

correlations were shown between Secure and Insecure attachment, the attachment variables Coherence of Mind, Coherence of Transcript and Full Scale Intelligence Quotient. No statistically significant correlations were obtained in the FT- group.

**Conclusions** Extremely Preterm born, when young adults, shows significantly lower IQ-scores, have negative self and positive others model and shows a higher proportion of insecure attachment. To our knowledge, this is the first study to report data on EPT and its impact on the attachment organization in adulthood. Insecure attachment, low IQ and prematurity may be considered as significant risk factors for developing psychopathology, they deserve careful attention in future research and clinical follow-ups.

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#### **SOCIODEMOGRAPHIC AND NEONATAL FACTORS ASSOCIATED WITH EARLY CHILDHOOD SOCIAL-COMMUNICATION DIFFICULTIES IN CHILDREN BORN PRETERM**

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**Background** The Quantitative Checklist for Autism in Toddlers (Q-CHAT) is a parent-completed questionnaire providing a quantitative measure of early childhood social-communication difficulty (Allison *et al*, J Autism Dev Disord, 2008). The Q-CHAT scores of children born preterm are higher than the general population, indicating greater autistic traits (Wong *et al*, Neonatal Society Proceedings 2012 Spring Meeting).

**Aim** To examine sociodemographic and neonatal factors associated with social-communication abilities in preterm infants at 24 months corrected age.

**Methods** The parents of children born at < 30 weeks gestation and enrolled in a study evaluating routinely collected neurodevelopmental data were asked to complete the Q-CHAT. Children with severe neurosensory disabilities and cerebral palsy were excluded. The effect of factors identified *a priori* (maternal age, gestation, birth-weight z-score, gender, multiple pregnancy, length of mechanical ventilation, supplemental oxygen requirement at 36 weeks post-menstrual age (BPD) and index of multiple deprivation (IMD)) on Q-CHAT scores were examined using univariable and multivariable linear regressions.

**Results** The Q-CHAT was completed by the parents of 104 children (mean[SD] gestation 27.0[1.7] weeks, when the children were at a mean corrected age of 24.7[2.7] months). On univariable analysis, gestation, multiple pregnancy, BPD and IMD were positively associated with Q-CHAT scores. Low gestation ( $p=0.02$ ) and higher IMD ( $p<0.01$ ) were independently associated with higher Q-CHAT scores on multivariable analysis.

**Conclusion** Preterm birth is a recognised risk factor for autism spectrum disorder. We report a novel finding of high deprivation as an independent predictor of early childhood social-communication difficulty in the preterm population.

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#### **PRETERM BORN PRESCHOOLERS' DISABILITIES IN DAILY ACTIVITIES**

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**Aims** Do very low birth weight (VLBW) preschoolers without Cerebral Palsy (CP) have disabilities in daily activities and what are risk factors for these disabilities?

**Methods** Disability in daily activities was assessed with the Dutch Pediatric Evaluation of Disability Inventory (PEDI-NL) in 143 VLBW children, at 44 months corrected age (CA). Children with CP are known to have disabilities and were therefore excluded. Multiple logistic regression analyses were performed to determine the risk factors for disabilities in daily activities. Perinatal and socio-demographic factors, a low (< 1SD) Psychomotor- Developmental Index (PDI) and low (< 1SD) Mental Developmental Index (MDI) of the Bayley Scales of Infant Development (BSID II) at 24 months CA were considered as potential risk factors and included in the analyses.

**Results** One or more disabilities were found in 27 VLBW children (19%). The highest frequencies were found in mobility (19 (13%) children) and in social functioning (12 (8%) children). Logistic regression analyses detected a low PDI and a low MDI as risk factors for disability in mobility; R-square 0.211. For disability in social functioning, a low MDI and being first born were detected as risk factors: R-square 285.

**Conclusions** At school entry, one in five VLBW children does have a disability in daily activities especially in mobility and social functioning which may reduce participation with their peers. However, prediction of the disabilities by risk factors is limited. Therefore, adding the PEDI to follow up assessments may enable adequate referral for intervention focussing on participation.

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#### **VISUAL SEARCH AND ATTENTION IN VERY LOW BIRTHWEIGHT (VLBW) PRESCHOOLERS**

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**Background and Aim** Very Low Birth Weight (VLBW) is associated with visual perceptual and visuomotor problems (Geldof *et al*, 2012). This study investigated the nature of the visual search problems in VLBW children and sought to test the hypothesis that visual search problems originate from deficits in attentional networks.

**Methods** Visual search and attentional network function was assessed in 105 VLBW children and 64 age matched term controls. Visual search performance was investigated with a newly developed paradigm that manipulated target density and ordering of targets. Attentional network function was measured using the Posner Attentional Network Test (ANT; Posner, 2007).

**Results** Visual search was less efficient in VLBW children compared to controls ( $F_{1,167} = 4.0$ ;  $p = 0.05$  partial  $\eta^2 = 0.02$ ). In addition, VLBW children demonstrated poor executive attention as indicated by lower accuracy levels on the executive attention measure of the ANT ( $p < 0.001$ ; partial  $\eta^2 = 0.08$ ), but not on the alerting ( $p = 0.45$ ; partial  $\eta^2 = 0.003$ ) and orienting ( $p = 0.32$ ; partial  $\eta^2 = 0.01$ ) attention measures. None of the attention measures significantly predicted visual search efficiency (alerting:  $\beta = .24$ ;  $p = 0.22$ ; orienting:  $\beta = -0.11$ ;  $p = 0.65$ ; executive attention:  $\beta = 0.17$ ;  $p = 0.14$ ).

**Discussion** VLBW children were characterized by less efficient visual search ability and reduced executive attention. Deficits in executive attention did not explain the deficits in visual search, suggesting that both deficits occur independently of each other.

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#### **LONGTERM FOLLOW UP OF COGNITIVE FUNCTION CHILDREN BORN AT THE LIMIT OF VIABILITY AFTER ACTIVE PERINATAL CARE, UMEÅ-UPPSALA STUDY**

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