Background and Aim Extremely preterm infants are at increased risk of permanent hearing loss. However, population-based data in infants born with less than 27 weeks gestation are scarce. The aim of this study is to investigate the prevalence of hearing impairments in extremely preterm infants at the age four years.

Methods A population based cohort study on infants born before 27 gestational weeks from 1 January 2004 to 31 mars 2007 in Stockholm, Sweden. Perinatal clinical data on all children were collected prospectively. Data on hearing ability were retracted from patient records. Hearing ability was investigated through neonatal hearing screening with otoacoustic emissions (OAE) for children born after 1 November 2005 and for all children at age four years with play audiometry through Child Health Centers.

Results Of the 107 children, one infant (0.9%) had a permanent moderate (40–60 dB) bilateral sensorineural hearing impairment. The hearing loss was detected through the neonatal hearing screening and hearing aids were given at age three years. 56 children had neonatal hearing screening of which 46 (82%) had normal hearing. After hearing screening at four years age no additional children were identified with hearing impairment. Several children had neonatal morbidity such as BPD, ROP and IVH. At age 50 months 6 children had CP.

Conclusion The prevalence of hearing impairments at the age of four in the studied population is 0.9 %. This prevalence is lower than data published in previous extremely preterm cohorts, and lower than expected in this very high-risk population.

Background and Aim Forty years ago the so-called “male disadvantage hypothesis” as an explanation for increased perinatal morbidity in boys as compared to girls was introduced by Naeye et al. Since then numerous studies have confirmed the risk of being born a boy, especially when born preterm. The aim of the current study was to evaluate associations of mother-child interaction with developmental outcome in ELGA children.

Patients and Methods A prospective study of 48 ELGA children, born before 28 gestational weeks (26±1.2 weeks, birth weight 876 g ± 194 g) and 16 term controls. At two years of corrected age the quality of mother-child interaction was assessed using the Ericson Scales and Mutually Responsive Orientation Scales. Developmental outcome was assessed with Griffiths Mental Developmental Scales (GMDS) and Bayley Scales of Infant and Toddler Development - Third Edition (BSID-III).

Results There was no difference in mother-child interaction between ELGA children and term controls at two years of corrected age. However, among ELGA children quality of dyadic relationship, maternal sensitive-responsiveness and supportive presence were associated with developmental outcome measured both with GMDS and BSID-III (adjusted p<0.05). This association remained after adjusting for mother’s educational level. White matter or gray matter abnormalities in MRI at term equivalent age or gr. III–IV intraventricular hemorrhage during neonatal period were not associated with mother-child interaction.

Conclusions This study emphasizes the importance of the quality of mother-child interaction after extremely preterm birth for the development of ELGA child.