

WEB MATERIAL

Web Table 1: Additionally adjusted associations between maternal pre-pregnancy obesity and offspring behavioural problems, The Danish National Birth Cohort, 1996-2002.

Behavioural problems	Maternal pre-pregnancy obesity ^a					
	AOR ^b (CI)	AOR ^c (CI)	AOR ^d (CI)	AOR ^e (CI)	AOR ^f (CI)	AOR ^g (CI)
Emotional problems	1.46 (1.26, 1.69)	1.47 (1.27, 1.70)	1.48 (1.28, 1.72)	1.50 (1.28, 1.74)	1.44 (1.25, 1.67)	1.51 (1.29, 1.76)
Conduct problems	1.55 (1.31, 1.83)	1.53 (1.29, 1.81)	1.56 (1.32, 1.84)	1.61 (1.35, 1.92)	1.52 (1.29, 1.80)	1.57 (1.31, 1.88)
Hyperactivity	1.45 (1.23, 1.73)	1.45 (1.22, 1.72)	1.48 (1.25, 1.76)	1.49 (1.25, 1.78)	1.39 (1.18, 1.76)	1.48 (1.23, 1.77)
Peer problems	1.73 (1.45, 2.07)	1.73 (1.45, 2.06)	1.76 (1.48, 2.10)	1.76 (1.47, 2.12)	1.68 (1.41, 2.01)	1.62 (1.32, 1.95)
Total difficulties	1.83 (1.49, 2.25)	1.82 (1.48, 2.24)	1.87 (1.52, 2.30)	1.89 (1.52, 2.36)	1.75 (1.42, 2.15)	1.89 (1.51, 2.36)
Total difficulties with impact	1.91 (1.49, 2.45)	1.88 (1.47, 2.42)	1.93 (1.50, 2.49)	1.95 (1.49, 2.55)	1.85 (1.48, 2.37)	1.93 (1.48, 2.54)

Abbreviation: AOR, Adjusted Odds Ratio. CI, Confidence Interval.

^aBMI ≥ 30

^bAdjusted: parental age, marital status, socioeconomic status, smoking, parity, birth year, gender, parental BMI, parental hyperactivity.

^cAdditional adjustment: gestational age

^dAdditional adjustment: birth weight

^eAdditional adjustment: gestational weight gain

^fAdditional adjustment: breastfeeding

^gAdditional adjustment: child BMI at 7 years old

Web Table 2: Adjusted associations between maternal pre-pregnancy obesity and offspring behavioural problems, stratified by smoking and socio-economic status, The Danish National Birth Cohort, 1996-2002.

Maternal pre-pregnancy obesity ^a		Smoking			Socioeconomic status	
Behavioural problems	AOR ^b (CI)	No	Yes	High	Middle	Low
Emotional problems	1.46 (1.26, 1.69)	1.49 (1.25, 1.77)	1.38 (1.05, 1.82)	1.62 (1.47, 2.17)	1.44 (1.20, 1.74)	1.48 (1.10, 2.17)
Conduct problems	1.55 (1.31, 1.83)	1.56 (1.28, 1.91)	1.54 (1.14, 2.09)	1.59 (1.17, 2.27)	1.53 (1.24, 1.88)	1.69 (1.10, 2.61)
Hyperactivity	1.45 (1.23, 1.73)	1.44 (1.16, 1.75)	1.59 (1.09, 2.15)	1.48 (1.10, 2.01)	1.40 (1.10, 1.78)	1.52 (1.02, 2.31)
Peer problems	1.73 (1.45, 2.07)	1.72 (1.39, 2.10)	1.81 (1.31, 2.49)	1.89 (1.40, 2.55)	1.78 (1.39, 2.28)	1.34 (0.86, 2.09)
Total difficulties	1.83 (1.49, 2.25)	1.78 (1.42, 2.40)	2.09 (1.47, 2.96)	2.20 (1.52, 3.17)	1.68 (1.88, 2.26)	2.04 (1.27, 3.27)

Abbreviation: AOR, Adjusted Odds Ratio. CI, Confidence Interval.

^aBMI ≥ 30

^bAdjusted: parental age, marital status, socioeconomic status, smoking, parity, birth year, gender, parental BMI, parental hyperactivity.

Web Table 3: Unadjusted estimates between the total study population (n=38 314) and the population with no missing covariates (n=32 163), The Danish National Birth Cohort, 1996-2002.

	Paternal BMI ^a					
	Total study population			Study population without missing covariates		
UOR (95% CI)	Emotional problems					
Maternal BMI ^a	<25.0			≥30.0		
<25.0	1.00 (ref.)	0.99 (0.90, 1.09)	1.25 (1.01, 1.53)	1.00 (ref.)	1.03 (0.92, 1.14)	1.20 (0.95, 1.53)
	1.13 (0.98, 1.30)	1.19 (1.03, 1.38)	1.66 (1.29, 2.13)	1.13 (0.96, 1.32)	1.24 (1.05, 1.46)	1.58 (1.18, 2.12)
	1.70 (1.40, 2.07)	1.47 (1.21, 1.80)	1.76 (1.31, 2.34)	1.64 (1.30, 2.06)	1.58 (1.26, 1.97)	1.95 (1.40, 2.72)
Conduct problems						
<25.0	1.00 (ref.)	1.12 (0.99, 1.26)	1.72 (1.37, 2.15)	1.00 (ref.)	1.11 (0.97, 1.27)	1.67 (1.29, 2.17)
	1.41 (1.20, 1.66)	1.18 (0.99, 1.41)	1.86 (1.39, 2.48)	1.54 (1.29, 1.85)	1.18 (0.96, 1.45)	1.75 (1.24, 2.48)
	1.99 (1.58, 2.50)	1.93 (1.54, 2.40)	1.82 (1.28, 2.58)	2.06 (1.59, 2.67)	2.01 (1.56, 2.60)	1.62 (1.04, 2.55)
Hyperactivity						
<25.0	1.00 (ref.)	1.12 (0.99, 1.26)	1.93 (1.55, 2.70)	1.00 (ref.)	1.10 (0.96, 1.27)	1.85 (1.43, 2.38)
	1.42 (1.21, 1.68)	1.33 (1.12, 1.59)	2.03 (1.53, 2.70)	1.43 (1.18, 1.72)	1.31 (1.07, 1.60)	2.09 (1.50, 2.90)
	1.81 (1.42, 2.30)	1.95 (1.56, 2.44)	1.74 (1.21, 2.49)	1.86 (1.42, 2.44)	1.99 (1.54, 2.57)	1.67 (1.07, 2.60)
Peers problems						
<25.0	1.00 (ref.)	1.14 (1.00, 1.30)	1.97 (1.55, 2.50)	1.00 (ref.)	1.12 (0.96, 1.31)	1.96 (1.48, 2.59)
	1.38 (1.15, 1.65)	1.46 (1.21, 1.75)	2.40 (1.79, 3.22)	1.30 (1.04, 1.61)	1.49 (1.20, 1.85)	2.42 (1.71, 3.41)
	1.90 (1.46, 2.46)	2.13 (1.68, 2.71)	3.22 (2.36, 4.38)	1.93 (1.43, 2.60)	2.03 (1.53, 2.71)	2.60 (1.72, 3.93)
Total difficulties						
<25.0	1.00 (ref.)	1.24 (1.06, 1.46)	2.89 (2.23, 3.75)	1.00 (ref.)	1.25 (1.03, 1.51)	2.80 (2.07, 3.79)
	1.46 (1.17, 1.83)	1.81 (1.46, 2.25)	2.79 (1.98, 3.94)	1.43 (1.10, 1.85)	1.69 (1.30, 2.18)	2.85 (1.91, 4.25)
	2.56 (1.92, 3.42)	2.73 (2.09, 3.58)	2.98 (2.00, 4.42)	2.69 (1.94, 3.73)	2.84 (2.08, 3.87)	3.03 (1.88, 4.90)
Total difficulties - with impact						
<25.0	1.00 (ref.)	1.38 (1.13, 1.69)	3.12 (2.26, 4.30)	1.00 (ref.)	1.44 (1.14, 1.82)	3.20 (2.21, 4.64)
	1.54 (1.16, 2.05)	1.80 (1.36, 2.37)	2.78 (1.80, 4.31)	1.59 (1.15, 2.21)	1.68 (1.20, 2.35)	2.90 (1.74, 4.82)
	2.73 (1.90, 3.90)	3.37 (2.45, 4.63)	2.97 (1.80, 4.91)	2.88 (1.91, 4.34)	3.45 (2.38, 4.99)	2.93 (1.57, 5.47)

Abbreviation: BMI, Body Mass Index. UOR, Unadjusted Odds Ratio. CI, Confidence Interval.

^aWeight (kg)/height (m)²

Web Table 4: Adjusted associations between maternal pre-pregnancy BMI and offspring behavioral problems among all children (n=40 513) and children included in the analyses (n=32163), The Danish National Birth Cohort, 1996-2002.

AOR ^c (95% CI)	Maternal overweight ^a		Maternal obesity ^b	
	All	Included	All	Included
Behavioural problems				
Emotional problems	1.18 (1.08;1.29)	1.15 (1.03;1.28)	1.52 (1.36;1.71)	1.46 (1.26;1.69)
Conduct problems	1.22 (1.11;1.35)	1.18 (1.04;1.34)	1.62 (1.42;1.85)	1.55 (1.31;1.83)
Hyperactivity	1.25 (1.13;1.38)	1.25 (1.10;1.42)	1.49 (1.29;1.70)	1.45 (1.23;1.73)
Peer problems	1.33 (1.20;1.49)	1.31 (1.14;1.50)	1.82 (1.58; 2.10)	1.73 (1.45;2.07)
Total difficulties	1.42 (1.25; 1.61)	1.33 (1.13;1.57)	1.93 (1.64;2.27)	1.83 (1.49;2.25)
Total difficulties with impact	1.34 (1.14;1.58)	1.28 (1.04;1.57)	2.00 (1.63;2.44)	1.91 (1.49;2.45)

Abbreviation: BMI, Body Mass Index. AOR, Adjusted Odds Ratio. CI, Confidence Interval.

^aBMI 25.0-29.9

^bBMI ≥30.0

^cAdjusted: parental age, marital status, socioeconomic status, smoking, parity, birth year, gender, parental BMI, parental hyperactivity.