Conclusion: HC and HC+FI can be predicted fairly accurately by a simple set of clinical variables available at birth. External validation is required to confirm the usefulness of these models. This may potentiate early intervention to improve future outcome in affected infants.

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VALIDATION OF AN OBSERVATIONAL RATING SCALE OF PARENTAL INTERACTIONS WITH VERY PRETERM INFANTS

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Objective: To date studies exploring the influence of maternal interactions on promoting cognitive and emotional development have relied on study specific scales or used the highly regarded Nursing Child Assessment Teaching Scale (NCATS). This study will validate a new, brief and easy to use measure developed to assess the quality of early maternal interactions.

Method: Participants were 43 mothers and their very preterm infants (< 32 weeks gestation) selected from a representative sample recruited in a previous study. Mothers were videoed undertaking a teaching task with their infant at 3-months corrected age and mother-infant interaction was assessed using the NCATS (73 items). In the present study interactions were reassessed using the purpose-developed 8 item Observational Scale for Parent Interaction (OSPI), possible scores range from 0 to 15.

Results: OSPI scores ranged from 1 to 15, with a median score of 7. The scale had good internal consistency Cronbach's alpha=0.758. OSPI scores correlated significantly with the NCATS Caregiver score (r=0.781, n=43, p< 0.001), and with the NCATS Caregiver and Child total score (r=0.772, n=43, p< 0.001) demonstrating concurrent validity. Infant's gestational age correlated significantly with the OSPI (r=0.448, n=43, p=0.003) but not with mother's age indicating construct validity. Ten interactions were re-rated using the OSPI and the intraclass correlation of 0.904 shows excellent test re-test reliability.

Conclusions: The OSPI is a valid and reliable measure of maternal interactions which is cost and time efficient. The scale should prove a useful measure particularly for larger studies.

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LIMITED SIGNIFICANCE OF WEIGHT GAIN DURING PREGNANCY ON BIRTH WEIGHT

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Background and aim: Data from The Medical Birth Registry of Norway show a temporary increase in mean birth weight and proportion of large babies in parallel with changes in national consumption of sugar-containing beverages. The aim was to study to what extent weight increase during pregnancy, which may reflect consumption of carbohydrates, affects birth weight.

Methods: During 2001-2009 15054 live term (37-42 weeks) singleton pregnancies were registered in the Oppland county pregnancy database. Time trends were examined, and 9282 births with complete information were subjected to multiple linear regression analysis. Birth weight (BW) was related to age, height, pre-pregnancy BMI (ppBMI), chronic diseases, parity, pregnancy complications, smoking and gestational weight gain (GWG) in the mother, and gestational age (GA), sex, and registered malformations in the child.

Results: During the study period mean BW decreased from 3658 to 3574 gram (p< 001). Mean ppBMI increased from 24.25 to 24.78, GWG decreased from 15.15 to 13.93 kg, smokers decreased from 22.7 to 11.5%, GA decreased from 39.79 to 39.50 weeks, (p< 001 for all). Our model explained 33% of the variability in BW. BW increased 18.9 (95%CI; 17.4,20.4) g per kg GWG, 21.7 (19.9,23.5) g per unit ppBMI, 13.1 (11.7,14.4) g per 1 cm mother´s height, 141.8 (135.0-148.6) g per week GA, and 105.7 (89.3-122.2) g for male sex, and decreased 187.3 (164.6, 210.1) g for smoking and 182.7 (164.5,200.9) g for being primipara.

Conclusion: Pregnancy weight gain and prepregnancy BMI have significant, but limited, impact on birth weight.