WHAT ADULTS KNOW ABOUT CHILD DEVELOPMENT IN ALBERTA, CANADA: IMPLICATIONS FOR HEALTH SERVICES

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Background Adult knowledge of child development shapes their expectations and feedback to children as they learn and grow. Effective guidance of children by adults is influenced by their knowledge of child development.

Study questions/aims (1) What is adult Albertans’ knowledge of developmental milestones from birth to 6-years in four developmental domains: physical, cognitive/language, social, and emotional? (2) What parenting supports do adults use regarding child development?

Methods 1,451 randomly selected adults in Alberta, both parents and non-parents, completed a telephone survey exploring knowledge about child development and parenting supports. Data was analysed using univariate and multivariate techniques (p < 0.05).

Results 35% of adults identified when at least half of physical developmental milestones typically occur; 23%, 16%, and 11% could do so for cognitive/language, emotional, and social development milestones respectively. Errors in reporting when milestones typically occur were primarily related to respondents thinking a milestone was achieved earlier. Knowledge has not limited. There were meaningful gaps in adult knowledge of when children achieve developmental milestones. Evidence to date suggests that better child outcomes begin with accurate parent knowledge of child development. There is opportunity to help parents and care providers become more aware of these milestones through knowledge dissemination strategies.

Background Infantile colic or excessive crying during the first months of life is common and causes concern among parents. Little is known about the health and development of children with a history of infantile colic. We evaluated whether these children have motor development impairments by the age of seven.

Method Data on crying symptoms in infancy and parental Developmental Coordination Disorder Questionnaire ‘07 (DCDQ’07) were available for 27,940 singletons from the Danish National Birth Cohort. We fitted a linear regression comparing DCDQ’07 total scores of children with and without a history of infantile colic. We moreover compared the risk (odds) for probable Developmental Coordination Disorder (DCD), defined as a DCDQ’07 total score < 46, for children with and without a history of infantile colic in a logistic regression model. All analyses were adjusted for a number of covariates.

Results Children with a history of infantile colic had slightly lower total DCDQ’07 scores (-0.5 [95% confidence interval: -0.9; -0.03]. The difference was larger among boys (-0.7 [-1.4; -0.1]) than among girls (-0.2 [-0.7; 0.3]). Children with a history of infantile colic had slightly higher risk for probable DCD (Odds ratio: 1.2 [1.0; 1.6]). This was more obvious among boys (1.3 [1.0; 1.7]) than among girls (1.0 [0.6; 1.7]). For both associations, the gender-specific estimates did not differ statistically.

Conclusion Boys with a history of infantile colic had a tendency to lower motor development scores. However, the associations were weak, and the clinical importance of these findings may be limited.

Background Infantile colic is considered a transient problem, but children with infantile colic may have persistent behavioural problems. We studied the association between history of infantile colic, and attention deficit, hyperactivity, emotional and behavioural problems.

Methods The Danish National Birth Cohort is a prospective cohort study of all Danish twins born from 1953 to 1976 and their singletons born from 1955 to 1973. Parents of 30,102 of 41,254 children (73%) participated in the study; the response rate was 87% for twins and 72% for singletons. The study is based on computer-recorded data from Danish registers. Details of the study and main findings have been published. This study is a prospective cohort study of all Danish twins born from 1953 to 1976 and their singletons born from 1955 to 1973. Parents of 30,102 of 41,254 children (73%) participated in the study; the response rate was 87% for twins and 72% for singletons. The study is based on computer-recorded data from Danish registers. Details of the study and main findings have been published. This study is a prospective cohort study of all Danish twins born from 1953 to 1976 and their singletons born from 1955 to 1973. Parents of 30,102 of 41,254 children (73%) participated in the study; the response rate was 87% for twins and 72% for singletons. The study is based on computer-recorded data from Danish registers. Details of the study and main findings have been published.

Results Children with a history of infantile colic were more likely to have behaviour problems than children without a history of infantile colic. The associations were stronger for boys than for girls. The results were robust to adjustment for potential confounders.

Conclusion Children with a history of infantile colic are at increased risk of behaviour problems. The associations are stronger for boys than for girls. The results are robust to adjustment for potential confounders.

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**Method**

Data on crying symptoms in infancy and Strengths and Difficulties Questionnaire (SDQ) scores at the age of 7 were available for 39,000 singletons from the Danish National Birth Cohort (DNBC). SDQ scores above the 90th percentile of community samples were characterised as abnormal. We compared the odds for abnormal SDQ scores of children with and without infantile colic using logistic regression.

Complete follow-up with hospital admissions and discharge diagnoses from the National Patients’ Register were available for 63,773 children from the DNBC with data on crying symptoms. Hazard ratios (HR) for diagnosis of hyperkinetic disorder (HKD, ICD-10 F90.0-F90.9) were estimated using Cox regression.

**Results**

Children with a history of infantile colic had an increased risk of abnormal scores in all SDQ difficulties subscales (OR [95% confidence intervals]: emotional symptoms: 1.6 [1.4–1.8]; conduct problems: 1.5 [1.3–1.8]; attention deficit/hyperactivity: 1.5 [1.3–1.8]; relation with peers:1.4 [1.2–1.6]), as well as in the Total Difficulties score (1.6 [1.4–1.9]).

We moreover observed an increased risk of HKD diagnosis (HR: 1.4 [1.1–1.9]) among children with a history of infantile colic. Results were similar after adjustment for gestational age, birth weight, several intrauterine exposures, and maternal SDQ symptoms.

**Conclusion**

Children with a history of infantile colic had higher risk of emotional, behavioural, attention deficit/hyperactivity problems, and for being diagnosed with HKD.

**Background and aims**

Previously low risk-taking was reported in very preterm (VP: gestational age at birth <32 weeks) and/or very low birth weight (VLBW: birth-weight <1500 grams; subsequently VP/VLBW) samples. Unknown is whether there are other specific personality characteristics associated with VP/VLBW adults. The aim of this study was to examine autistic features, personality characteristics and risk-taking attitudes of VP/ VLBW in comparison to full-term controls at 26 years of age.

**Methods**

The Bavarian Longitudinal Study is a geographically defined prospective whole population sample of neonatal at-risk children born in Germany. The sample comprised of 200 VP/ VLBW adults and 197 controls. The test battery included the Broad Autism Phenotype Questionnaire (autistic features), the Big-5 Inventory (personality), and the Arnett Inventory of Sensation Seeking (risk-taking).

**Results**

Compared to the control sample, VP/ VLBW adults scored significantly higher in autism, introversion and neuroticism but not in conscientiousness and openness scales. They also reported decreased risk-taking. Profile analysis showed introversion, decreased risk-taking, autism and neuroticism as unique features of VP/ VLBW compared to controls ($F_{\text{within-group}} = 0.70$, ns; $F_{\text{between-group}} = 49.56$, $p < 0.001$). These characteristics also loaded into a single profile factor ($\chi^2 = 7.99$, df = 4, ns; CFI = 0.984). VP/ VLBW birth significantly predicted the profile factor ($\beta = 0.33$, $p < 0.001$) and explained 11% of its variance.

**Conclusions**

VP/ VLBW birth poses an important risk for a global withdrawn personality, as indicated by being less socially engaged (introversion), low in taking risks, poor in communication (autistic features) and easily worried (neuroticism). This profile might help to explain the social difficulties VP/ VLBW individuals experience in adult roles, such as in peer/partner relationships and career.