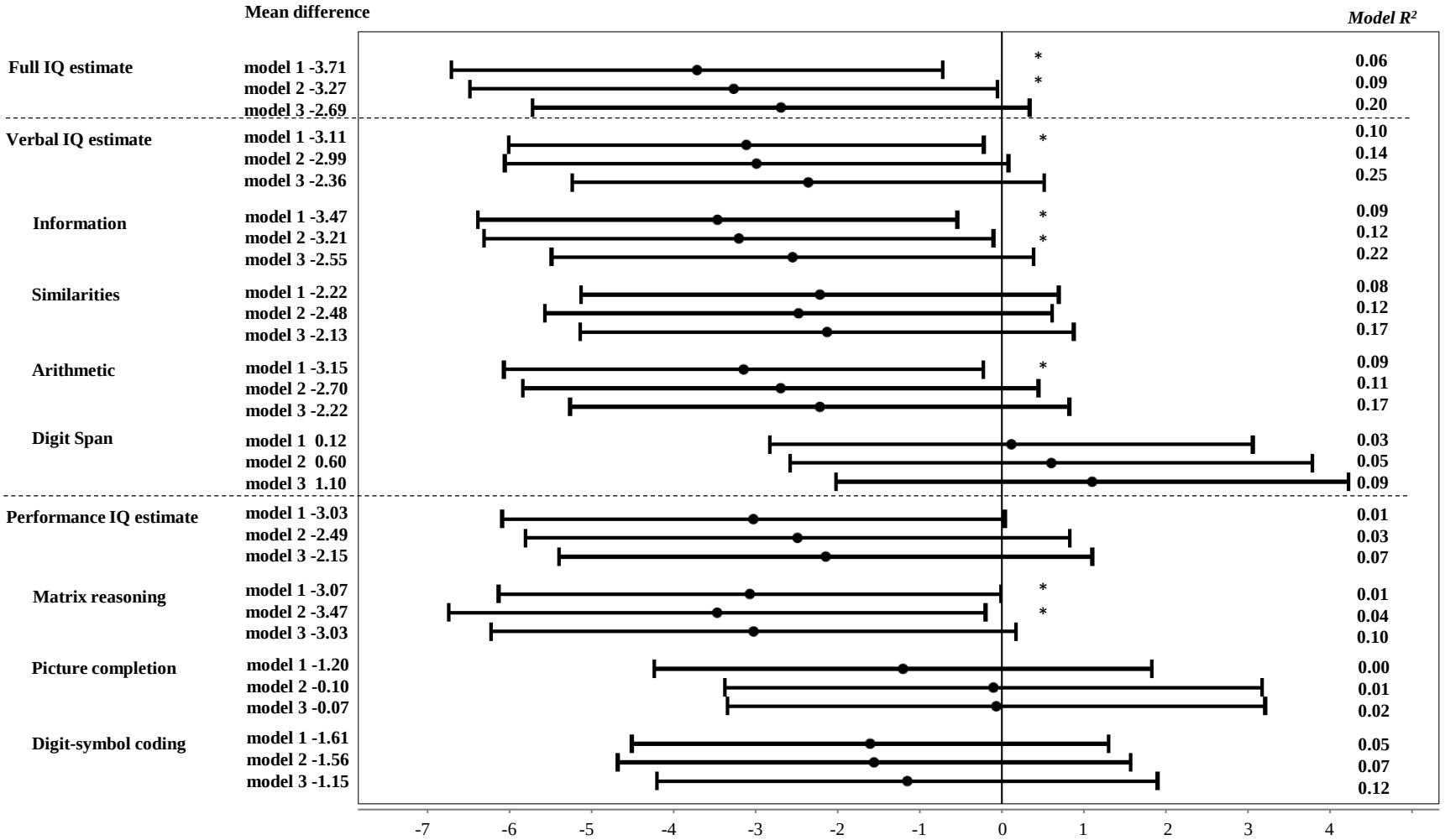
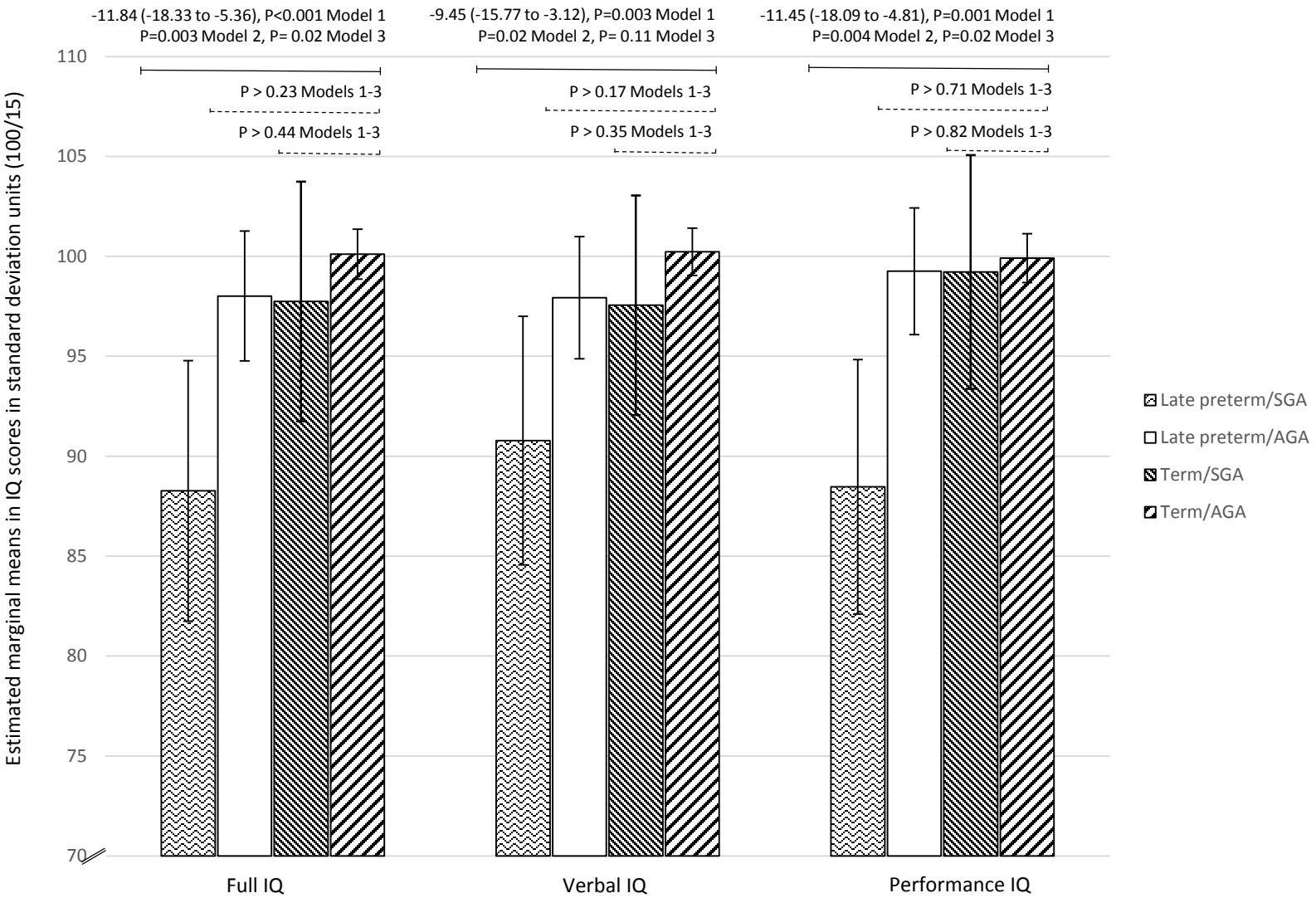
Figure 1



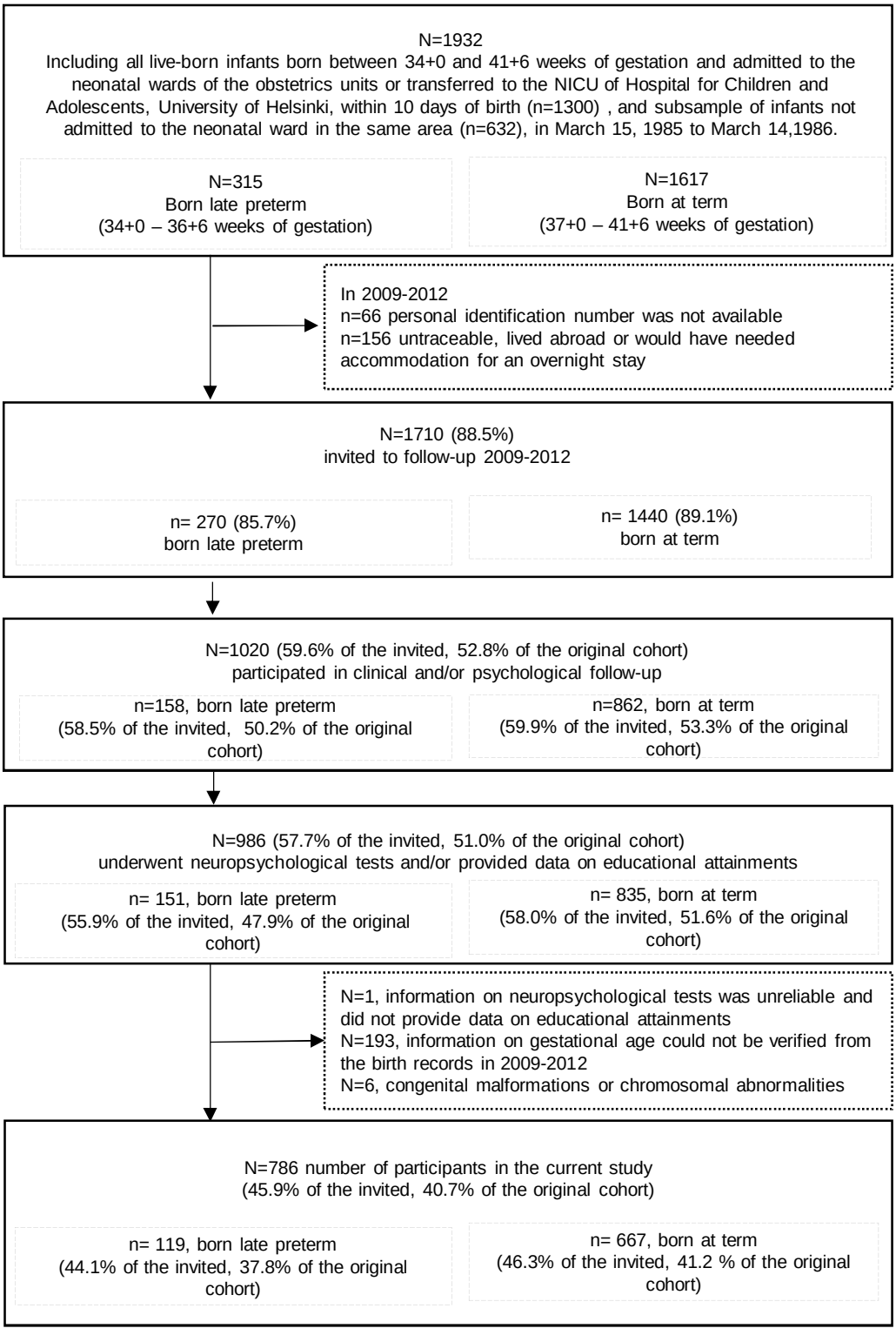
The mean difference derived from multiple linear regressions (i.e., regression weight of gestational age group status) in SD units (Mean=100, SD=15) and their 95% confidence intervals showing late-preterm (error bars) and term born (zero line). Model 1, adjusted for sex and age at testing; Model 2, further adjusted for multiple pregnancies, parity, maternal pre-pregnancy BMI, hypertensive disorder during pregnancy, diabetes during pregnancy, smoking during pregnancy, maternal age at delivery; Model 3, further adjusted for highest educational attainment of either parent.

Figure 2.



Note. Numbers above solid lines represent mean differences, 95% confidence intervals, and P-values in model 1, and P values in Models 2 and 3 in IQ points in those born late-preterm and SGA compared with those born at term and AGA. P-values above dashed lines represent significance of statistical difference in comparison to those born at term and AGA in models 1-3.

eFigure 1. Selection of participants



eFigure2. Estimated marginal means and 95 % confidence intervals of subscales of verbal and performance IQ estimates in those born late preterm and SGA, late preterm and AGA, at term SGA, and at term AGA. The estimated marginal means are adjusted for sex and age at testing.

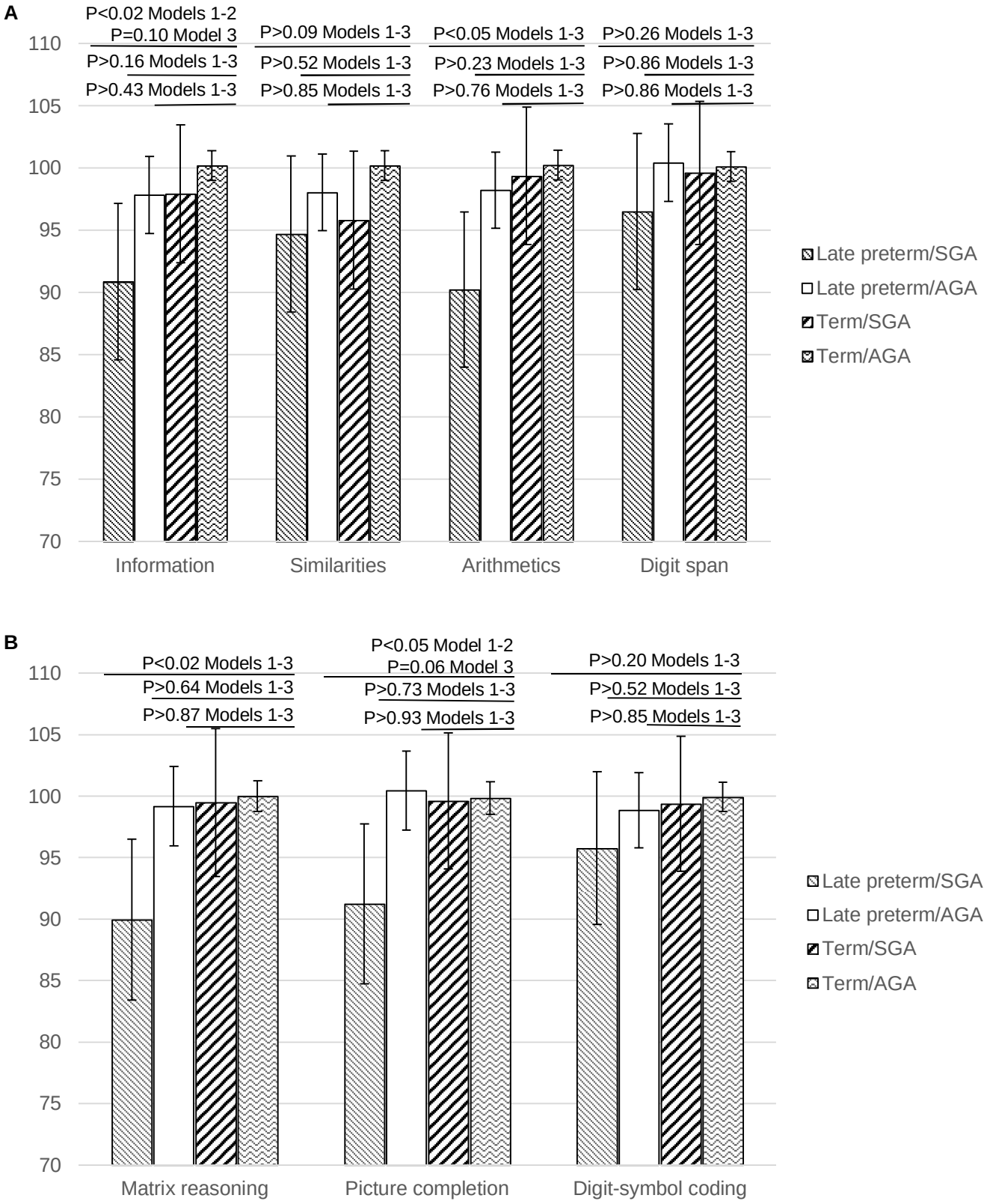


Figure lengend. P-values above solid lines represent significance of statistical difference in comparison to those born at term and AGA in models 1-3.

eFigure 3. Estimated marginal means and 95 % confidence intervals of estimated IQ scores in those born late preterm/slightly SGA (<-1SD), late preterm/AGA, at term/slightly SGA (<-1SD), and at term AGA. The estimated marginal means are adjusted for sex and age at testing.

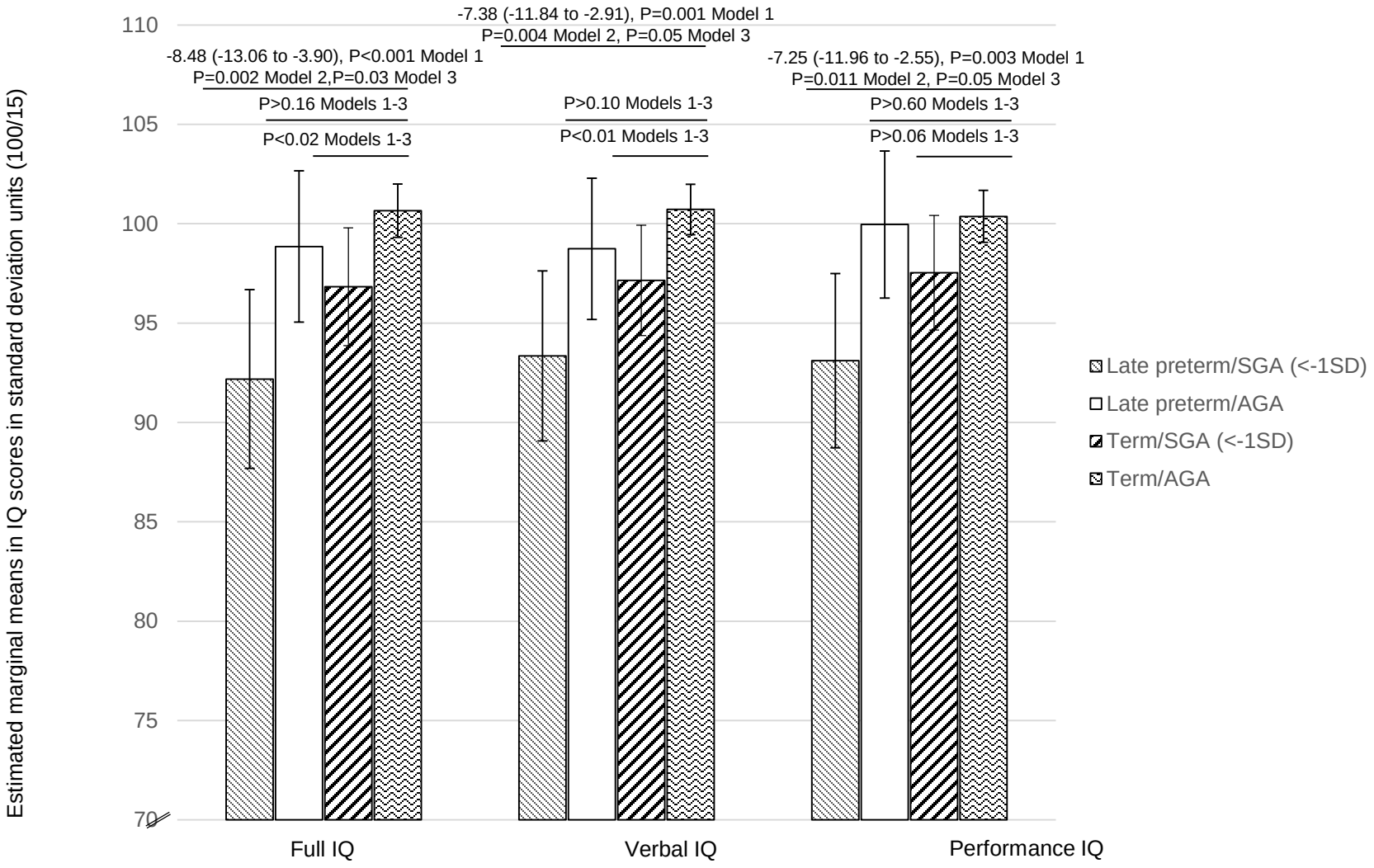


Figure Legend: Numbers above solid lines represent mean differences, 95% confidence Intervals, and P-values in model 1 and P values in Models 2 and 3 in IQ points in those born late preterm and SGA (-1SD) compared with those born at term and AGA. P-values above dashed lines represent significance of statistical difference in comparison to those born at term and AGA in models 1-3.

eFigure 4. Estimated marginal means and 95 % confidence intervals of subscales of verbal and performance IQ estimates in those born late preterm/ slightly SGA, late preterm/AGA, at term/slightly SGA, and at term/AGA. The estimated marginal means are adjusted for sex and age at testing.

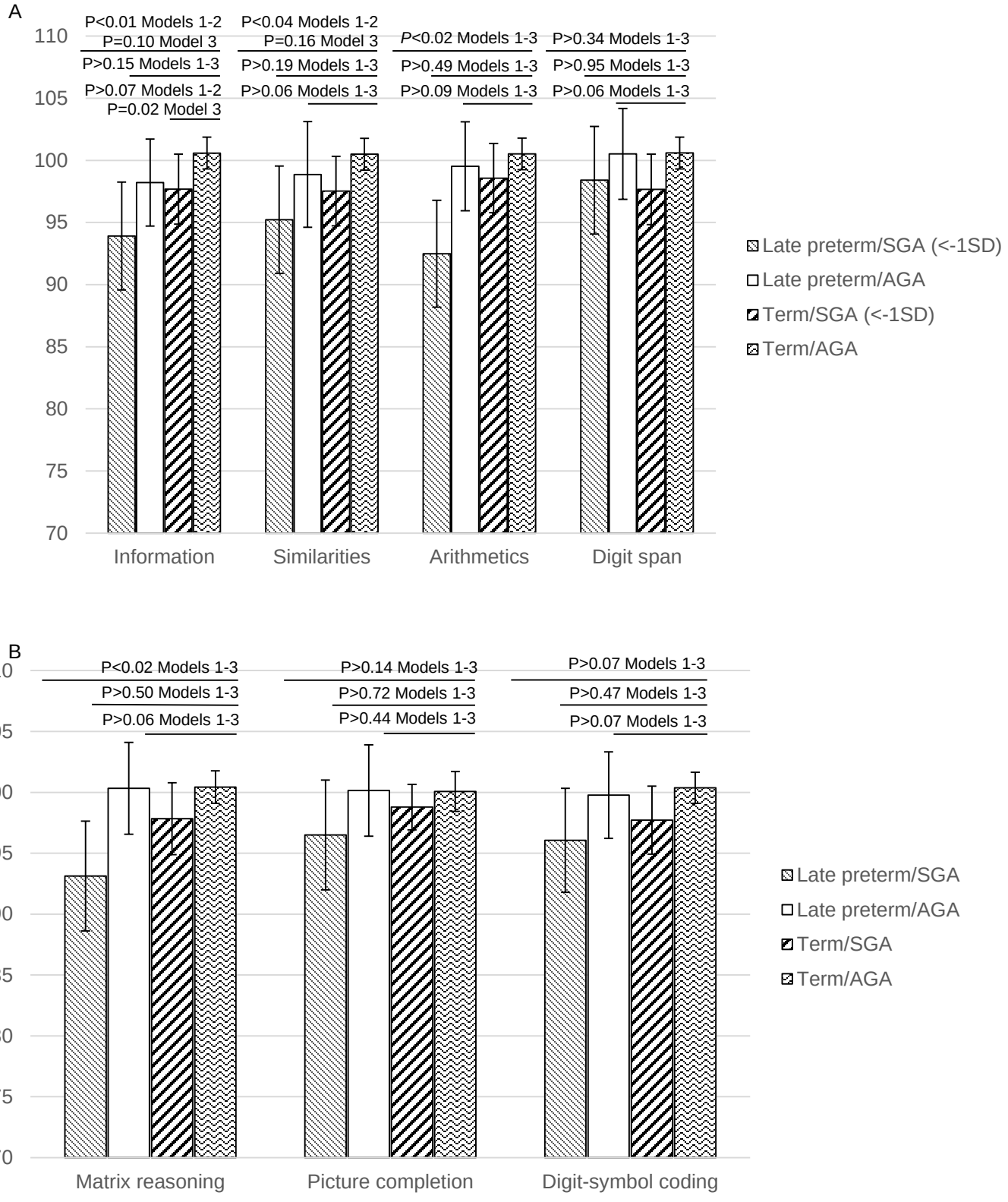


Figure Legend. P-values above parenthesis represent results of analysis testing group differences in four groups.
P-values above error bars represent a statistically significant differences in comparison to those at term and AGA in model 1.

Supplemental Table 1-e. Characteristics of the late preterm participants of the study by birth weight for gestational age groups (SGA vs. AGA)

	Late preterm		Term		
	SGA (n=21)	AGA (n=92)	SGA (n=28)	AGA (n=614)	
Variable	n (%)/mean(SD)	n (%)/mean(SD)	n (%)/mean(SD)	n (%)/mean(SD)	chi2/ANOVA P-value
Sex (men)	13 (61.9%)	48 (52.2%)	11 (39.3%)	301 (49.4%)	0.43
Pre- and neonatal period					
Multiple pregnancy	7 (33.3%)	10 (10.9%)	5 (17.9%)	11 (1.8%)	<0.001
Parity (Primiparous)	11 (52.4%)	52 (56.5%)	21 (75.0%)	296 (48.2)	0.73
Maternal prepregnancy BMI	21.1 (2.59)	22.0 (2.57)	21.85 (4.00)	22.23 (3.28)	0.35
Maternal hypertensive disorder					<0.001
Hypertension	4 (19.0%)	7 (7.6%)	8 (28.6%)	102 (16.6%)	
Pre-eclampsia	6 (28.6%)	10 (10.9%)	3 (10.7%)	11 (1.8%)	
Normotension	11 (52.4%)	75 (81.5%)	17 (60.7%)	501 (81.6%)	
Maternal diabetes					0.23
no OGTT	17 (81.0%)	71 (77.2%)	25 (89.3%)	494 (80.5%)	
normal OGTT	2 (9.5%)	15 (16.3%)	3 (10.7%)	84 (13.4%)	
gestational diabetes	1 (4.8%)	1 (1.1%)	0 (0.0%)	28 (4.6%)	
Type 1 diabetes	1 (4.8%)	5 (5.4%)	0 (0.0%)	7 (1.1%)	
Type 2 diabetes	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.1%)	
Maternal smoking during pregnancy					0.01
No	13 (61.9%)	79 (85.9%)	22 (78.6%)	534 (87.1%)	
1-10 cigarettes/ day	7 (33.3%)	12 (13.0%)	4 (14.3%)	59 (9.6%)	
>10 cigarettes/ day	1 (4.8%)	1 (1.1%)	2 (7.1%)	20 (3.3%)	
Maternal age at delivery					0.90
< 20 years	0 (0.0%)	1 (1.1%)	1 (3.6%)	9 (1.5%)	
20 to 40 years	21 (100%)	89 (96.7%)	27 (96.4%)	594 (96.7%)	
> 40 years	0 (0.0%)	2 (2.2%)	0 (0.0%)	11 (1.8%)	
Labor type [a]					<0.001
Spontaneous birth	4 (20.0%)	52 (56.5%)	15 (53.6%)	486 (81.0%)	
Elective caesarian section	5 (25.0%)	17 (18.5%)	3 (10.7%)	40 (6.7%)	
Other caesarian section	11 (55.0%)	23 (25.0%)	10 (35.7%)	74 (12.3%)	

	Late preterm		Term		
	SGA (n=21)	AGA (n=92)	SGA (n=28)	AGA (n=614)	
Variable	n (%)/mean(SD)	n (%)/mean(SD)	n (%)/mean(SD)	n (%)/mean(SD)	chi2/ANOVA, p-value
Apgar score 5 minutes [b]					0.87
0-7	2 (9.5%)	6 (6.8%)	3 (11.1%)	44 (7.3%)	
> 7	19 (90.5%)	82 (93.2%)	24 (88.9%)	559 (92.7%)	
Breastfeeding at 5 months [c]					<0.001
Never	4 (19.0%)	6 (7.0%)	4 (14.3%)	12 (2.0%)	
Finished	13 (61.0%)	51 (59.3%)	15 (53.6%)	284 (47.5%)	
Partial	4 (19.0%)	25 (29.1%)	7 (25.0%)	218 (36.5%)	
Full	0 (0.0%)	4 (4.7%)	2 (7.1)	84 (14.0%)	
Length of stay in hospital/ days					<0.001
no hospitalization	0 (0.0%)	8 (8.7%)	3 (10.7%)	29 (47.1%)	
up to 7 days	17 (81.0%)	73 (79.3%)	22 (78.6%)	303 (49.3%)	
> 7 days	4 (19.0%)	11 (12.0%)	3 (10.7%)	22 (3.6%)	
Childhood					
Parental education					0.07
lower secondary	5 (23.8%)	7 (7.6%)	0 (0.0%)	53 (8.4%)	
vocational education	6 (28.6%)	24 (26.1%)	8 (28.6%)	124 (20.2%)	
general upper secondary or lower tertiary	8 (38.2%)	29 (31.5%)	12 (42.9%)	224 (36.5%)	
upper tertiary	2 (9.5%)	32 (34.8%)	8 (28.6%)	213 (34.7%)	
Academic performance					
Grade point average at the end of comprehensive school (scale 4-10)[d]	8.2 (0.63)	8.3 (0.83)	8.3 (0.80)	8.3 (0.82)	0.96
Remedial education (yes)[e]	12 (60.0%)	22 (26.5%)	8 (30.8%)	172 (29.4%)	0.03
Own current or on-going education [f]					0.35
lower secondary	4 (19.0%)	4 (4.5%)	1 (3.7%)	33 (5.5%)	
upper secondary	7 (33.3%)	31 (35.2%)	8 (29.6%)	190 (31.7%)	
lower tertiary	5 (23.8%)	22 (25.0%)	10 (37.0%)	155 (25.8%)	
upper tertiary	5 (23.8%)	31 (35.2%)	8 (29.6%)	222 (37.0%)	

	Late preterm		Term		
	SGA (n=21)	AGA (n=92)	SGA (n=28)	AGA (n=614)	
Variable	n (%)/mean(SD)	n (%)/mean(SD)	n (%)/mean(SD)	n (%)/mean(SD)	chi2/ANOVA P-value
General neurocognitive abilities in young adulthood					
Age at testing	25.3 (0.62)	25.2 (0.59)	25.1 (0.55)	25.4 (0.64)	0.02
Full IQ estimate[g]	88.4 (16.8)	98.8 (13.9)	98.7 (13.6)	99.9 (15.4)	0.008
Verbal IQ estimate[h]	91.0 (18.0)	99.1 (14.9)	98.6 (14.0)	100.0 (15.3)	0.07
Performance IQ estimate[i]	88.3 (16.0)	99.3 (13.2)	99.4 (14.6)	99.9 (15.5)	0.009

a Data missing from 1 SGA and 14 AGA. b data missing from 4 AGA. c data missing from 22 AGA. d Data missing from 4 SGA and 17 AGA. e data missing from 1 SGA and 9 AGA. f data missing from 4 AGA. g data missing from 7 AGA. h data missing from 5 AGA. i data missing from 7 AGA.

AGA = appropriate for gestational age; BMI = body-mass-index; IQ = intelligence quotients, LGA = large for gestational age; n = number of participants; OGTT = Oral glucose tolerance test; SD = standard deviation; SGA = small for gestational age.