and there are few longitudinal studies that have used a comprehensive neuropsychological test battery. Aim of study was to look at how young adults born SGA perform on a variety of neuropsychological tests, and to see whether they have problems of specific or general origin.

Methods Population-based follow-up study at age 19 of 59 term-born SGA (birth weight< 10th centile, mean: 2915g) and 81 controls (birth weight≥10th centile, mean: 3707g). One participant in the SGA group had cerebral palsy and was excluded from analysis.

A standardized neuropsychological test battery was used to assess several functions: memory, language, attention, executive functions and visual-motor integration.

Results The SGA-group performed significantly poorer than controls (p<0.01) on several tests. These were tests assessing memory; (Wechsler memory scale-III: auditory immediate memory and mental control), attention (Trail making test), executive functions (Design fluency) and visual-motor-integration (Motor coordination test). The groups did not differ in visual memory tasks, long term memory, language functions and several other attention/executive tasks.

Conclusions Our results suggest that young adults born SGA have specific neuropsychological difficulties, especially problems with auditory learning, eye-hand-coordination, and they are slower at performing and initiating tasks compared to controls. This might further indicate that children born SGA can be in need of special education in school.

241 USING THE AGES AND STAGES QUESTIONNAIRE TO CAPTURE PATTERNS OF RISK FOR DEVELOPMENTAL DELAY IN CANADIAN CHILDREN BORN LATE PRETERM

doi:10.1136/archdischild-2012-302724.0241

Background and aims Nearly three quarters of preterm infants are >36 weeks gestational age (GA), or late preterm (LPT). LPT children are at significantly greater risk for neurological, language and communication delays, social and emotional problems, and attention-deficit/hyperactivity disorder than children born full term. Developmental screening and early intervention may mitigate these risks. Little is known about early patterns of risk across developmental domains in the LPT group as this grouping has been oversimplified. A standardized questionnaire, the Ages and Stages Questionnaire 3rd edition (ASQ-3) may be useful to capture delays in LPT children born late preterm.

Methods Population-based follow-up study at age 19 of 59 term-born SGA (birth weight< 10th centile, mean: 2915g) and 81 controls (birth weight≥10th centile, mean: 3707g). One participant in the SGA group had cerebral palsy and was excluded from analysis.

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Background The assessment of psychometric parameters is an important part of growth&development evaluation of preschool children. The contributing factors of psychomotor functions are parents’ Socio-Economic Status (SES), mother(teacher)/child interaction and environmental quality play. It’s important to evaluate the weak points of this particularly neglected aspect of child development in Vlora-Albania.

Aim Assessment of the most problematic areas of psychomotor development of children in Vlora-Albania and distribution of psychometric parameters according to the quality of care&learning environment and to SES of children’s parents.

Methods This cross-sectional study included all the 75 preschoolers enrolled in two kindergartens and the institutionalized children in Foster-Care, Vlora-Albania. The evaluation of psychomotor development was done based on the standard international test of Ages&Stage Questionnaires-3, referring to children chronological age. Evaluation of child care & learning environment was done according to ECERS-R (Early-Care-Environment-Rate-Scale). Socio-economic status distribution was based on father’s occupation and classified on European Socio-Economic Classification (E-SEC).

Results In this study we found that 57% of 63 kindergarten preschoolers had at least one problematic psychometric parameter and all the ones in Foster-Care had at least one also. The most problematic item at the kindergarten preschoolers was Personal-Social sector, and at the Foster-Care children was Communication. The highest percentage (75%) of delays of psychometric parameters was found at children whose fathers’ SES belong to class VII (semi-routine occupations).

Conclusions A significant number of preschoolers and all institutionalized children at Vlora-Albania have abnormal psychometric parameters. A better quality of care&play environment leads to less delays at psychomotor development.

243 SENSORY PROCESSING OF CHILDREN WITH AUTISM: UNITING EVIDENCE AND PRACTICE

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Background Sensory processing function is the child’s ability to register, modulate and discriminate between different sensory information arising from the body (e.g. tactile and vestibular sense) and those received from the environment (vision, auditory and gustatory senses). Individuals with autism commonly experience sensory processing difficulties, which can impact upon functional performance in activities of daily living.

Aim To investigate the sensory processing patterns of children with autism.

Methods 15 children aged between 4 to 10 years old (Average 6.9 years) who were diagnosed with autism were included in the study.
Their parents/carers completed the Sensory Profile Caregiver’s Questionnaire. This is a standardised tool designed to assess children’s sensory processing dysfunction in their daily functional performance.

**Results**

There were 13 boys and 2 girls. Nine children were attending mainstream schools and six attended special schools. The assessments completed highlighted that all children experienced some form of sensory processing difficulty (Figure 1).

**Background and aim**

Early intervention programs are critical to optimize development for children in low-income families. Principles of social justice and inclusion increase the tendency to employ strategies and focus on family dynamics.

**Method**

The molecular etiology of hearing impairment in Russia has not been fully investigated. Study of GJB2, MYO7A, SLC26A4, SLC26A5 genes mutation and MTOA7 mutations in different regions of Russia. The SLC26A4 and SLC26A5 genes mutations are analyzed in this study.

**Methods**

Two hundred and fifty unrelated deaf patients were included. The all coding exons of SLC26A4 and first ten exons of SLC26A5 genes were sequenced in all 250 patients, including 130 patients carrying bi- and mono-allelic recessive GJB2 mutations, two patients carrying a known GJB2 dominant mutation c.224G>A (p.Arg75Cln), as well as six patients with mtDNA (m.1555A>G, m.961insC, m.961delTinsC, and m.7444G>A) mutations.

**Results**

Eight patients (3.2%, 8/250) with non-syndromic hearing loss were found carrying SLC26A4 and SLC26A5 mutation and polymorphic variants. Among them, one patient with bi-allelic SLC26A4 mutations (c.85G>C (p.Clu29Gln) and c.149T>G (p.Leu50Arg)) had EVA by CT scan. One patient with non-syndromic hearing loss was heterozygous for mutations c.919–2A>G in SLC26A4 gene. The most common SLC26A5 gene mutation, g.-53–2A>G, accounted for 0.4% (1/250) of all SLC26A4 mutant alleles. Two patients with non-syndromic hearing loss were heterozygous for polymorphic variant c.49548A>G (p.C740Ser) in SLC26A4, and one was heterozygous for polymorphic variant g.38190T>C in SLC26A5. The novel SLC26A4 gene mutation g.29607delA was identified in one patient with EVA.

**Conclusion**

Our results suggest that GJB2, SLC26A4 and SLC26A5 mutations together make up a major cause of congenital hearing loss in the different populations from Russia.

**245 SPECTRUMS AND FREQUENCIES OF SLC26A4 AND SLC26A5 GENES MUTATION AMONG PATIENTS WITH INHERITED HEARING LOSS FROM DIFFERENT REGIONS OF RUSSIA**

**246 MATERNAL UPD2: A NEW GENETIC LOCUS FOR RUSSELL-SILVER SYNDROME**

**Abstract 243 Figure 1**

**Conclusion**

The findings support the key theme found in literature indicating that individuals with autism commonly experience sensory processing difficulties. There seem to be clear links between sensory processing difficulties and reduced functional performance during school and home activities. Further controlled studies on sensory processing in children with autism are recommended.