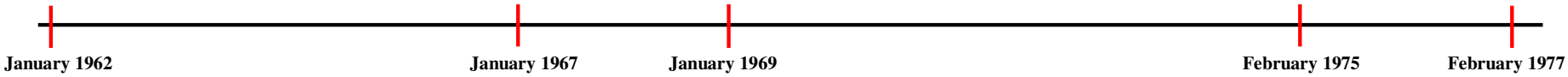
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Maternal exposure	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Atole								
Cohort 1	**241**	1.53	**1.60**	**0.74**	0.41	**0.79**	**1.29**	0.26
95% CI	0 , 482	-0.76 , 3.83	0.10 , 3.11	-0.00 , 1.48	-0.26 , 1.09	0.10 , 1.48	0.19 , 2.39	-0.65 , 1.17
P value	0.05	0.19	0.04	0.05	0.23	0.02	0.02	0.57
Cohort 2	**274**	0.98	**1.99**	**0.99**	0.43	**0.90**	**1.49**	0.90
95% CI	30 , 518	-1.36 , 3.32	0.40 , 3.59	0.27 , 1.71	-0.22 , 1.07	0.23 , 1.57	0.49 , 2.50	-0.05 , 1.86
P value	0.03	0.41	0.01	0.01	0.19	0.01	p<0.01	0.06
Cohort 3	**585**	0.95	**3.71**	**1.97**	0.50	**1.61**	**2.60**	1.28
95% CI	57 , 1,112	-1.93 , 3.83	0.63 , 6.79	0.64 , 3.29	-0.50 , 1.50	0.46 , 2.76	0.37 , 4.82	-0.34 , 2.91
P value	0.03	0.52	0.02	p<0.01	0.33	0.01	0.02	0.12
Cohort 4	**350**	0.22	2.22	**1.31**	0.58	**0.98**	1.13	0.16
95% CI	51 , 649	-2.93 , 3.36	-0.87 , 5.31	0.12 , 2.51	-0.27 , 1.44	0.06 , 1.89	-0.25 , 2.52	-1.10 , 1.43
P value	0.02	0.89	0.16	0.03	0.18	0.04	0.11	0.80
Fresco								
Cohort 1	-134	0.40	0.50	-0.04	0.27	0.32	0.51	0.23
95% CI	-432 , 163	-1.97 , 2.76	-1.45 , 2.44	-1.06 , 0.97	-0.37 , 0.91	-0.65 , 1.28	-1.09 , 2.11	-0.98 , 1.45
P value	0.38	0.74	0.62	0.93	0.41	0.52	0.53	0.71
Cohort 2	-116	0.20	0.88	0.20	-0.05	0.47	0.87	0.52
95% CI	-434 , 202	-2.23 , 2.63	-1.21 , 2.98	-0.86 , 1.26	-0.71 , 0.62	-0.52 , 1.46	-0.74 , 2.47	-0.76 , 1.80
P value	0.47	0.87	0.41	0.71	0.89	0.35	0.29	0.42
Cohort 3	55	-0.04	0.17	-0.08	0.31	0.31	0.12	-0.07
95% CI	-336 , 445	-2.83 , 2.74	-2.30 , 2.64	-1.39 , 1.23	-0.67 , 1.28	-0.84 , 1.46	-1.73 , 1.98	-1.55 , 1.41
P value	0.78	0.98	0.89	0.91	0.54	0.60	0.90	0.93
Cohort 4	78	-0.94	-0.34	-0.00	0.04	0.46	1.12	0.64
95% CI	-293 , 448	-4.09 , 2.21	-3.32 , 2.63	-1.27 , 1.26	-0.83 , 0.91	-0.73 , 1.65	-0.83 , 3.07	-1.01 , 2.29
P value	0.68	0.56	0.82	1.00	0.93	0.45	0.26	0.45
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349

* See Figure 1 for definitions of four cohorts.

Notes: Offspring of unexposed women constitutes the reference group for cohorts of maternal exposure to atole or fresco.

Confidence intervals and p-values were calculated allowing for clustering at the mother level. Additional variables included but not reported are offspring sex, child's date of birth (for birth weight estimates) and a fourth-order polynomial in child age (for measures other than birth weight), as well as a fourth-order polynomial in mother's date of birth, four dummy variables to represent village fixed effects (reference group are mother's who were born outside of the four experimental villages) and a dummy variable for observations with missing data on mother's date of birth.

Figure 1. Definition of Four Birth Cohorts Based on Whether Exposed for Complete Initial 24 mo of Life in Two More Populous Villages *



Cohort 4: No exposure during first 24 mo of life but some exposure when < 7 y and continuing for 8 y.
[n = 151]
Mean exposure: 8.0 y

Cohort 3: Some exposure during first 24 mo of life and continuing for 8 y, but not starting at birth.
[n = 65]
Mean exposure: 7.9 y

Cohort 2: Complete exposure during the first 24 mo of life and generally some exposure in utero and some later exposure for up to 8 y total.
[n = 480]
Mean exposure: 4.9 y

Cohort 1: Exposure started at 0 mo of age but not complete for first 24 mo of life.
[n = 198]
Mean exposure: 0.8 y **

Note: In each cohort definition, n refers to number of children of mothers born in the four cohorts. The regression analysis also includes 471 children of mothers who were not exposed to the supplementation trial between 0 and 7 y of age.

* In two less populous villages, supplementation was initiated in May 1969, thus the initial birthdates for the first three cohorts are pushed back to May 1962, 1967, and 1969, respectively .

** Following the original sample design, cohort 1 includes mothers born until 9 August 1977 (6 mothers in Atole villages and 10 in Fresco villages were born after Februay 1977).

ONLINE SUPPLEMENTAL MATERIAL

Appendix Text for Nutritional supplementation of girls influences the growth of their children: Prospective study in Guatemala

22 January 2009

1) Authors: Jere R. Behrman, Maria C. Calderon, Samuel H. Preston, John Hoddinott, Reynaldo Martorell and Aryeh D. Stein

2) Authors' affiliations: Department of Economics and Population Studies Center, University of Pennsylvania (JRB); Graduate Group in Demography, University of Pennsylvania, Philadelphia, Pennsylvania (MCC); Department of Sociology and Population Studies Center, University of Pennsylvania (SHP); International Food Policy Research Institute, Washington (JH); Hubert Department of Global Health, Rollins School of Public Health, Emory University (RM, ADS).

3) Corresponding author: Jere R. Behrman <jbehrman@econ.upenn.edu>, Economics Department, McNeil 160, 3718 Locust Walk, University of Pennsylvania, Philadelphia, PA 19104-6297, USA; phone 1 215 898 7704; fax 1 215 898 2124

INTRODUCTION

This appendix provides additional detail supporting the results reported in the paper "Nutritional supplementation of girls influences the growth of their children: Prospective study in Guatemala."

BASIC RESULTS (APPENDIX TABLE T2)

Appendix Table T2 presents the full results for the base specification used to explore the effect of the early childhood experimental nutritional intervention a quarter century later on child anthropometrics that are presented in text Table 2. We used linear regression to estimate the relationships between the offspring anthropometric measures and maternal exposure to the *atole*

and *fresco* supplements. We controlled for offspring sex and a fourth-order polynomial in child age (for measures other than birth weight), as well as a fourth-order polynomial in mother's date of birth to capture cohort and period effects on outcomes. In our basic specification, we did not control for birth weight or maternal height or schooling, as these might be pathways through which the nutritional supplements may have affected the child outcomes. We used four dummy variables (San Juan, Conacaste, Espiritu Santo and Santo Domingo) to represent village fixed effects, with the mothers who were from outside of the four villages constituting the comparison group. These village variables capture all fixed characteristics of these localities that might affect those who were born and raised in these villages. For instance, measures of grandparental schooling are higher in one of the *fresco* villages.[1] We calculated standard errors to allow for clustering at the mother level. We report parameter estimates and 95 percent confidence intervals. We use "significant" to refer to $p<0.05$. We used Stata version 10.0[2] for data analysis.

VARIANTS AND ROBUSTNESS CHECKS FOR BASIC RESULTS

(1) The basic results include only maternal exposure to *atole* or *fresco*. Including in addition paternal exposure to *atole* or *fresco* did not result in any significant associations of paternal exposure with any of the eight offspring measures. Addition of paternal characteristics, including village fixed effects for the father's early place of residence, did not affect the maternal estimates (Appendix Table T2 A).

(2) The p-values (and 95% confidence intervals) reported in the paper are based on standard errors that were calculated allowing for clustering at the mother level.[2, 3] We compared this approach with the alternative of the Huber-White[4, 5] method, which allows for heteroscedasticity of unknown form, but not for clustering. This alternative resulted in greater precision (and

significant effects for head circumference), so the precision of our basic estimates in Table 2 with clustering on mothers appears conservative (Table T2 B).

(3) Maternal height and schooling attainment are plausible pathways through which early-life nutrition might affect offspring nutrition. We did not include them in the basic estimates because, if they are pathways, their inclusion would obscure the total effects. But they were included in the basic estimates of a related study.[6] Adjustment for log maternal height and schooling attainment did not change the estimated exposure effects substantially, though one or both of these controls had significant coefficient estimates for all of the child outcomes except for BMI (Table T2 C).

(4) The offspring birth weight is a possible pathway through which maternal early life nutrition affected offspring nutrition. We did not include birth weight in the basic estimates because, if birth weight is a pathway, its inclusion would obscure the total effects. But birth weight was included in the basic estimates of a related study.[6] Adjustment for birth weight for the other seven outcomes did not change the exposure coefficients substantially even though birth weight had significant positive coefficient estimates for all but the two skinfold thickness indicators (Table T2 D).

(5) The original design of the nutritional supplementation was on the village level as described in the paper. The basic specification included village effects to attempt to preclude the possibility that the indicators of exposure to the supplements might have been confounded by other village characteristics and in part proxied for those other village characteristics though a related study did not include village effects.[6] Dropping controls for village effects resulted in smaller confidence intervals and attainment of statistical significance for height and head circumference

in addition to the five child outcomes for which significant coefficients are found in the basic estimates (Table T2 E).

(6) There may have been differential effects depending on the gender of the offspring as found in a related sudy.[6] Testing for heterogeneous impacts by gender indicated no significant differences (Table T2 F).

(7) There was attrition of children between the 2002-4 data collection and the 2006-7 data collection that was the source for the child anthropometric measures used in this study. For example, for birth weight 1,041 children of the 1,686 children of the right age range in the 2002-4 data were in both samples. (The numbers present in both samples varied slightly by outcome because of missing observations on some outcomes.) Controlling for attrition using the Fitzgerald, Gottschalk and Moffitt[7, 8] methodology did not change the estimates substantially (Tables T2 G-H). We first estimated an "attrition" probit on all alive offspring in the 2002-4 data, assigning them a 1 if they were in the analytic 2006-7 sample and zero otherwise. Children born between the two data collections were excluded from the "attrition" probit. We conditioned on all the independent variables considered in the main models, as well as an additional set of variables potentially associated with attrition, taken from the 1969–77 study as well as later study-related village censuses that occurred each decade.[9] We included a number of variables that reflect family structure in previous years, since these are likely to be associated with parental migration status—indicators of whether the grandparents were alive when each sample member mother or father was 7 y old and whether the sample mothers or fathers lived with both their parents in 1975 or in 1987. During the fieldwork in 2006–7, locating sample members was typically facilitated by having access to other family members from whom the field team could gather information. Therefore, we also included a number of variables that capture this feature of

the success of data collection. They include whether the mothers' and fathers' parents were alive in 2002, whether they lived in the original village, whether a sibling of the sample mothers and fathers had been interviewed in the 2002–4 follow-up survey, and the number of siblings of the mothers and of the fathers in the sample in each family. While we do not formally have adjustments to correct for selection on unmeasured characteristics, by including the measured characteristics indicated above, which are likely to be correlated with unmeasured characteristics, we expect that we reduced the scope for attrition bias due to unmeasured characteristics as well. The factors described above were highly significant in predicting attrition, above and beyond the conditioning variables already included in the models (see Table T2 H). Following Fitzgerald, Gottschalk, and, Moffitt,[7] we reweighted the estimates shown in Table 2 in the paper; these results are shown in Table T2 G. We interpret these findings to mean that, as found in other contexts with high attrition,[1, 8, 10, 11] our results do not appear to be driven by attrition biases.

(8) Because the original design of the supplementation was at the village level with different birth cohorts of mothers having different exposures depending on their birth years, not the individual level, a relatively conservative approach was to use the village birth-year means rather than the individual observations for the estimates. Using the Donald-Lang[12] differences-in-difference estimator based on the village birth-year means (after conditioning out variables that vary at the individual level such as child sex and a fourth order polynomial in child age except for the birth weight outcome in which case the polynomial was in child birth year), which reduces the degrees of freedom from 616-626 to 112-155, did not change the estimates substantially and yielded estimates for birth weight and BMI that were significant ($p<0.01$), with

those for weight ($p<0.06$), arm circumference ($p<0.10$) and triceps skinfold thickness ($p<0.10$) somewhat more imprecise (Table T2 I).

RESULTS BY DIFFERENT EXPOSURE COHORTS

In Text Table 3 we provide estimates for exposure to *atole* and to *fresco* characterized by exposure cohort as defined in Figure 1 in the paper. Appendix Table T3 gives the full results for these estimates, with a number of controls identical to those that are included in the full estimates for Table 2 (see Appendix Section 2 above).

CONCLUSIONS

Through consideration of a series of additional specifications under varying assumptions, we have demonstrated the stability of the results reported in the paper: Nutritional supplementation of girls – particularly but not exclusively limited to exposure at ages beyond the first 2 y of life -- leads to substantial increases in offspring birth weight and in indicators of fatness

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T2	Effect of maternal exposure to Atole or Fresco for mothers born between 1962 and 1977 on offspring anthropometric measures in 2006-7 (Basis for Table 2 in Main Text)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics								
Atole	**275**	1.10	**1.91**	**0.95**	0.50	**0.88**	**1.38**	0.56
95% CI	58 , 492	-1.05 , 3.25	0.43 , 3.38	0.28 , 1.63	-0.12 , 1.11	0.27 , 1.49	0.47 , 2.28	-0.31 , 1.42
P value	**0.013**	0.316	**0.011**	**0.006**	0.113	**0.005**	**0.003**	0.205
SE	111	1.09	0.75	0.34	0.31	0.31	0.46	0.44
Fresco	-92	0.19	0.32	-0.05	0.13	0.34	0.64	0.25
95% CI	-372 , 188	-1.94 , 2.32	-1.52 , 2.16	-1.01 , 0.91	-0.46 , 0.73	-0.57 , 1.26	-0.87 , 2.14	-0.90 , 1.40
P value	0.518	0.862	0.733	0.918	0.659	0.461	0.407	0.672
SE	143	1.08	0.94	0.49	0.30	0.47	0.77	0.58
Date of birth	2,726	-0.35	3.53	-1.65	0.75	-0.33	-5.69	-0.34
95% CI	-1,022 , 6,475	-15.72 , 15.03	-13.81 , 20.87	-10.34 , 7.04	-4.04 , 5.53	-7.46 , 6.79	-16.60 , 5.22	-7.73 , 7.05
P value	0.154	0.965	0.689	0.709	0.760	0.927	0.306	0.929
SE	1,909	7.83	8.83	4.42	2.44	3.63	5.56	3.76
Date of birth squared	-126	-0.07	-0.23	0.06	-0.04	-0.01	0.24	0.01
95% CI	-295 , 43	-0.80 , 0.66	-1.04 , 0.57	-0.33 , 0.46	-0.26 , 0.19	-0.33 , 0.32	-0.26 , 0.75	-0.34 , 0.36
P value	0.143	0.845	0.568	0.751	0.739	0.972	0.344	0.953
SE	86	0.37	0.41	0.20	0.11	0.17	0.26	0.18
Date of birth cubed	3	0.00	0.01	-0.00	0.00	0.00	-0.00	-0.00
95% CI	-1 , 6	-0.01 , 0.02	-0.01 , 0.02	-0.01 , 0.01	-0.00 , 0.01	-0.01 , 0.01	-0.01 , 0.01	-0.01 , 0.01
P value	0.135	0.689	0.486	0.776	0.731	0.893	0.376	0.962
SE	2	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	-0.00	0.00	0.00
95% CI	-0.04 , 0.01	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.129	0.563	0.430	0.785	0.734	0.836	0.397	0.956
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-165	-0.49	-0.72	-0.32	-0.10	-0.44	-1.08	-0.53
95% CI	-382 , 53	-2.53 , 1.55	-2.03 , 0.58	-0.94 , 0.29	-0.67 , 0.47	-1.00 , 0.12	-1.91 , -0.26	-1.33 , 0.28
P value	0.137	0.639	0.278	0.301	0.721	0.123	0.010	0.198
SE	111	1.04	0.67	0.31	0.29	0.29	0.42	0.41
Conacaste	-160	0.93	-0.57	-0.61	-0.04	-0.55	-0.73	-0.13
95% CI	-377 , 56	-1.26 , 3.11	-2.07 , 0.94	-1.30 , 0.07	-0.68 , 0.59	-1.17 , 0.07	-1.66 , 0.19	-1.04 , 0.78
P value	0.146	0.405	0.458	0.080	0.889	0.080	0.121	0.780
SE	110	1.11	0.77	0.35	0.32	0.31	0.47	0.47
Espiritu Santo	183	-0.21	0.04	0.22	-0.73	-0.21	-0.65	-0.14
95% CI	-95 , 460	-2.11 , 1.69	-1.73 , 1.82	-0.73 , 1.18	-1.27 , -0.19	-1.10 , 0.68	-2.14 , 0.84	-1.28 , 1.00
P value	0.196	0.828	0.962	0.645	0.008	0.648	0.389	0.813
SE	141	0.97	0.90	0.49	0.28	0.45	0.76	0.58
Santo Domingo	28	-0.40	0.27	0.59	0.04	0.03	-0.01	0.38
95% CI	-257 , 313	-2.64 , 1.84	-1.59 , 2.12	-0.36 , 1.54	-0.59 , 0.66	-0.89 , 0.96	-1.52 , 1.50	-0.79 , 1.56
P value	0.848	0.728	0.779	0.225	0.909	0.944	0.987	0.523
SE	145	1.14	0.95	0.48	0.32	0.47	0.77	0.60
Child's characteristics								
Sex	127	0.62	0.02	0.05	0.97	-0.14	-1.55	-0.97

95% CI	63 , 191	0.08 , 1.16	-0.51 , 0.56	-0.19 , 0.29	0.82 , 1.13	-0.34 , 0.06	-1.88 , -1.21	-1.27 , -0.68
P value	0.000	0.025	0.930	0.662	0.000	0.176	0.000	0.000
SE	33	0.27	0.27	0.12	0.08	0.10	0.17	0.15
Trend	-0.01							
95% CI	-0.03 , 0.02							
P value	0.673							
SE	0.01							
Age (months)		1.30	0.27	-0.01	0.49	0.16	0.07	-0.05
95% CI		1.17 , 1.43	0.18 , 0.36	-0.07 , 0.05	0.44 , 0.54	0.11 , 0.20	-0.01 , 0.14	-0.11 , 0.02
P value		0.000	0.000	0.697	0.000	0.000	0.078	0.180
SE		0.07	0.05	0.03	0.03	0.02	0.04	0.03
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.00 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.216	0.412	0.000	0.001	0.116	0.866
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.587	0.250	0.000	0.011	0.143	0.488
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.034	0.864	0.354	0.000	0.085	0.239	0.517
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-18,409	75.11	-7.40	32.77	33.41	19.25	57.48	11.97
95% CI	-49,145 , 12,327	-43.84 , 194.06	-144.85 , 130.04	-37.02 , 102.57	-4.54 , 71.35	-38.27 , 76.77	-30.07 , 145.03	-45.71 , 69.64
P value	0.240	0.215	0.916	0.357	0.084	0.511	0.198	0.684
SE	15,651	60.57	69.99	35.54	19.32	29.29	44.58	29.37
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,262.575	-3,850.064	-4,033.053	-2,790.032	-2,385.803	-2,751.526	-3,447.895	-3,257.612
Adj R2	0.026	0.944	0.746	0.168	0.755	0.567	0.159	0.136
F Test	3.352	1,744.047	443.187	11.383	123.507	102.639	14.762	14.492
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,553.149	7,734.129	8,100.107	5,614.064	4,803.605	5,537.052	6,929.790	6,549.223
BIC	20,625.787	7,821.664	8,188.628	5,701.492	4,886.919	5,625.472	7,018.323	6,637.745
BIC_C	20,615.052	7,809.352	8,175.549	5,689.231	4,874.660	5,612.494	7,005.259	6,624.692
N cluster	615	617	625	615	627	625	626	626

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 A	T2 + Father's Characteristics							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	**Height (cm)**	**Weight (Kg)**	**BMI**	**Head circumference (cm)**	**Arm circumference (cm)**	**Triceps skinfold (mm)**	**Subscapular skinfold (mm)**
Mother's characteristics								
Atole	**323**	0.31	1.10	**0.76**	0.37	**0.68**	**1.23**	0.44
95% CI	108 , 537	-1.88 , 2.50	-0.36 , 2.55	0.07 , 1.45	-0.26 , 1.00	0.04 , 1.32	0.27 , 2.19	-0.47 , 1.35
P value	**0.003**	0.782	0.139	**0.032**	0.250	**0.036**	**0.012**	0.340
SE	109	1.12	0.74	0.35	0.32	0.32	0.49	0.46
Fresco	-0.46	0.49	0.49	-0.06	-0.03	0.33	0.68	0.35
95% CI	-287 , 286	-1.73 , 2.71	-1.48 , 2.46	-1.09 , 0.96	-0.65 , 0.60	-0.63 , 1.29	-0.89 , 2.26	-0.87 , 1.57
P value	0.997	0.663	0.626	0.902	0.935	0.502	0.394	0.574
SE	146	1.13	1.00	0.52	0.32	0.49	0.80	0.62
Date of birth	2,379	0.78	4.13	-1.55	0.24	0.08	-4.42	0.46
95% CI	-1,289 , 6,047	-14.18 , 15.75	-11.53 , 19.79	-9.57 , 6.46	-4.50 , 4.98	-6.89 , 7.05	-15.16 , 6.31	-6.76 , 7.68
P value	0.203	0.918	0.605	0.704	0.920	0.981	0.419	0.900
SE	1,868	7.62	7.98	4.08	2.41	3.55	5.47	3.68
Date of birth squared	-111	-0.12	-0.24	0.07	-0.02	-0.02	0.18	-0.03
95% CI	-276 , 54	-0.83 , 0.59	-0.95 , 0.47	-0.30 , 0.43	-0.24 , 0.20	-0.34 , 0.29	-0.31 , 0.68	-0.37 , 0.31
P value	0.185	0.740	0.507	0.725	0.871	0.880	0.467	0.877
SE	84	0.36	0.36	0.19	0.11	0.16	0.25	0.17
Date of birth cubed	2	0.00	0.01	-0.00	0.00	0.00	-0.00	0.00
95% CI	-1 , 6	-0.01 , 0.02	-0.01 , 0.02	-0.01 , 0.01	-0.00 , 0.01	-0.01 , 0.01	-0.01 , 0.01	-0.01 , 0.01
P value	0.171	0.599	0.440	0.734	0.833	0.803	0.503	0.871
SE	2	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	-0.00	0.00	-0.00
95% CI	-0.04 , 0.01	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.160	0.491	0.395	0.729	0.810	0.749	0.524	0.880
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-77	0.69	-0.17	-0.31	-0.11	-0.34	-0.98	-0.41
95% CI	-301 , 147	-1.42 , 2.80	-1.53 , 1.18	-0.97 , 0.35	-0.71 , 0.49	-0.94 , 0.26	-1.88 , -0.09	-1.27 , 0.46
P value	0.499	0.519	0.804	0.359	0.713	0.265	0.031	0.357
SE	114	1.07	0.69	0.34	0.30	0.30	0.45	0.44
Conacaste	-195	1.12	0.29	-0.26	-0.07	-0.27	-0.38	0.16
95% CI	-415 , 25	-1.10 , 3.35	-1.24 , 1.83	-0.98 , 0.46	-0.71 , 0.56	-0.93 , 0.40	-1.37 , 0.60	-0.78 , 1.10
P value	0.082	0.322	0.708	0.480	0.825	0.427	0.448	0.737
SE	112	1.13	0.78	0.37	0.32	0.34	0.50	0.48
Espiritu Santo	73	-1.35	-0.68	0.13	-0.57	-0.34	-0.72	-0.33
95% CI	-233 , 380	-3.41 , 0.70	-2.62 , 1.25	-0.89 , 1.14	-1.18 , 0.03	-1.29 , 0.60	-2.27 , 0.84	-1.52 , 0.86
P value	0.639	0.196	0.489	0.808	0.064	0.478	0.366	0.591
SE	156	1.05	0.99	0.52	0.31	0.48	0.79	0.61
Santo Domingo	-15	-1.47	-0.43	0.41	0.02	-0.19	-0.30	0.14
95% CI	-309 , 278	-3.76 , 0.82	-2.38 , 1.53	-0.59 , 1.41	-0.65 , 0.69	-1.15 , 0.77	-1.86 , 1.27	-1.08 , 1.35
P value	0.918	0.207	0.667	0.423	0.951	0.695	0.710	0.827
SE	150	1.17	0.99	0.51	0.34	0.49	0.80	0.62
Father's characteristics								

Atole	116	-1.96	-1.08	-0.03	-0.30	-0.05	0.28	0.48
95% CI	-81 , 313	-3.98 , 0.06	-2.71 , 0.56	-0.85 , 0.80	-0.94 , 0.34	-0.77 , 0.67	-0.99 , 1.56	-0.33 , 1.29
P value	0.249	0.058	0.196	0.948	0.357	0.892	0.664	0.247
SE	100	1.03	0.83	0.42	0.32	0.37	0.65	0.41
Fresco	29	0.15	0.49	0.27	0.10	0.16	0.71	0.82
95% CI	-278 , 335	-2.28 , 2.59	-1.47 , 2.46	-0.67 , 1.20	-0.54 , 0.74	-0.65 , 0.98	-0.78 , 2.20	-0.31 , 1.95
P value	0.855	0.902	0.621	0.574	0.761	0.694	0.350	0.153
SE	156	1.24	1.00	0.48	0.32	0.41	0.76	0.58
Date of birth	227	0.80	-4.49	-1.77	-0.06	-0.25	0.29	-0.10
95% CI	83 , 372	-0.25 , 1.84	-6.32 , -2.65	-2.92 , -0.61	-0.33 , 0.21	-0.69 , 0.19	-0.57 , 1.14	-0.93 , 0.74
P value	0.002	0.135	0.000	0.003	0.667	0.265	0.508	0.822
SE	74	0.53	0.94	0.59	0.14	0.22	0.44	0.43
Date of birth squared	-14	-0.05	0.26	0.10	0.01	0.02	-0.03	0.00
95% CI	-26 , -2	-0.13 , 0.04	0.14 , 0.39	0.03 , 0.18	-0.02 , 0.03	-0.02 , 0.05	-0.09 , 0.04	-0.06 , 0.06
P value	0.022	0.298	0.000	0.009	0.532	0.368	0.407	0.986
SE	6	0.04	0.06	0.04	0.01	0.02	0.03	0.03
Date of birth cubed	0.34	0.00	-0.01	-0.00	-0.00	-0.00	0.00	0.00
95% CI	-0.01 , 0.69	-0.00 , 0.00	-0.01 , -0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.060	0.369	0.000	0.016	0.469	0.442	0.324	0.917
SE	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Date of birth to the fourth	-0.00	-0.00	0.00	0.00	0.00	0.00	-0.00	-0.00
95% CI	-0.01 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.105	0.399	0.001	0.025	0.457	0.501	0.265	0.847
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-123	-0.75	-0.36	-0.19	-0.02	-0.37	-0.61	-0.80
95% CI	-346 , 100	-2.80 , 1.30	-1.96 , 1.24	-1.01 , 0.64	-0.67 , 0.63	-1.10 , 0.36	-1.87 , 0.64	-1.60 , 0.01
P value	0.279	0.473	0.660	0.657	0.941	0.323	0.338	0.053
SE	113.48	1.04	0.82	0.42	0.33	0.37	0.64	0.41
Conacaste	49	1.30	-0.17	-0.56	0.08	-0.54	-0.93	-0.97
95% CI	-163 , 260	-0.88 , 3.48	-1.96 , 1.62	-1.45 , 0.33	-0.56 , 0.71	-1.30 , 0.23	-2.30 , 0.43	-1.85 , -0.09
P value	0.650	0.243	0.850	0.217	0.813	0.168	0.179	0.031
SE	108	1.11	0.91	0.45	0.32	0.39	0.69	0.45
Espiritu Santo	208	-0.04	-0.36	-0.37	-0.58	-0.36	-1.01	-0.85
95% CI	-104 , 520	-2.46 , 2.39	-2.29 , 1.58	-1.27 , 0.54	-1.22 , 0.06	-1.16 , 0.43	-2.46 , 0.44	-1.94 , 0.23
P value	0.192	0.977	0.716	0.426	0.078	0.372	0.172	0.123
SE	159	1.23	0.99	0.46	0.33	0.41	0.74	0.55
Santo Domingo	90	-0.12	-0.54	-0.28	-0.27	-0.21	-0.59	-0.77
95% CI	-216 , 397	-2.54 , 2.31	-2.47 , 1.39	-1.18 , 0.62	-0.89 , 0.35	-1.02 , 0.60	-2.08 , 0.90	-1.90 , 0.36
P value	0.563	0.925	0.582	0.541	0.397	0.610	0.438	0.183
SE	156	1.24	0.98	0.46	0.32	0.41	0.76	0.58
Child's characteristics								
Sex	128	0.57	-0.00	0.04	0.95	-0.15	-1.57	-0.99
95% CI	65 , 192	0.03 , 1.11	-0.52 , 0.51	-0.21 , 0.28	0.80 , 1.11	-0.35 , 0.05	-1.91 , -1.23	-1.29 , -0.69
P value	0.000	0.037	0.989	0.764	0.000	0.147	0.000	0.000
SE	32	0.27	0.26	0.12	0.08	0.10	0.17	0.15
Trend	-0.00							
95% CI	-0.03 , 0.03							
P value	0.869							
SE	0.01							
Age (months)		1.29	0.26	-0.02	0.49	0.15	0.06	-0.05

95% CI		1.16 , 1.42	0.17 , 0.35	-0.08 , 0.05	0.44 , 0.54	0.10 , 0.20	-0.01 , 0.14	-0.12 , 0.02
P value		0.000	0.000	0.620	0.000	0.000	0.103	0.165
SE		0.07	0.05	0.03	0.03	0.03	0.04	0.04
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.00 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.320	0.517	0.000	0.001	0.154	0.956
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.749	0.332	0.000	0.019	0.188	0.575
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.041	0.711	0.447	0.000	0.123	0.303	0.605
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-16,730	60.85	10.19	41.89	38.22	17.38	47.33	7.19
95% CI	-46,853 , 13,393	-55.60 , 177.30	-117.39 , 137.76	-23.27 , 107.04	0.77 , 75.67	-38.98 , 73.74	-38.82 , 133.48	-49.70 , 64.08
P value	0.276	0.305	0.875	0.207	0.046	0.545	0.281	0.804
SE	15,339	59.30	64.96	33.18	19.07	28.70	43.87	28.97
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,244.143	-3,830.673	-3,990.195	-2,765.635	-2,375.173	-2,744.107	-3,441.778	-3,252.219
Adj R2	0.046	0.945	0.760	0.193	0.757	0.568	0.160	0.137
F Test	6.391	1060.571	273.308	7.942	79.809	66.409	9.745	9.477
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,536.286	7,715.346	8,034.389	5,585.270	4,802.346	5,542.213	6,937.555	6,558.439
BIC	20,660.808	7,854.373	8,174.981	5,724.127	4,937.731	5,682.645	7,078.167	6,699.031
BIC_C	20,642.405	7,834.818	8,154.208	5,704.654	4,917.811	5,662.033	7,057.418	6,678.301
N cluster	615	617	625	615	627	625	626	626

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variables included but not reported are dummy variables for observations with missing data on mother's and father's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 B	T2 with Huber-White (Robust) Standard Errors							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics								
Atole	**275**	1.10	**1.91**	**0.95**	**0.50**	**0.88**	**1.38**	0.56
95% CI	116 , 434	-0.53 , 2.72	0.73 , 3.08	0.37 , 1.54	0.03 , 0.96	0.38 , 1.38	0.63 , 2.12	-0.24 , 1.35
P value	**0.001**	0.185	**0.001**	**0.001**	**0.037**	**0.001**	**0.000**	0.168
SE	81	0.83	0.60	0.30	0.24	0.25	0.38	0.41
Fresco	-92	0.19	0.32	-0.05	0.13	0.34	0.64	0.25
95% CI	-310 , 125	-1.69 , 2.07	-1.21 , 1.84	-0.87 , 0.77	-0.35 , 0.62	-0.39 , 1.08	-0.57 , 1.84	-0.72 , 1.21
P value	0.406	0.844	0.681	0.904	0.587	0.359	0.299	0.615
SE	111	0.96	0.78	0.42	0.25	0.37	0.61	0.49
Date of birth	2,726	-0.35	3.53	-1.65	0.75	-0.33	-5.69	-0.34
95% CI	-583 , 6,036	-12.87 , 12.18	-11.97 , 19.03	-9.99 , 6.69	-3.49 , 4.98	-7.08 , 6.41	-15.86 , 4.48	-7.23 , 6.56
P value	0.106	0.957	0.655	0.698	0.730	0.923	0.273	0.924
SE	1,687	6.38	7.90	4.25	2.16	3.44	5.18	3.51
Date of birth squared	-126	-0.07	-0.23	0.06	-0.04	-0.01	0.24	0.01
95% CI	-274 , 22	-0.66 , 0.52	-0.95 , 0.48	-0.32 , 0.45	-0.23 , 0.16	-0.31 , 0.30	-0.22 , 0.71	-0.31 , 0.33
P value	0.095	0.810	0.518	0.740	0.704	0.971	0.307	0.949
SE	76	0.30	0.36	0.19	0.10	0.16	0.24	0.16
Date of birth cubed	3	0.00	0.01	-0.00	0.00	0.00	-0.00	-0.00
95% CI	-0.4 , 5	-0.01 , 0.02	-0.01 , 0.02	-0.01 , 0.01	-0.00 , 0.00	-0.01 , 0.01	-0.01 , 0.00	-0.01 , 0.01
P value	0.086	0.618	0.425	0.765	0.692	0.886	0.337	0.959
SE	1	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	-0.00	0.00	0.00
95% CI	-0.04 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.081	0.471	0.362	0.774	0.692	0.824	0.357	0.952
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-165	-0.49	-0.72	-0.32	-0.10	-0.44	-1.08	-0.53
95% CI	-321 , -8	-2.04 , 1.07	-1.78 , 0.34	-0.86 , 0.21	-0.54 , 0.34	-0.91 , 0.03	-1.78 , -0.39	-1.27 , 0.22
P value	0.039	0.538	0.180	0.237	0.644	0.066	0.002	0.168
SE	80	0.79	0.54	0.27	0.22	0.24	0.35	0.38
Conacaste	-160	0.93	-0.57	-0.61	-0.04	-0.55	-0.73	-0.13
95% CI	-321 , 0.1	-0.70 , 2.56	-1.77 , 0.63	-1.21 , -0.01	-0.52 , 0.43	-1.06 , -0.04	-1.48 , 0.02	-0.98 , 0.72
P value	0.050	0.265	0.354	0.046	0.853	0.033	0.057	0.764
SE	82	0.83	0.61	0.31	0.24	0.26	0.38	0.43
Espiritu Santo	183	-0.21	0.04	0.22	-0.73	-0.21	-0.65	-0.14
95% CI	-34 , 399	-1.96 , 1.54	-1.44 , 1.53	-0.58 , 1.03	-1.18 , -0.29	-0.93 , 0.52	-1.85 , 0.54	-1.11 , 0.84
P value	0.098	0.813	0.955	0.587	0.001	0.576	0.285	0.782
SE	110	0.89	0.76	0.41	0.23	0.37	0.61	0.50
Santo Domingo	28	-0.40	0.27	0.59	0.04	0.03	-0.01	0.38
95% CI	-194 , 249	-2.36 , 1.56	-1.27 , 1.80	-0.23 , 1.41	-0.46 , 0.54	-0.70 , 0.77	-1.22 , 1.19	-0.60 , 1.36
P value	0.806	0.691	0.735	0.161	0.887	0.930	0.984	0.444
SE	113	1.00	0.78	0.42	0.25	0.38	0.61	0.50
Child's characteristics								

Sex	127	0.62	0.02	0.05	0.97	-0.14	-1.55	-0.97
95% CI	66 , 188	0.06 , 1.17	-0.50 , 0.54	-0.19 , 0.30	0.82 , 1.13	-0.34 , 0.07	-1.88 , -1.21	-1.27 , -0.68
P value	0.000	0.029	0.928	0.671	0.000	0.181	0.000	0.000
SE	31	0.28	0.26	0.12	0.08	0.10	0.17	0.15
Trend	-0.01							
95% CI	-0.03 , 0.02							
P value	0.677							
SE	0.01							
Age (months)		1.30	0.27	-0.01	0.49	0.16	0.07	-0.05
95% CI		1.17 , 1.44	0.17 , 0.36	-0.08 , 0.05	0.44 , 0.54	0.11 , 0.20	-0.01 , 0.14	-0.11 , 0.02
P value		0.000	0.000	0.700	0.000	0.000	0.091	0.190
SE		0.07	0.05	0.03	0.03	0.03	0.04	0.04
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.01 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.227	0.420	0.000	0.001	0.133	0.870
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.593	0.258	0.000	0.014	0.158	0.502
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.045	0.865	0.362	0.000	0.096	0.253	0.529
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-18,409	75.11	-7.40	32.77	33.41	19.25	57.48	11.97
95% CI	-45,713 , 8,895	-22.74 , 172.97	-132.08 , 117.28	-34.55 , 100.10	-0.66 , 67.47	-35.62 - 74.13	-24.72 , 139.68	-42.22 , 66.16
P value	0.186	0.132	0.907	0.340	0.055	0.491	0.170	0.665
SE	13,918	49.88	63.56	34.32	17.37	27.97	41.90	27.62
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,262.575	-3,850.064	-4,033.053	-2,790.032	-2,385.803	-2,751.526	-3,447.895	-3,257.612
Adj R2	0.026	0.944	0.746	0.168	0.755	0.567	0.159	0.136
F Test	4.203	1637.449	503.264	11.158	185.401	112.213	14.886	13.198
Prob >F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,553.149	7,734.129	8,100.107	5,614.064	4,803.605	5,537.052	6,929.790	6,549.223
BIC	20,625.787	7,821.664	8,188.628	5,701.492	4,886.919	5,625.472	7,018.323	6,637.745

Notes: Confidence intervals, p-values and standard errors were calculated using the Huber-White method. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 C	T2 + Mother's log Height and Completed Grades of Schooling							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	**Height (cm)**	**Weight (Kg)**	**BMI**	**Head circumference (cm)**	**Arm circumference (cm)**	**Triceps skinfold (mm)**	**Subscapular skinfold (mm)**
Mother's characteristics								
Atole	**259**	1.63	**2.20**	**0.99**	0.59	**0.98**	**1.54**	0.63
95% CI	50 , 469	-0.47 , 3.73	0.75 , 3.65	0.32 , 1.67	-0.02 , 1.19	0.37 , 1.59	0.65 , 2.44	-0.27 , 1.52
P value	**0.015**	0.127	**0.003**	**0.004**	0.059	**0.002**	**0.001**	0.171
SE	107	1.07	0.74	0.34	0.31	0.31	0.46	0.46
Fresco	-60	0.89	0.46	-0.07	0.25	0.34	0.54	0.20
95% CI	-329 , 208	-1.23 , 3.01	-1.32 , 2.24	-1.01 , 0.87	-0.32 , 0.83	-0.57 , 1.24	-0.93 , 2.01	-0.93 , 1.32
P value	0.660	0.412	0.611	0.886	0.387	0.465	0.471	0.733
SE	137	1.08	0.90	0.48	0.29	0.46	0.75	0.57
Log height	2,296	42.15	6.96	-3.64	6.17	-0.97	-8.22	-5.83
95% CI	1,001 , 3,591	31.17 , 53.13	-7.77 , 21.68	-9.27 , 1.98	3.15 , 9.18	-4.67 , 2.72	-14.19 , -2.26	-10.97 , -0.68
P value	0.001	0.000	0.354	0.204	0.000	0.606	0.007	0.027
SE	660	5.59	7.50	2.86	1.54	1.88	3.04	2.62
Completed grades schooling	-3	0.35	0.27	0.05	0.07	0.09	0.14	0.08
95% CI	-18 , 12	0.23 , 0.47	0.16 , 0.39	-0.00 , 0.10	0.03 , 0.10	0.05 , 0.13	0.07 , 0.21	0.02 , 0.14
P value	0.682	0.000	0.000	0.064	0.000	0.000	0.000	0.015
SE	7	0.06	0.06	0.03	0.02	0.02	0.04	0.03
Date of birth	2,462	-2.63	1.81	-1.77	0.47	-0.85	-6.43	-0.66
95% CI	-1,103 , 6,027	-16.77 , 11.52	-15.39 , 19.00	-10.23 , 6.69	-4.30 , 5.24	-7.81 , 6.11	-17.14 , 4.27	-8.04 , 6.72
P value	0.176	0.715	0.837	0.681	0.847	0.811	0.238	0.860
SE	1,816	7.20	8.76	4.31	2.43	3.54	5.45	3.76
Date of birth squared	-114	0.05	-0.15	0.07	-0.02	0.02	0.28	0.03
95% CI	-275 , 46	-0.62 , 0.72	-0.95 , 0.65	-0.32 , 0.46	-0.24 , 0.20	-0.30 , 0.34	-0.21 , 0.77	-0.32 , 0.37
P value	0.163	0.881	0.720	0.723	0.840	0.898	0.264	0.883
SE	82	0.34	0.41	0.20	0.11	0.16	0.25	0.18
Date of birth cubed	2	0.00	0.00	-0.00	0.00	-0.00	-0.01	-0.00
95% CI	-1 , 5	-0.01 , 0.01	-0.01 , 0.02	-0.01 , 0.01	-0.00 , 0.00	-0.01 , 0.01	-0.02 , 0.00	-0.01 , 0.01
P value	0.153	0.980	0.642	0.748	0.849	0.964	0.284	0.889
SE	1.62	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	-0.00	0.00	0.00
95% CI	-0.04 , 0.01	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.148	0.868	0.594	0.756	0.871	0.993	0.294	0.880
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-152	-0.99	-0.81	-0.30	-0.17	-0.47	-1.11	-0.50
95% CI	-363 , 60	-3.07 , 1.08	-2.19 , 0.58	-0.93 , 0.34	-0.75 , 0.42	-1.05 , 0.10	-1.93 , -0.29	-1.33 , 0.34
P value	0.159	0.347	0.251	0.360	0.575	0.108	0.008	0.243
SE	108	1.05	0.71	0.32	0.30	0.29	0.42	0.42
Conacaste	-153	0.43	-0.69	-0.59	-0.14	-0.58	-0.75	-0.10
95% CI	-363 , 57	-1.69 , 2.56	-2.15 , 0.77	-1.28 , 0.11	-0.77 , 0.49	-1.22 , 0.05	-1.67 , 0.18	-1.06 , 0.86
P value	0.153	0.688	0.355	0.099	0.660	0.072	0.114	0.836
SE	107	1.08	0.74	0.35	0.32	0.32	0.47	0.49
Espiritu Santo	191	-0.62	-0.01	0.24	-0.80	-0.22	-0.65	-0.11

95% CI	-73 , 454	-2.55 , 1.31	-1.74 , 1.72	-0.69 , 1.17	-1.34 , -0.26	-1.10 , 0.66	-2.09 , 0.79	-1.22 , 1.00
P value	0.156	0.527	0.992	0.614	0.004	0.625	0.377	0.848
SE	134	0.98	0.88	0.48	0.28	0.45	0.73	0.57
Santo Domingo	20	-0.78	0.20	0.60	-0.06	0.04	0.03	0.40
95% CI	-253 , 294	-3.01 , 1.46	-1.60 , 2.00	-0.34 , 1.53	-0.66 , 0.54	-0.88 , 0.96	-1.46 , 1.51	-0.75 , 1.56
P value	0.885	0.496	0.826	0.211	0.854	0.936	0.969	0.493
SE	139	1.14	0.92	0.48	0.31	0.47	0.76	0.59
Child's characteristics								
Sex	125	0.49	-0.01	0.06	0.96	-0.15	-1.55	-0.97
95% CI	62 , 189	-0.02 , 1.00	-0.52 , 0.50	-0.17 , 0.29	0.81 , 1.11	-0.34 , 0.05	-1.88 , -1.22	-1.26 , -0.68
P value	0.000	0.059	0.978	0.618	0.000	0.150	0.000	0.000
SE	32	0.26	0.26	0.12	0.08	0.10	0.17	0.15
Trend	-0.01							
95% CI	-0.04 , 0.02							
P value	0.540							
SE	0.01							
Age (months)		1.29	0.27	-0.01	0.49	0.15	0.06	-0.05
95% CI		1.17 , 1.42	0.17 , 0.36	-0.08 , 0.05	0.44 , 0.54	0.10 , 0.20	-0.01 , 0.13	-0.12 , 0.02
P value		0.000	0.000	0.679	0.000	0.000	0.115	0.175
SE		0.07	0.05	0.03	0.03	0.03	0.04	0.03
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.00 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.258	0.435	0.000	0.001	0.158	0.905
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.655	0.268	0.000	0.016	0.182	0.523
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.040	0.791	0.375	0.000	0.105	0.285	0.550
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-27,728	-122.61	-31.21	51.78	4.00	27.40	103.58	43.34
95% CI	-57,759 , 2,302	-250.35 - 5.13	-173.13 , 110.70	-18.31 , 121.87	-38.03 , 46.03	-32.03 , 86.84	11.44 , 195.73	-22.61 , 109.29
P value	0.070	0.060	0.666	0.147	0.852	0.366	0.028	0.197
SE	15,292	65.05	72.27	35.69	21.40	30.27	46.92	33.58
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,246.669	-3,754.883	-4,012.187	-2,786.014	-2,353.185	-2,739.378	-3,433.231	-3,250.797
Adj R2	0.047	0.951	0.753	0.171	0.766	0.573	0.174	0.142
F Test	3.882	1448.511	323.275	9.556	101.708	81.814	12.955	12.399
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,529.337	7,551.765	8,066.375	5,614.027	4,746.370	5,520.756	6,908.462	6,543.593
BIC	20,622.729	7,659.897	8,175.724	5,722.026	4,850.513	5,629.981	7,017.827	6,652.943
BIC_C	20,608.927	7,644.688	8,159.568	5,706.881	4,835.189	5,613.949	7,001.688	6,636.820
N cluster	615	617	625	615	627	625	626	626

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variables included but not reported are a dummy variable for observations with missing data on mother's date of birth, height and completed grades of schooling. Variable sex equals 1 for boys and 0 for girls.

T2 D	T2 + Child Birth Weight on Right Side						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics							
Atole	0.76	**1.64**	**0.82**	0.37	**0.73**	**1.31**	0.45
95% CI	-1.33 , 2.85	0.16 , 3.13	0.15 , 1.48	-0.20 , 0.95	0.12 , 1.35	0.38 , 2.24	-0.43 , 1.33
P value	0.474	**0.031**	**0.017**	0.205	**0.019**	**0.006**	0.311
SE	1.06	0.76	0.34	0.29	0.31	0.47	0.45
Fresco	0.44	0.35	-0.04	0.23	0.31	0.61	0.25
95% CI	-1.68 , 2.56	-1.48 , 2.18	-1.02 , 0.93	-0.35 , 0.81	-0.61 , 1.24	-0.95 , 2.16	-0.93 , 1.42
P value	0.685	0.706	0.934	0.437	0.502	0.442	0.679
SE	1.08	0.93	0.50	0.30	0.47	0.79	0.60
Child birthweight (Kg)	1.47	1.20	0.56	0.48	0.45	0.33	0.31
95% CI	0.92 , 2.02	0.60 , 1.80	0.31 , 0.81	0.33 , 0.63	0.22 , 0.68	-0.03 , 0.69	-0.00 , 0.62
P value	0.000	0.000	0.000	0.000	0.000	0.074	0.053
SE	0.28	0.31	0.13	0.08	0.12	0.18	0.16
Date of birth	-2.04	-8.17	-9.35	-0.11	-7.37	-9.97	-2.08
95% CI	-32.08 , 28.01	-40.95 , 24.61	-23.01 , 4.31	-10.19 , 9.96	-18.46 , 3.72	-32.87 , 12.93	-17.59 , 13.42
P value	0.894	0.625	0.179	0.982	0.192	0.393	0.792
SE	15.30	16.69	6.96	5.13	5.65	11.66	7.89
Date of birth squared	0.02	0.29	0.41	0.00	0.31	0.44	0.09
95% CI	-1.33 , 1.36	-1.16 , 1.74	-0.20 , 1.01	-0.45 , 0.45	-0.19 , 0.80	-0.58 , 1.45	-0.60 , 0.78
P value	0.982	0.694	0.187	0.991	0.221	0.401	0.797
SE	0.69	0.74	0.31	0.23	0.25	0.52	0.35
Date of birth cubed	0.00	-0.00	-0.01	-0.00	-0.01	-0.01	-0.00
95% CI	-0.03 , 0.03	-0.03 , 0.02	-0.02 , 0.00	-0.01 , 0.01	-0.02 , 0.00	-0.03 , 0.01	-0.02 , 0.01
P value	0.933	0.755	0.192	0.995	0.249	0.406	0.794
SE	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Date of birth to the fourth	-0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.852	0.806	0.192	0.994	0.271	0.406	0.784
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-0.30	-0.53	-0.21	-0.03	-0.33	-1.00	-0.39
95% CI	-2.30 , 1.69	-1.81 , 0.75	-0.81 , 0.39	-0.56 , 0.50	-0.89 , 0.24	-1.84 , -0.16	-1.19 , 0.41
P value	0.764	0.417	0.490	0.915	0.257	0.020	0.340
SE	1.01	0.65	0.31	0.27	0.29	0.43	0.41
Conacaste	1.39	-0.16	-0.45	0.08	-0.36	-0.51	0.06
95% CI	-0.75 , 3.53	-1.65 , 1.33	-1.12 , 0.22	-0.52 , 0.68	-0.98 , 0.26	-1.45 , 0.42	-0.86 , 0.98
P value	0.202	0.836	0.187	0.803	0.250	0.281	0.899
SE	1.09	0.76	0.34	0.31	0.31	0.48	0.47
Espiritu Santo	-0.50	-0.02	0.21	-0.86	-0.17	-0.58	-0.08
95% CI	-2.40 , 1.41	-1.80 , 1.77	-0.77 , 1.18	-1.39 , -0.33	-1.07 , 0.73	-2.12 , 0.96	-1.25 , 1.10
P value	0.610	0.985	0.675	0.002	0.712	0.460	0.899
SE	0.97	0.91	0.50	0.27	0.46	0.78	0.60
Santo Domingo	-0.44	0.40	0.67	-0.04	0.13	0.09	0.49

95% CI	-2.65 , 1.77	-1.42 , 2.23	-0.29 , 1.63	-0.64 , 0.57	-0.79 , 1.05	-1.46 , 1.63	-0.70 , 1.69
P value	0.696	0.664	0.171	0.903	0.782	0.913	0.418
SE	1.13	0.93	0.49	0.31	0.47	0.79	0.61
Child's characteristics							
Sex	0.39	-0.16	-0.05	0.90	-0.23	-1.60	-1.01
95% CI	-0.16 , 0.94	-0.69 , 0.38	-0.29 , 0.19	0.74 , 1.05	-0.43 , -0.02	-1.94 , -1.26	-1.32 , -0.70
P value	0.160	0.562	0.700	0.000	0.032	0.000	0.000
SE	0.28	0.27	0.12	0.08	0.11	0.18	0.16
Age (months)	1.31	0.27	-0.02	0.49	0.15	0.06	-0.05
95% CI	1.18 , 1.43	0.18 , 0.36	-0.08 , 0.05	0.43 , 0.54	0.10 , 0.20	-0.01 , 0.13	-0.12 , 0.02
P value	0.000	0.000	0.596	0.000	0.000	0.105	0.130
SE	0.06	0.05	0.03	0.03	0.02	0.04	0.03
Age (months) squared	-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	0.00
95% CI	-0.02 , -0.01	-0.01 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.000	0.166	0.507	0.000	0.001	0.147	0.982
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.000	0.472	0.320	0.000	0.016	0.172	0.608
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.016	0.983	0.431	0.000	0.107	0.271	0.624
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	81.91	85.16	94.74	38.60	76.07	91.73	24.98
95% CI	-165.11 , 328.92	-189.79 , 360.12	-18.89 , 208.38	-44.78 , 121.98	-15.84 , 167.98	-98.37 , 281.82	-102.86 , 152.82
P value	0.515	0.543	0.102	0.364	0.105	0.344	0.701
SE	125.78	140.01	57.86	42.46	46.80	96.80	65.10
Observations	1234	1311	1230	1308	1299	1308	1307
Log likelihood	-3,711.385	-3,907.463	-2,700.322	-2,285.789	-2,649.663	-3,334.263	-3,147.174
Adj R2	0.946	0.750	0.185	0.767	0.575	0.162	0.137
F Test	1670.768	398.233	12.571	118.299	91.772	13.418	12.883
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	7,458.771	7,850.926	5,436.644	4,605.579	5,335.327	6,704.525	6,330.348
BIC	7,550.895	7,944.139	5,528.710	4,693.575	5,428.375	6,797.698	6,423.507
BIC_C	7,537.915	7,930.309	5,515.759	4,680.580	5,414.680	6,783.908	6,409.731
N cluster	600	608	599	609	607	608	608

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 E	T2 without Village Controls							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	**Height (cm)**	**Weight (Kg)**	**BMI**	**Head circumference (cm)**	**Arm circumference (cm)**	**Triceps skinfold (mm)**	**Subscapular skinfold (mm)**
Mother's characteristics								
Atole	**117**	**1.35**	**1.29**	**0.49**	**0.44**	**0.41**	**0.54**	0.26
95% CI	12 , 222	0.33 , 2.37	0.40 , 2.18	0.11 , 0.88	0.17 , 0.71	0.07 , 0.74	0.02 , 1.05	-0.18 , 0.69
P value	**0.029**	**0.009**	**0.005**	**0.013**	**0.001**	**0.017**	**0.041**	0.246
SE	53	0.52	0.45	0.20	0.14	0.17	0.26	0.22
Fresco	16	-0.11	0.51	0.38	-0.18	0.29	0.39	0.40
95% CI	-90 , 121	-1.14 , 0.92	-0.28 , 1.30	0.01 , 0.74	-0.45 , 0.10	-0.05 , 0.63	-0.15 , 0.93	-0.07 , 0.87
P value	0.771	0.839	0.203	0.045	0.203	0.092	0.158	0.093
SE	54	0.52	0.40	0.19	0.14	0.17	0.27	0.24
Date of birth	2,987	-0.15	3.37	-1.51	-0.02	-0.79	-6.65	-0.39
95% CI	-740 , 6,714	-15.46 , 15.15	-13.73 , 20.47	-9.95 , 6.93	-4.79 , 4.74	-7.94 , 6.36	-17.76 , 4.45	-7.86 , 7.07
P value	0.116	0.984	0.699	0.725	0.993	0.828	0.240	0.917
SE	1,898	7.79	8.71	4.30	2.43	3.64	5.65	3.80
Date of birth squared	-138	-0.08	-0.23	0.06	-0.00	0.02	0.29	0.01
95% CI	-306 , 29	-0.81 , 0.64	-1.02 , 0.57	-0.33 , 0.45	-0.22 , 0.22	-0.31 , 0.34	-0.22 , 0.80	-0.34 , 0.36
P value	0.105	0.818	0.574	0.768	0.993	0.922	0.269	0.946
SE	85	0.37	0.40	0.20	0.11	0.17	0.26	0.18
Date of birth cubed	3	0.00	0.01	-0.00	0.00	-0.00	-0.01	-0.00
95% CI	-0.5 , 6	-0.01 , 0.02	-0.01 , 0.02	-0.01 , 0.01	-0.00 , 0.00	-0.01 , 0.01	-0.02 , 0.00	-0.01 , 0.01
P value	0.097	0.657	0.486	0.795	0.987	0.999	0.296	0.961
SE	2	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	-0.00	0.00	0.00
95% CI	-0.04 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.092	0.531	0.425	0.808	0.988	0.941	0.317	0.962
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Child's characteristics								
Sex	128	0.60	0.03	0.06	0.97	-0.14	-1.54	-0.97
95% CI	63 , 192	0.07 , 1.14	-0.51 , 0.56	-0.18 , 0.30	0.82 , 1.13	-0.34 , 0.07	-1.88 , -1.21	-1.27 , -0.68
P value	0.000	0.028	0.921	0.618	0.000	0.185	0.000	0.000
SE	33	0.27	0.27	0.12	0.08	0.10	0.17	0.15
Trend	-0.01							
95% CI	-0.03 , 0.02							
P value	0.616							
SE	0.01							
Age (months)		1.30	0.27	-0.01	0.48	0.16	0.06	-0.05
95% CI		1.17 , 1.43	0.18 , 0.36	-0.07 , 0.05	0.43 , 0.53	0.11 , 0.20	-0.01 , 0.14	-0.11 , 0.02
P value		0.000	0.000	0.709	0.000	0.000	0.080	0.163
SE		0.06	0.05	0.03	0.03	0.02	0.04	0.03
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.01 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.208	0.407	0.000	0.001	0.132	0.920
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00

Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.581	0.250	0.000	0.012	0.166	0.535
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.034	0.867	0.358	0.000	0.090	0.273	0.564
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-20,489	74.24	-6.21	31.59	39.23	22.58	64.81	12.54
95% CI	-51,146 , 10,168	-44.16 , 192.64	-142.37 , 129.96	-36.36 , 99.55	1.51 , 76.95	-35.25 , 80.42	-24.42 , 154.04	-45.80 , 70.88
P value	0.190	0.219	0.929	0.362	0.042	0.443	0.154	0.673
SE	15,611	60.29	69.34	34.60	19.21	29.45	45.44	29.71
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,270.093	-3,855.099	-4,033.680	-2,793.987	-2,404.354	-2,754.104	-3,453.084	-3,261.436
Adj R2	0.018	0.943	0.746	0.166	0.749	0.566	0.155	0.134
F Test	3.302	2356.172	597.960	15.162	258.525	137.143	18.771	19.208
Prob>F	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,560.186	7,736.197	8,093.361	5,613.973	4,832.708	5,534.207	6,932.167	6,548.871
BIC	20,612.070	7,803.136	8,161.053	5,680.830	4,895.193	5,601.823	6,999.869	6,616.564
BIC_C	20,604.402	7,793.721	8,151.051	5,671.454	4,885.999	5,591.898	6,989.879	6,606.583
N cluster	615	617	625	615	627	625	626	626

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 F	T2 + Interactions between Atole and Fresco and Child Sex							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics								
Atole	**297**	0.78	**2.02**	**1.02**	**0.65**	**0.88**	**1.37**	0.68
95% CI	71 , 523	-1.48 , 3.04	0.26 , 3.79	0.25 , 1.80	0.03 , 1.28	0.22 , 1.55	0.38 , 2.35	-0.30 , 1.66
P value	**0.010**	0.498	**0.025**	**0.010**	**0.041**	**0.009**	**0.007**	0.172
SE	115	1.15	0.90	0.39	0.32	0.34	0.50	0.50
Fresco	-72	0.78	0.56	-0.08	0.26	0.37	0.72	0.40
95% CI	-354 , 211	-1.50 , 3.05	-1.41 , 2.52	-1.09 , 0.92	-0.36 , 0.89	-0.58 , 1.33	-0.89 , 2.32	-0.83 , 1.63
P value	0.619	0.502	0.578	0.870	0.403	0.440	0.380	0.525
SE	144	1.16	1.00	0.51	0.32	0.48	0.82	0.63
Child sex * atole	-47	0.60	-0.26	-0.14	-0.34	-0.01	0.01	-0.26
95% CI	-205 , 111	-0.66 , 1.86	-1.61 , 1.09	-0.71 , 0.42	-0.71 , 0.02	-0.47 , 0.45	-0.73 , 0.76	-0.89 , 0.37
P value	0.562	0.352	0.702	0.618	0.067	0.966	0.974	0.412
SE	80	0.64	0.69	0.29	0.19	0.23	0.38	0.32
Child sex * fresco	-38	-1.16	-0.45	0.07	-0.24	-0.06	-0.16	-0.28
95% CI	-197 , 120	-2.49 , 0.17	-1.59 , 0.69	-0.50 , 0.64	-0.62 , 0.13	-0.57 , 0.45	-1.01 , 0.69	-1.04 , 0.48
P value	0.633	0.089	0.441	0.808	0.202	0.822	0.715	0.463
SE	81	0.68	0.58	0.29	0.19	0.26	0.43	0.39
Date of birth	2,748	-0.79	3.48	-1.60	0.73	-0.35	-5.73	-0.38
95% CI	-973 , 6,468	-16.02 , 14.45	-13.75 , 20.71	-10.28 , 7.07	-3.99 , 5.45	-7.47 , 6.77	-16.64 , 5.17	-7.72 , 6.95
P value	0.147	0.919	0.692	0.717	0.762	0.924	0.302	0.919
SE	1,895	7.76	8.78	4.42	2.40	3.63	5.55	3.74
Date of birth squared	-127	-0.05	-0.23	0.06	-0.04	-0.01	0.24	0.01
95% CI	-295 , 40	-0.77 , 0.67	-1.04 , 0.57	-0.34 , 0.46	-0.26 , 0.18	-0.33 , 0.32	-0.26 , 0.75	-0.33 , 0.36
P value	0.137	0.891	0.570	0.759	0.740	0.976	0.339	0.944
SE	85	0.37	0.41	0.20	0.11	0.17	0.26	0.18
Date of birth cubed	3	0.00	0.01	-0.00	0.00	0.00	-0.00	-0.00
95% CI	-1 , 6	-0.01 , 0.02	-0.01 , 0.02	-0.01 , 0.01	-0.00 , 0.01	-0.01 , 0.01	-0.01 , 0.01	-0.01 , 0.01
P value	0.129	0.731	0.487	0.785	0.731	0.896	0.371	0.954
SE	2	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	-0.00	0.00	0.00
95% CI	-0.04 , 0.01	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.124	0.602	0.432	0.796	0.733	0.839	0.393	0.948
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-164	-0.48	-0.72	-0.32	-0.10	-0.44	-1.08	-0.52
95% CI	-383 , 54	-2.52 , 1.56	-2.02 , 0.59	-0.94 , 0.29	-0.67 , 0.47	-1.00 , 0.12	-1.91 , -0.26	-1.32 , 0.28
P value	0.140	0.642	0.280	0.302	0.734	0.124	0.010	0.202
SE	111	1.04	0.66	0.31	0.29	0.29	0.42	0.41
Conacaste	-161	0.95	-0.57	-0.62	-0.05	-0.55	-0.73	-0.13
95% CI	-378 , 56	-1.23 , 3.13	-2.07 , 0.94	-1.30 , 0.07	-0.67 , 0.58	-1.17 , 0.07	-1.65 , 0.20	-1.05 , 0.79
P value	0.146	0.392	0.459	0.080	0.887	0.081	0.122	0.781
SE	110	1.11	0.77	0.35	0.32	0.32	0.47	0.47
Espiritu Santo	180	-0.21	0.02	0.22	-0.75	-0.21	-0.66	-0.15

95% CI	-96 , 457	-2.12 , 1.70	-1.76 , 1.81	-0.74 , 1.17	-1.28 , -0.22	-1.10 , 0.68	-2.15 , 0.84	-1.29 , 0.99
P value	0.201	0.831	0.981	0.653	0.006	0.646	0.389	0.791
SE	141	0.97	0.91	0.49	0.27	0.45	0.76	0.58
Santo Domingo	25	-0.38	0.25	0.58	0.02	0.03	-0.01	0.37
95% CI	-259 , 310	-2.63 , 1.86	-1.62 , 2.11	-0.37 , 1.54	-0.60 , 0.64	-0.89 , 0.96	-1.53 , 1.50	-0.80 , 1.54
P value	0.861	0.737	0.796	0.231	0.951	0.946	0.986	0.539
SE	145	1.14	0.95	0.49	0.31	0.47	0.77	0.60
Child's characteristics								
Sex	155	0.77	0.26	0.08	1.17	-0.12	-1.50	-0.80
95% CI	42 , 268	-0.11 , 1.66	-0.46 , 0.97	-0.27 , 0.43	0.91 , 1.42	-0.43 , 0.20	-2.00 , -1.01	-1.23 , -0.36
P value	0.007	0.088	0.485	0.651	0.000	0.463	0.000	0.000
SE	58	0.45	0.37	0.18	0.13	0.16	0.25	0.22
Trend	-0.01							
95% CI	-0.03 , 0.02							
P value	0.697							
SE	0.01							
Age (months)		1.30	0.27	-0.01	0.49	0.16	0.07	-0.04
95% CI		1.18 , 1.43	0.18 , 0.36	-0.07 , 0.05	0.44 - 0.54	0.11 , 0.20	-0.01 , 0.14	-0.11 , 0.02
P value		0.000	0.000	0.699	0.000	0.000	0.076	0.196
SE		0.07	0.05	0.03	0.03	0.02	0.04	0.03
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.01 , 0.00	-0.00 , 0.00	-0.01 - -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.208	0.408	0.000	0.001	0.115	0.833
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 - 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.572	0.248	0.000	0.011	0.142	0.467
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 - -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.034	0.883	0.351	0.000	0.085	0.238	0.498
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-18,593	78.19	-7.05	32.45	33.52	19.36	57.81	12.28
95% CI	-49,083 , 11,896	-39.75 , 196.14	-143.38 , 129.29	-37.21 , 102.11	-3.86 - 70.89	-38.11 , 76.82	-29.69 , 145.30	-44.86 , 69.43
P value	0.232	0.193	0.919	0.361	0.0787	0.509	0.195	0.673
SE	15,525	60.06	69.42	35.47	19.03	29.26	44.55	29.10
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,262.355	-3,846.764	-4,032.811	-2,789.776	-2,384.032	-2,751.497	-3,447.793	-3,257.225
Adj R2	0.025	0.944	0.746	0.167	0.756	0.566	0.158	0.135
F Test	2.926	1571.905	399.562	10.396	110.919	91.165	13.633	13.277
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,556.711	7,731.529	8,103.622	5,617.552	4,804.064	5,540.993	6,933.585	6,552.451
BIC	20,639.726	7,829.362	8,202.558	5,715.266	4,897.792	5,639.815	7,032.535	6,651.386
BIC_C	20,627.457	7,815.601	8,187.940	5,701.563	4,884.001	5,625.310	7,017.933	6,636.799
N cluster	615	617	625	615	627	625	626	626

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 G	Effect of maternal exposure to Atole or Fresco for mothers born between 1962 and 1977 on offspring anthropometric measures in 2006-7 (Attrition-weighted estimates)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics								
Atole	**225**	1.49	**1.94**	**0.97**	0.33	**1.61**	**1.77**	**1.50**
95% CI	5 , 445	-0.65 , 3.63	0.62 , 3.26	0.27 , 1.67	-0.33 , 1.00	0.77 , 2.45	0.79 , 2.74	0.46 , 2.54
P value	**0.045**	0.171	**0.004**	**0.006**	0.328	**0.000**	**0.000**	**0.005**
SE	112	1.09	0.67	0.36	0.34	0.43	0.50	0.53
Fresco	-131	0.92	0.56	-0.11	0.27	0.42	0.39	0.26
95% CI	-387 , 124	-1.36 , 3.19	-0.99 , 2.11	-1.00 , 0.78	-0.45 , 0.99	-0.47 , 1.31	-0.95 , 1.74	-0.82 , 1.34
P value	0.313	0.428	0.475	0.803	0.464	0.357	0.566	0.637
SE	130	1.16	0.79	0.45	0.37	0.46	0.68	0.55
Date of birth	2,860	-3.02	4.65	-1.86	0.05	-4.30	-12.25	-3.90
95% CI	-918 , 6,639	-18.28 , 12.24	-17.24 , 26.53	-12.44 , 8.73	-5.12 , 5.23	-14.49 , 5.89	-25.91 , 1.41	-13.33 , 5.52
P value	0.138	0.698	0.677	0.731	0.984	0.407	0.079	0.417
SE	1,924	7.77	11.14	5.39	2.63	5.19	6.96	4.80
Date of birth squared	-132	0.04	-0.32	0.07	-0.01	0.18	0.55	0.17
95% CI	-303 , 38	-0.70 , 0.77	-1.34 , 0.70	-0.42 , 0.56	-0.26 , 0.24	-0.29 , 0.64	-0.08 , 1.19	-0.27 , 0.60
P value	0.128	0.918	0.535	0.785	0.938	0.453	0.084	0.458
SE	87	0.37	0.52	0.25	0.13	0.24	0.32	0.22
Date of birth cubed	3	0.00	0.01	-0.00	0.00	-0.00	-0.01	-0.00
95% CI	-1 , 6	-0.01 , 0.02	-0.01 , 0.03	-0.01 , 0.01	-0.00 , 0.01	-0.01 , 0.01	-0.02 , 0.00	-0.01 , 0.01
P value	0.121	0.902	0.441	0.816	0.919	0.487	0.088	0.485
SE	2	0.01	0.01	0.01	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.02	-0.00	-0.00	0.00	-0.00	0.00	0.00	0.00
95% CI	-0.04 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.117	0.766	0.381	0.827	0.922	0.506	0.089	0.496
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-149	0.29	-0.71	-0.40	-0.11	-0.32	-0.84	-0.81
95% CI	-369 , 71	-1.70 , 2.29	-1.65 , 0.23	-1.08 , 0.27	-0.71 , 0.48	-0.99 , 0.35	-1.59 , -0.10	-1.84 , 0.23
P value	0.184	0.772	0.139	0.244	0.711	0.349	0.026	0.125
SE	112	1.02	0.48	0.34	0.30	0.34	0.38	0.53
Conacaste	-136	0.94	-0.82	-0.66	0.04	-0.9	-0.81	-0.83
95% CI	-355 , 83	-1.19 , 3.07	-2.16 , 0.52	-1.37 , 0.04	-0.64 , 0.73	-1.62 , -0.18	-1.72 , 0.11	-1.84 , 0.18
P value	0.222	0.387	0.229	0.063	0.900	0.015	0.084	0.108
SE	111	1.09	0.68	0.36	0.35	0.37	0.47	0.51
Espiritu Santo	179	-0.04	-0.24	0.09	-0.76	-0.09	-0.49	-0.31
95% CI	-71 , 429	-1.91 , 1.84	-1.72 , 1.23	-0.76 , 0.95	-1.35 , -0.17	-0.87 , 0.69	-1.73 , 0.76	-1.38 , 0.76
P value	0.159	0.968	0.746	0.829	0.012	0.817	0.444	0.567
SE	127	0.95	0.75	0.44	0.30	0.40	0.63	0.54
Santo Domingo	77	-0.60	-0.12	0.32	-0.30	-0.14	-0.35	-0.05
95% CI	-186 , 341	-2.95 , 1.75	-1.72 , 1.48	-0.64 , 1.27	-1.07 , 0.47	-0.97 , 0.70	-1.73 , 1.02	-1.21 , 1.12
P value	0.563	0.614	0.886	0.516	0.443	0.745	0.615	0.939
SE	134	1.20	0.81	0.49	0.39	0.43	0.70	0.59
Child's characteristics								

Sex	119	0.49	0.04	0.33	0.96	0.22	-0.91	-0.33
95% CI	50 , 188	-0.13 , 1.11	-0.54 , 0.62	-0.06 , 0.72	0.67 , 1.24	-0.12 , 0.57	-1.37 , -0.46	-0.77 , 0.12
P value	0.001	0.124	0.891	0.098	0.000	0.195	0.000	0.152
SE	35	0.32	0.30	0.20	0.15	0.17	0.23	0.23
Trend	-0.00							
95% CI	-0.03 , 0.02							
P value	0.747							
SE	0.01							
Age (months)		1.53	0.33	0.03	0.63	0.21	0.1	-0.04
95% CI		1.40 , 1.66	0.26 , 0.40	-0.06 , 0.13	0.56 , 0.69	0.14 , 0.28	0.01 , 0.19	-0.13 , 0.05
P value		0.000	0.000	0.487	0.000	0.000	0.022	0.412
SE		0.07	0.04	0.05	0.03	0.04	0.04	0.05
Age (months) squared		-0.02	0.00	0.00	-0.01	0.00	0.00	-0.00
95% CI		-0.02 , -0.01	-0.01 , -0.00	-0.00 , 0.00	-0.01 , -0.01	-0.01 , -0.00	-0.01 , -0.00	-0.00 , 0.00
P value		0.000	0.002	0.098	0.000	0.000	0.010	0.473
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.038	0.045	0.000	0.000	0.007	0.172
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		0.00	-0.00	0.00	0.00	0.00	0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , -0.00	-0.00 , -0.00	-0.00 , 0.00
P value		0.000	0.234	0.055	0.000	0.000	0.013	0.146
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-19,469	97.20	-8.13	35.70	38.52	50.68	108.27	42.49
95% CI	-50,402 , 11,465	-18.94 , 213.33	-181.99 , 165.72	-48.18 , 119.57	-1.25 , 78.28	-32.12 , 133.48	-1.24 , 217.78	-32.37 , 117.35
P value	0.217	0.101	0.927	0.404	0.058	0.230	0.053	0.265
SE	15,752	59.14	88.53	42.71	20.25	42.16	55.77	38.12
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10260.365	-3751.817	-3912.975	-2737.885	-2349.048	-2609.750	-3282.375	-3112.129
Adj R2	0.021	0.974	0.832	0.166	0.922	0.739	0.180	0.161
F Test	2.661	2065.004	531.897	11.784	229.99	98.015	11.680	11.314
Prob>F	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N cluster	615	617	625	615	627	625	626	626

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

T2 H	Attrition probits to construct weights used in table T2 G. Derivatives evaluated at the mean (dP/dx) presented. Dependent variable equals 1 if in 2006-7 sample							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics								
Atole	0.13	0.10	0.03	0.08	0.04	0.06	0.04	0.04
95% CI	-0.48 , 0.74	-0.53 , 0.74	-0.61 , 0.67	-0.56 , 0.72	-0.60 , 0.68	-0.57 , 0.70	-0.60 , 0.68	-0.60 , 0.68
P value	0.678	0.752	0.923	0.802	0.906	0.852	0.901	0.901
SE	0.31	0.33	0.33	0.33	0.33	0.32	0.33	0.33
Fresco	0.27	0.26	0.15	0.25	0.16	0.17	0.16	0.16
95% CI	-0.23 , 0.78	-0.29 , 0.80	-0.43 , 0.73	-0.31 , 0.80	-0.41 , 0.74	-0.41 , 0.75	-0.42 , 0.74	-0.42 , 0.74
P value	0.289	0.351	0.615	0.386	0.578	0.574	0.588	0.588
SE	0.26	0.28	0.30	0.28	0.29	0.30	0.30	0.30
Date of birth	0.83	0.41	0.25	0.34	0.29	0.30	0.33	0.33
95% CI	-0.79 , 2.45	-1.22 , 2.05	-1.37 , 1.86	-1.29 , 1.96	-1.32 , 1.90	-1.32 , 1.92	-1.29 , 1.94	-1.29 , 1.94
P value	0.315	0.621	0.764	0.685	0.722	0.717	0.693	0.693
SE	0.83	0.83	0.82	0.83	0.82	0.82	0.83	0.83
Date of birth squared	-0.04	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02
95% CI	-0.12 , 0.04	-0.10 , 0.06	-0.09 , 0.06	-0.10 , 0.06	-0.09 , 0.06	-0.09 , 0.06	-0.10 , 0.06	-0.10 , 0.06
P value	0.294	0.579	0.727	0.642	0.684	0.688	0.661	0.661
SE	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Date of birth cubed	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.282	0.553	0.705	0.614	0.662	0.673	0.644	0.644
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Date of birth to the fourth	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.279	0.542	0.697	0.601	0.656	0.673	0.643	0.643
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	0.13	0.13	0.11	0.13	0.11	0.11	0.10	0.10
95% CI	-0.08 , 0.34	-0.09 , 0.34	-0.10 , 0.32	-0.08 , 0.35	-0.11 , 0.32	-0.10 , 0.32	-0.11 , 0.31	-0.11 , 0.31
P value	0.215	0.251	0.297	0.229	0.327	0.301	0.339	0.339
SE	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Conacaste	0.02	0.09	0.04	0.09	0.04	0.04	0.04	0.04
95% CI	-0.21 , 0.25	-0.13 , 0.31	-0.18 , 0.26	-0.13 , 0.31	-0.18 , 0.26	-0.18 , 0.26	-0.18 , 0.26	-0.18 , 0.26
P value	0.885	0.443	0.726	0.414	0.739	0.715	0.732	0.732
SE	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Espiritu Santo	0.03	-0.04	0.05	-0.03	0.05	0.05	0.05	0.05
95% CI	-0.20 , 0.26	-0.27 , 0.20	-0.18 , 0.28	-0.26 , 0.20	-0.19 , 0.28	-0.18 , 0.28	-0.18 , 0.28	-0.18 , 0.28
P value	0.774	0.769	0.665	0.808	0.691	0.662	0.685	0.685
SE	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Santo Domingo	-0.05	-0.05	-0.01	-0.04	-0.01	-0.01	-0.02	-0.02
95% CI	-0.31 , 0.21	-0.29 , 0.20	-0.27 , 0.25	-0.29 , 0.21	-0.27 , 0.24	-0.27 , 0.25	-0.28 , 0.24	-0.28 , 0.24
P value	0.705	0.707	0.950	0.748	0.911	0.945	0.893	0.893
SE	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Child's characteristics								

Sex	-0.04	-0.02	-0.03	-0.02	-0.04	-0.03	-0.03	-0.03
95% CI	-0.09 , 0.01	-0.07 , 0.03	-0.08 , 0.02	-0.07 , 0.03	-0.08 , 0.01	-0.08 , 0.02	-0.08 , 0.02	-0.08 , 0.02
P value	0.098	0.502	0.192	0.467	0.147	0.194	0.247	0.247
SE	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.02
Trend	0.00							
95% CI	0.00 , 0.00							
P value	0.003							
SE	0.00							
Age (months)		0.07	0.07	0.07	0.07	0.07	0.07	0.07
95% CI		-0.01 , 0.15	-0.02 , 0.15	-0.01 , 0.15	-0.01 , 0.15	-0.01 , 0.15	-0.01 , 0.15	-0.01 , 0.15
P value		0.090	0.116	0.090	0.102	0.083	0.102	0.102
SE		0.04	0.04	0.04	0.04	0.04	0.04	0.04
Age (months) squared		-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.059	0.081	0.059	0.078	0.063	0.076	0.076
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.038	0.052	0.037	0.054	0.043	0.051	0.051
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , -0.00	-0.00 , -0.00	-0.00 , -0.00	-0.00 , -0.00	-0.00 , -0.00	-0.00 , -0.00
P value		0.023	0.031	0.023	0.034	0.026	0.031	0.031
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Variables potentially associated with attrition								
1 (1) if grandmother alive when mother was aged 7 y	-0.43	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
95% CI	-0.82 , -0.04	-0.83 , 0.01	-0.81 , -0.01	-0.83 , 0.01	-0.81 , -0.01	-0.81 , -0.01	-0.81 , -0.01	-0.81 , -0.01
P value	0.033	0.056	0.046	0.058	0.046	0.044	0.044	0.044
SE	0.20	0.21	0.20	0.22	0.20	0.20	0.20	0.20
2 (1) if grandfather alive when mother was aged 7 y	0.05	0.06	0.09	0.06	0.09	0.09	0.10	0.10
95% CI	-0.26 , 0.36	-0.27 , 0.39	-0.23 , 0.42	-0.27 , 0.39	-0.24 , 0.41	-0.24 , 0.42	-0.23 , 0.42	-0.23 , 0.42
P value	0.740	0.709	0.576	0.729	0.600	0.604	0.559	0.559
SE	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17
3 (1) if mother lived with both grandmother and grandfather in 1975	-0.02	0.01	0.00	0.01	-0.00	-0.01	0.00	0.00
95% CI	-0.12 , 0.09	-0.09 , 0.11	-0.11 , 0.11	-0.09 , 0.11	-0.11 , 0.11	-0.12 , 0.10	-0.10 , 0.11	-0.10 , 0.11
P value	0.787	0.830	0.978	0.842	0.946	0.892	0.934	0.934
SE	0.06	0.05	0.06	0.05	0.06	0.06	0.06	0.06
4 (1) if mother lived with both grandmother and grandfather in 1987	0.13	0.11	0.15	0.11	0.16	0.16	0.16	0.16
95% CI	0.02 , 0.23	-0.00 , 0.21	0.04 , 0.26	-0.00 , 0.21	0.05 , 0.27	0.05 , 0.27	0.05 , 0.26	0.05 , 0.26
P value	0.017	0.054	0.005	0.056	0.003	0.003	0.004	0.004
SE	0.05	0.06	0.05	0.06	0.05	0.05	0.05	0.05
5 (1) if grandmother alive when father was aged 7 y	-0.39	-0.32	-0.43	-0.32	-0.43	-0.42	-0.42	-0.42
95% CI	-0.67 , -0.11	-0.57 , -0.07	-0.68 , -0.18	-0.58 , -0.07	-0.68 , -0.17	-0.68 , -0.16	-0.68 , -0.17	-0.68 , -0.17

P value	0.006	0.013	0.001	0.012	0.001	0.001	0.001	0.001
SE	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13
6 (1) if grandfather alive when father was aged 7 y	0.33	0.21	0.30	0.20	0.31	0.31	0.31	0.31
95% CI	-0.02 , 0.68	-0.07 , 0.50	-0.04 , 0.64	-0.08 , 0.49	-0.03 , 0.64	-0.03 , 0.65	-0.03 , 0.64	-0.03 , 0.64
P value	0.066	0.148	0.080	0.161	0.073	0.071	0.074	0.074
SE	0.18	0.15	0.17	0.15	0.17	0.17	0.17	0.17
7 (1) if father lived with both grandmother and grandfather in 1975	0.07	0.06	0.07	0.07	0.06	0.06	0.06	0.06
95% CI	-0.05 , 0.19	-0.06 , 0.18	-0.05 , 0.18	-0.05 , 0.18	-0.05 , 0.18	-0.06 , 0.18	-0.05 , 0.18	-0.05 , 0.18
P value	0.239	0.300	0.250	0.279	0.279	0.306	0.282	0.282
SE	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8 (1) if father lived with both grandmother and grandfather in 1987	-0.05	-0.07	-0.06	-0.07	-0.06	-0.06	-0.05	-0.05
95% CI	-0.16 , 0.07	-0.18 , 0.05	-0.17 , 0.06	-0.19 , 0.05	-0.18 , 0.06	-0.18 , 0.06	-0.17 , 0.06	-0.17 , 0.06
P value	0.441	0.270	0.350	0.247	0.329	0.309	0.364	0.364
SE	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
9 (1) if maternal grandmother alive in 2002	0.15	0.12	0.16	0.12	0.16	0.15	0.16	0.16
95% CI	-0.00 , 0.31	-0.03 , 0.27	0.01 , 0.31	-0.03 , 0.27	0.01 , 0.31	-0.01 , 0.30	0.01 , 0.31	0.01 , 0.31
P value	0.054	0.104	0.040	0.119	0.041	0.060	0.041	0.041
SE	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
10 (1) if maternal grandfather alive in 2002	0.14	0.13	0.12	0.14	0.13	0.13	0.12	0.12
95% CI	0.03 , 0.26	0.03 , 0.24	0.01 , 0.24	0.03 , 0.24	0.01 , 0.24	0.01 , 0.24	0.01 , 0.24	0.01 , 0.24
P value	0.016	0.015	0.038	0.013	0.036	0.031	0.041	0.041
SE	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.06
11 (1) if maternal grandmother living in original village in 2002	0.30	0.33	0.31	0.34	0.31	0.32	0.31	0.31
95% CI	0.17 , 0.43	0.21 , 0.46	0.19 , 0.44	0.21 , 0.46	0.18 , 0.43	0.19 , 0.45	0.18 , 0.44	0.18 , 0.44
P value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.06	0.06	0.07	0.06	0.06	0.07	0.07	0.07
12 (1) if maternal grandfather living in original village in 2002	0.05	0.00	0.02	0.00	0.02	0.01	0.02	0.02
95% CI	-0.07 , 0.17	-0.12 , 0.13	-0.11 , 0.15	-0.13 , 0.13	-0.10 , 0.15	-0.12 , 0.14	-0.11 , 0.15	-0.11 , 0.15
P value	0.438	0.963	0.745	0.984	0.726	0.902	0.805	0.805
SE	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07
13 Number of mother's siblings in survey	-0.00	-0.01	-0.00	-0.01	-0.00	-0.01	-0.01	-0.01
95% CI	-0.03 , 0.03	-0.04 , 0.02	-0.03 , 0.03	-0.04 , 0.02	-0.03 , 0.03	-0.04 , 0.03	-0.04 , 0.02	-0.04 , 0.02
P value	0.896	0.472	0.812	0.450	0.836	0.744	0.674	0.674
SE	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02
14 (1) if any mother's sibling re-interviewed in 2002-4	-0.09	-0.08	-0.06	-0.06	-0.06	-0.06	-0.05	-0.05
95% CI	-0.32 , 0.13	-0.31 , 0.14	-0.28 , 0.17	-0.28 , 0.15	-0.28 , 0.16	-0.28 , 0.17	-0.28 , 0.17	-0.28 , 0.17
P value	0.420	0.471	0.617	0.569	0.591	0.606	0.646	0.646

SE	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11
15 (1) if paternal grandmother alive in 2002	0.05	0.09	0.08	0.09	0.08	0.08	0.08	0.08
95% CI	-0.09 , 0.19	-0.05 , 0.22	-0.05 , 0.22	-0.05 , 0.22	-0.05 , 0.22	-0.06 , 0.21	-0.05 , 0.22	-0.05 , 0.22
P value	0.468	0.198	0.227	0.206	0.228	0.249	0.217	0.217
SE	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
16 (1) if paternal grandfather alive in 2002	0.08	0.10	0.09	0.09	0.09	0.09	0.09	0.09
95% CI	-0.04 , 0.19	-0.01 , 0.21	-0.02 , 0.20	-0.02 , 0.20	-0.03 , 0.20	-0.02 , 0.21	-0.02 , 0.20	-0.02 , 0.20
P value	0.178	0.089	0.128	0.099	0.129	0.099	0.121	0.121
SE	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
17 (1) if paternal grandmother living in original village in 2002	0.09	0.08	0.07	0.08	0.07	0.08	0.07	0.07
95% CI	-0.04 , 0.22	-0.05 , 0.21	-0.06 , 0.21	-0.05 , 0.21	-0.06 , 0.21	-0.05 , 0.22	-0.06 , 0.21	-0.06 , 0.21
P value	0.190	0.236	0.271	0.240	0.269	0.225	0.272	0.272
SE	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
18 (1) if paternal grandfather living in original village in 2002	0.10	0.09	0.10	0.09	0.10	0.10	0.10	0.10
95% CI	-0.03 , 0.22	-0.03 , 0.22	-0.03 , 0.23	-0.04 , 0.22	-0.03 , 0.22	-0.03 , 0.22	-0.02 , 0.23	-0.02 , 0.23
P value	0.128	0.148	0.117	0.160	0.123	0.137	0.113	0.113
SE	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
19 Number of father's siblings in survey	-0.00	-0.01	-0.00	-0.01	-0.00	-0.00	-0.00	-0.00
95% CI	-0.03 , 0.03	-0.04 , 0.02	-0.04 , 0.03	-0.04 , 0.02	-0.03 , 0.03	-0.04 , 0.03	-0.03 , 0.03	-0.03 , 0.03
P value	0.961	0.655	0.808	0.626	0.859	0.804	0.835	0.835
SE	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
20 (1) if any father's sibling re-interviewed in 2002-4	-0.00	0.00	0.05	0.02	0.03	0.03	0.03	0.03
95% CI	-0.20 , 0.20	-0.19 , 0.20	-0.15 , 0.25	-0.17 , 0.21	-0.17 , 0.23	-0.17 , 0.23	-0.17 , 0.23	-0.17 , 0.23
P value	0.999	0.972	0.630	0.829	0.775	0.774	0.755	0.755
SE	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Observations	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686
Log likelihood	-925.948	-977.190	-911.624	-978.675	-915.818	-922.849	-916.445	-916.445
Pseudo R2	0.175	0.143	0.180	0.142	0.178	0.174	0.177	0.177
Wald Chi2	176.123	167.241	174.861	169.529	173.996	173.865	173.064	173.064
Prob>Chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N cluster	894	894	894	894	894	894	894	894
Chi2 statistic on variables 1-8	15.433	13.361	20.163	13.638	20.439	20.096	20.186	20.186
Prob>Chi2	0.051	0.100	0.010	0.092	0.009	0.010	0.010	0.010
Chi2 statistic on variables 9-20	65.33	70.89	65.55	71.84	63.64	63.36	64.02	64.02
Prob>Chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chi2 statistic on variables 1-20	115.9	122.1	117.5	123.2	115.1	115.9	116.6	116.6
Prob>Chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Variable sex equals 1 for boys and 0 for girls.

T2 I	Effect of maternal exposure to Atole or Fresco for mothers born between 1962 and 1977 on offspring anthropometric measures in 2006-7. Differences-in-differences estimation treating mother's village birth-years as different groups (Donald and Lang 2007)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	Height (cm)	Weight (Kg)	BMI	Head circumference (cm)	Arm circumference (cm)	Triceps skinfold (mm)	Subscapular skinfold (mm)
Mother's characteristics								
Atole	**366**	-0.02	1.92	**1.36**	0.40	0.80	1.42	0.43
95% CI	106 , 625	-2.27 , 2.22	-0.33 , 4.16	0.56 , 2.17	-0.37 , 1.17	-0.02 , 1.62	-0.23 , 3.06	-0.82 , 1.68
P value	**0.006**	0.985	0.093	**0.001**	0.305	0.057	0.091	0.498
SE	131	1.13	1.13	0.40	0.39	0.41	0.83	0.63
Fresco	-39	1.43	0.15	-0.40	0.09	0.16	0.14	-0.01
95% CI	-300 , 221	-1.95 , 4.81	-1.85 , 2.16	-1.40 , 0.61	-0.74 , 0.92	-0.75 , 1.07	-1.69 , 1.97	-1.25 , 1.23
P value	0.765	0.403	0.880	0.435	0.827	0.728	0.876	0.990
SE	131	1.70	1.01	0.50	0.42	0.46	0.92	0.63
San Juan	-165	-0.91	-1.35	-0.81	0.06	-0.66	-1.25	-0.70
95% CI	-443 , 114	-3.21 , 1.39	-3.71 , 1.02	-1.60 , -0.03	-0.69 , 0.81	-1.55 , 0.23	-3.04 , 0.54	-2.02 , 0.62
P value	0.244	0.435	0.261	0.041	0.869	0.145	0.168	0.294
SE	140	1.16	1.19	0.39	0.38	0.45	0.90	0.66
Conacaste	-186	1.32	-0.53	-0.73	0.14	-0.48	-0.49	-0.05
95% CI	-432 , 61	-0.95 , 3.59	-2.78 , 1.73	-1.60 , 0.14	-0.58 , 0.86	-1.35 , 0.40	-2.20 , 1.22	-1.33 , 1.23
P value	0.138	0.252	0.643	0.101	0.709	0.282	0.569	0.942
SE	124	1.15	1.14	0.44	0.36	0.44	0.86	0.65
Espiritu Santo	283	-1.85	-0.40	0.41	-0.72	-0.25	-0.47	-0.17
95% CI	21 , 546	-4.86 , 1.16	-2.66 , 1.86	-0.56 , 1.38	-1.43 , -0.02	-1.19 , 0.69	-2.21 , 1.27	-1.36 , 1.02
P value	0.035	0.225	0.727	0.401	0.045	0.601	0.595	0.777
SE	132	1.52	1.14	0.49	0.36	0.48	0.88	0.60
Santo Domingo	53	-2.75	-0.33	0.85	0.17	-0.05	0.28	0.33
95% CI	-200 , 306	-6.54 , 1.03	-2.50 , 1.84	-0.19 , 1.89	-0.77 , 1.11	-1.02 , 0.93	-1.74 , 2.29	-1.02 , 1.69
P value	0.677	0.152	0.765	0.108	0.722	0.922	0.787	0.628
SE	127	1.91	1.09	0.52	0.47	0.49	1.01	0.68
Year of birth *	-44	-1.89	-0.10	-0.21	-0.35	-0.14	-1.17	-0.08
95% CI	-346 , 258	-3.54 , -0.25	-2.79 , 2.59	-1.54 , 1.11	-1.06 , 0.35	-1.19 , 0.91	-2.82 , 0.47	-0.97 , 0.80
P value	0.774	0.025	0.939	0.752	0.322	0.793	0.159	0.850
SE	152	0.83	1.36	0.67	0.36	0.53	0.83	0.45
Year of birth squared	2	0.14	-0.05	0.01	0.03	-0.00	0.09	-0.00
95% CI	-31 , 35	-0.04 , 0.32	-0.33 , 0.23	-0.11 , 0.13	-0.04 , 0.10	-0.10 , 0.10	-0.07 , 0.25	-0.10 , 0.10
P value	0.924	0.129	0.727	0.895	0.376	0.992	0.255	0.983
SE	17	0.09	0.14	0.06	0.03	0.05	0.08	0.05
Year of birth cubed	0.03	-0.00	0.00	-0.00	-0.00	0.00	-0.00	0.00
95% CI	-1.42 , 1.48	-0.01 , 0.00	-0.01 , 0.01	-0.01 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.01 , 0.00	-0.00 , 0.00
P value	0.965	0.274	0.596	0.928	0.423	0.878	0.365	0.941
SE	0.73	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Year of birth to the fourth	-0.00	0.00	-0.00	0.00	0.00	-0.00	0.00	-0.00
95% CI	-0.02 , 0.02	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.895	0.419	0.542	0.891	0.452	0.831	0.452	0.943
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	3,301	65.32	9.89	18.51	39.90	13.71	13.42	9.08

95% CI	2,405 , 4,197	59.62 , 71.03	0.10 , 19.68	13.18 , 23.85	37.08 , 42.71	9.52 , 17.89	6.63 , 20.20	6.17 , 11.99
P value	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000
SE	452	2.87	4.94	2.69	1.42	2.11	3.42	1.47
Observations	114	112	115	112	115	115	115	115
Adj R2	0.109	0.132	0.019	0.035	0.090	-0.016	0.007	-0.041
Log likelihood	-799.479	-271.161	-299.853	-183.708	-152.092	-170.145	-239.811	-209.615
F Test	2.653	2.938	1.002	2.686	3.430	0.902	0.919	0.676
Prob >F	0.006	0.003	0.447	0.006	0.001	0.534	0.519	0.744

Note: Robust standard errors in parentheses.

* Mother's year of birth ranges from 1955 to 1987. The variable included in the regressions has been scaled to range from 1 to 33.

T3	Effect of maternal exposure to Atole or Fresco for maternal birth cohorts between 1962 and 1977 on offspring anthropometric measures in 2006-7* (Basis for Table 3 in Main Text)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birthweight (grams)	**Height (cm)**	**Weight (Kg)**	**BMI**	**Head circumference (cm)**	**Arm circumference (cm)**	**Triceps skinfold (mm)**	**Subscapular skinfold (mm)**
Mother's characteristics								
Atole								
Cohort 1	**241**	1.53	**1.60**	**0.74**	0.41	**0.79**	**1.29**	0.26
95% CI	0 , 482	-0.76 , 3.83	0.10 , 3.11	-0.00 , 1.48	-0.26 , 1.09	0.10 , 1.48	0.19 , 2.39	-0.65 , 1.17
P value	**0.050**	0.190	**0.036**	**0.051**	0.229	**0.024**	**0.022**	0.569
SE	123	1.17	0.76	0.38	0.34	0.35	0.56	0.46
Cohort 2	**274**	0.98	**1.99**	**0.99**	0.43	**0.90**	**1.49**	0.90
95% CI	30 , 518	-1.36 , 3.32	0.40 , 3.59	0.27 , 1.71	-0.22 , 1.07	0.23 , 1.57	0.49 , 2.50	-0.05 , 1.86
P value	**0.028**	0.413	**0.015**	**0.007**	0.192	**0.008**	**0.003**	0.062
SE	124	1.19	0.81	0.37	0.33	0.34	0.51	0.48
Cohort 3	**585**	0.95	**3.71**	**1.97**	0.50	**1.61**	**2.60**	1.28
95% CI	57 , 1,112	-1.93 , 3.83	0.63 , 6.79	0.64 , 3.29	-0.50 , 1.50	0.46 , 2.76	0.37 , 4.82	-0.34 , 2.91
P value	**0.030**	0.519	**0.018**	**0.004**	0.328	**0.006**	**0.022**	0.121
SE	269	1.47	1.57	0.67	0.51	0.58	1.13	0.83
Cohort 4	**350**	0.22	2.22	**1.31**	0.58	**0.98**	1.13	0.16
95% CI	51 , 649	-2.93 , 3.36	-0.87 , 5.31	0.12 , 2.51	-0.27 , 1.44	0.06 , 1.89	-0.25 , 2.52	-1.10 , 1.43
P value	**0.022**	0.893	0.159	**0.032**	0.179	**0.036**	0.109	0.801
SE	152	1.60	1.57	0.61	0.43	0.47	0.71	0.65
Fresco								
Cohort 1	-134	0.40	0.50	-0.04	0.27	0.32	0.51	0.23
95% CI	-432 , 163	-1.97 , 2.76	-1.45 , 2.44	-1.06 , 0.97	-0.37 , 0.91	-0.65 , 1.28	-1.09 , 2.11	-0.98 , 1.45
P value	0.376	0.742	0.617	0.932	0.409	0.521	0.534	0.708
SE	152	1.21	0.99	0.52	0.33	0.49	0.81	0.62
Cohort 2	-116	0.20	0.88	0.20	-0.05	0.47	0.87	0.52
95% CI	-434 , 202	-2.23 , 2.63	-1.21 , 2.98	-0.86 , 1.26	-0.71 , 0.62	-0.52 , 1.46	-0.74 , 2.47	-0.76 , 1.80
P value	0.473	0.872	0.409	0.713	0.888	0.354	0.290	0.424
SE	162	1.24	1.07	0.54	0.34	0.51	0.82	0.65
Cohort 3	55	-0.04	0.17	-0.08	0.31	0.31	0.12	-0.07
95% CI	-336 , 445	-2.83 , 2.74	-2.30 , 2.64	-1.39 , 1.23	-0.67 , 1.28	-0.84 , 1.46	-1.73 , 1.98	-1.55 , 1.41
P value	0.783	0.976	0.894	0.907	0.541	0.595	0.896	0.929
SE	199	1.42	1.26	0.67	0.50	0.59	0.95	0.75
Cohort 4	78	-0.94	-0.34	-0.00	0.04	0.46	1.12	0.64
95% CI	-293 , 448	-4.09 , 2.21	-3.32 , 2.63	-1.27 , 1.26	-0.83 , 0.91	-0.73 , 1.65	-0.83 , 3.07	-1.01 , 2.29
P value	0.681	0.558	0.820	0.996	0.925	0.451	0.258	0.446
SE	188	1.60	1.52	0.64	0.44	0.61	0.99	0.84
Date of birth	1,073	4.87	6.65	-1.95	-0.34	-0.60	-5.21	2.34
95% CI	-3,142 , 5,288	-15.47 , 25.21	-13.72 , 27.02	-12.18 , 8.29	-6.22 , 5.54	-8.97 , 7.76	-16.63 , 6.21	-6.22 , 10.90
P value	0.617	0.639	0.522	0.709	0.910	0.887	0.371	0.591
SE	2,146	10.36	10.37	5.21	2.99	4.26	5.81	4.36
Date of birth squared	-52	-0.32	-0.40	0.07	0.02	0.00	0.22	-0.12
95% CI	-244 , 140	-1.30 , 0.66	-1.37 , 0.57	-0.41 , 0.55	-0.26 , 0.29	-0.39 , 0.39	-0.32 , 0.75	-0.54 , 0.29

P value	0.597	0.526	0.418	0.771	0.914	0.990	0.431	0.553
SE	98	0.50	0.49	0.24	0.14	0.20	0.27	0.21
Date of birth cubed	1	0.01	0.01	-0.00	-0.00	0.00	-0.00	0.00
95% CI	-3 , 5	-0.01 , 0.03	-0.01 , 0.03	-0.01 , 0.01	-0.01 , 0.01	-0.01 , 0.01	-0.01 , 0.01	-0.01 , 0.01
P value	0.573	0.443	0.350	0.819	0.912	0.925	0.483	0.529
SE	2	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Date of birth to the fourth	-0.01	-0.00	-0.00	0.00	0.00	-0.00	0.00	-0.00
95% CI	-0.04 , 0.02	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value	0.549	0.380	0.305	0.853	0.905	0.861	0.521	0.519
SE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Juan	-181	-0.41	-0.84	-0.39	-0.08	-0.48	-1.16	-0.62
95% CI	-402 , 40	-2.47 , 1.65	-2.16 , 0.49	-1.01 , 0.23	-0.65 , 0.49	-1.05 , 0.08	-1.99 , -0.32	-1.43 , 0.18
P value	0.109	0.693	0.216	0.214	0.782	0.095	0.007	0.130
SE	113	1.05	0.67	0.31	0.29	0.29	0.43	0.41
Conacaste	-169	1.01	-0.65	-0.67	-0.02	-0.58	-0.77	-0.21
95% CI	-390 , 51	-1.19 , 3.21	-2.18 , 0.87	-1.35 , 0.02	-0.65 , 0.61	-1.20 , 0.04	-1.69 , 0.16	-1.12 , 0.71
P value	0.132	0.367	0.401	0.057	0.955	0.068	0.103	0.658
SE	112	1.12	0.78	0.35	0.32	0.32	0.47	0.46
Espiritu Santo	173	-0.13	-0.10	0.14	-0.70	-0.25	-0.73	-0.26
95% CI	-114 , 459	-2.08 , 1.81	-1.89 , 1.70	-0.82 , 1.10	-1.25 , -0.15	-1.15 , 0.65	-2.21 , 0.76	-1.41 , 0.89
P value	0.237	0.892	0.917	0.770	0.013	0.583	0.339	0.656
SE	146	0.99	0.91	0.49	0.28	0.46	0.76	0.59
Santo Domingo	22	-0.32	0.12	0.50	0.08	-0.01	-0.10	0.25
95% CI	-272 , 315	-2.60 , 1.95	-1.75 , 1.99	-0.45 , 1.45	-0.56 , 0.71	-0.94 , 0.91	-1.61 , 1.41	-0.92 , 1.42
P value	0.885	0.780	0.903	0.303	0.814	0.978	0.897	0.675
SE	149	1.16	0.95	0.49	0.32	0.47	0.77	0.60
Child's characteristics								
Sex	129	0.62	0.02	0.05	0.98	-0.14	-1.55	-0.96
95% CI	65 , 194	0.07 , 1.16	-0.52 , 0.57	-0.19 , 0.29	0.83 , 1.13	-0.34 , 0.06	-1.88 , -1.21	-1.26 , -0.67
P value	0.000	0.026	0.936	0.686	0.000	0.179	0.000	0.000
SE	33	0.28	0.28	0.12	0.08	0.10	0.17	0.15
Trend	-0.01							
95% CI	-0.03 , 0.02							
P value	0.703							
SE	0.01							
Age (months)		1.30	0.27	-0.01	0.49	0.16	0.07	-0.04
95% CI		1.18 , 1.43	0.18 , 0.36	-0.07 , 0.05	0.44 , 0.54	0.11 , 0.21	-0.00 , 0.14	-0.11 , 0.02
P value		0.000	0.000	0.731	0.000	0.000	0.055	0.192
SE		0.06	0.04	0.03	0.03	0.02	0.04	0.03
Age (months) squared		-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
95% CI		-0.02 , -0.01	-0.00 , 0.00	-0.00 , 0.00	-0.01 , -0.01	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.183	0.364	0.000	0.000	0.085	0.797
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) cubed		0.00	0.00	0.00	0.00	0.00	0.00	0.00
95% CI		0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00	0.00 , 0.00	0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.000	0.526	0.210	0.000	0.008	0.108	0.427
SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age (months) to the fourth		-0.00	0.00	-0.00	-0.00	-0.00	-0.00	-0.00
95% CI		-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , -0.00	-0.00 , 0.00	-0.00 , 0.00	-0.00 , 0.00
P value		0.031	0.928	0.302	0.000	0.068	0.192	0.455

SE		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-5,135	35.93	-27.79	36.35	41.42	22.04	54.44	-7.13
95% CI	-39,045 , 28,776	-116.78 , 188.64	-183.81 , 128.24	-44.47 , 117.16	-3.84 , 86.68	-44.11 , 88.19	-35.11 , 143.98	-71.60 , 57.34
P value	0.766	0.644	0.727	0.377	0.0728	0.513	0.233	0.828
SE	17,268	77.76	79.45	41.15	23.05	33.69	45.60	32.83
Observations	1,324	1,273	1,349	1,265	1,349	1,341	1,350	1,349
Log likelihood	-10,257.582	-3,848.941	-4,029.627	-2,786.445	-2,383.276	-2,749.529	-3,443.980	-3,253.012
Adj R2	0.029	0.944	0.746	0.169	0.755	0.566	0.160	0.138
F Test	2.481	1279.213	330.941	8.896	90.882	77.512	10.989	11.083
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AIC	20,555.164	7,743.883	8,105.255	5,618.889	4,810.552	5,545.059	6,933.960	6,552.024
BIC	20,658.933	7,862.313	8,225.018	5,737.174	4,925.108	5,664.686	7,053.741	6,671.788
BIC_C	20,643.597	7,845.655	8,207.323	5,720.587	4,908.253	5,647.127	7,036.065	6,654.129
F tests (p-value)								
4 Atole Cohorts = 0	0.100	0.713	0.078	0.026	0.700	0.039	0.030	0.135
4 Fresco Cohorts = 0	0.590	0.939	0.867	0.941	0.577	0.897	0.512	0.667
4 Atole Cohorts = 4 Fresco Cohorts = 0	0.172	0.962	0.292	0.143	0.698	0.217	0.086	0.264
Atole								
Cohort 2 = Cohort 1	0.074	0.403	0.045	0.026	0.405	0.025	0.011	0.082
Cohort 2 = Cohort 3	0.034	0.712	0.017	0.004	0.413	0.008	0.006	0.134
Cohort 2 = Cohort 4	0.047	0.651	0.049	0.020	0.352	0.024	0.014	0.100
Cohort 3 = Cohort 1	0.036	0.418	0.022	0.009	0.433	0.009	0.015	0.300
Cohort 3 = Cohort 4	0.031	0.767	0.050	0.008	0.390	0.014	0.048	0.261
Fresco								
Cohort 2 = Cohort 1	0.675	0.939	0.683	0.741	0.331	0.633	0.527	0.665
Cohort 2 = Cohort 3	0.434	0.963	0.585	0.817	0.673	0.630	0.328	0.427
Cohort 2 = Cohort 4	0.417	0.722	0.586	0.896	0.964	0.637	0.485	0.676
Cohort 3 = Cohort 1	0.384	0.910	0.859	0.993	0.692	0.808	0.754	0.833
Cohort 3 = Cohort 4	0.919	0.763	0.927	0.989	0.790	0.752	0.374	0.587

Notes: Confidence intervals, p-values and standard errors were calculated allowing for clustering at the mother level. Additional variable included but not reported is a dummy variable for observations with missing data on mother's date of birth. Variable sex equals 1 for boys and 0 for girls.

* See Figure 1 for definitions of four cohorts.