

The effect of early developmental problems in infancy: perspectives and clinical implications

In this month's issue Guedeney et al. (DOI 10.1007/s00787-017-0988-9) set out to test the prospective association between infant social withdrawal and childhood IQ using a longitudinal prospective design. Longitudinal cohorts are amongst Europe's best resources for understanding prospective associations relevant to child development and child mental health (Braddick, F., Carral, V., Jenkins, R., & Jané-Llopis, E. (2009). *Child and Adolescent Mental Health in Europe: Infrastructures, Policy and Programmes*. Luxembourg: European Communities). The study hypothesised that social withdrawal at 1 year would be prospectively associated with cognitive development at 5-6 years. A great strength of the study was the availability of an assessment of motor and language development concurrent to the assessment of social behaviour. Main findings that higher social withdrawal at 1 year was prospectively associated with IQ at 5-6 years were not maintained when language and motor development scores at 1 year were included in the model. In fact infants with high social withdrawal scores had much lower language development scores and somewhat lower motor development scores at 1 year compared to children with higher social withdrawal; showing a cross-sectional association between social withdrawal and motor/language development. The authors speculate that there might be an early influence of language and/or motor skills on social withdrawal behaviours, that language and/or motor difficulties might co-occur with social withdrawal behaviours, that the social withdrawal assessment scale might in fact be picking up language development as well as social behavior; or that social withdrawal may disrupt the normal course of early cognitive development.

The research team has previously shown an association between social withdrawal at 1 year and behavioural problems at 3 years of life. (Guedeney, A., Pingault, JB., Thorr, A. et al. *Eur Child Adolesc Psychiatry* (2014) 23: 1181. <https://doi.org/10.1007/s00787-013-0513-8>) in the same cohort; and language, social and communication problems at 2 years of age in a different community sample (Milne, L., et al. *Long term developmental impact of social withdrawal in infants*. *Infant Behavior and Development* (2009), doi:10.1016/j.infbeh.2008.12.006).

The study in the current issue of ECAP raises interesting specific and broader perspectives. Firstly, if social withdrawal is prospectively associated with psychopathology and concurrent language and motor developmental problems one wonders whether what is being measured is actually social withdrawal. The assessment used in Guedeney et al. (DOI 10.1007/s00787-017-0988-9) [Alarm Distress Baby Scale (ADBB)] assesses facial expression, eye contact, general level of activity, self-stimulating gestures, vocalizations, rapidity of response to stimulation, relationship with the observer, attractiveness to the observer. As many of the items assessed seem to rely on early motor and language skills, it is possible that, particularly at this early age, the social withdrawal assessment might actually be measuring a broad set of developmental abnormalities, rather than specific deficits in the social domain. The lack of evidence of specificity of the ADBB in predicting specifically social problems longitudinally further corroborates this.

Secondly, it is unclear in Guedeney et al. (DOI 10.1007/s00787-017-0988-9) whether social withdrawal at 1 year is actually better than language and motor development at 1 year at predicting cognitive development at 5-6 years. It is likely that language, motor development, and social withdrawal might not be entirely separate constructs.

Thirdly, there is increasing evidence that early social-emotional and behavioural problems in infancy are predictive of a range of social, emotional and behavioural problems in childhood (doi:[10.1007/s00787-012-0332-3](https://doi.org/10.1007/s00787-012-0332-3))(doi:[10.1097/01.chi.0000220849.48650.59](https://doi.org/10.1097/01.chi.0000220849.48650.59)) (doi: 10.1111/jcpp.12256) (doi: 10.1097/DBP.0000000000000268.) (Bedford, R., Wagner, N.J., Rehder, P.D. et al. Eur Child Adolesc Psychiatry (2017) 26: 947. <https://doi.org/10.1007/s00787-017-0967-1>).

There has been a vast development in the last 15 years in the study and ability to assess early social, emotional and behavioural problems. Despite variability in reported specificity of early symptoms and signs, and continuity of early social-emotional and behavioural problems (doi: 10.1111/jcpp.12256) (doi: 10.1097/DBP.0000000000000268.), their presence in infancy should alert parents and healthcare professionals. However, much of the available literature suggests that healthcare professionals may be reluctant to convey concerns about the development of infants and toddlers. A recent study showed that health nurses and parents rarely identified social, emotional and behavioural problems amongst infants. Identification occurred only amongst about a tenth of children with social, emotional and behavioural concerns (Alakortes, J., Kovaniemi, S., Carter, A.S. et al. Eur Child Adolesc Psychiatry (2017) 26: 481. <https://doi.org/10.1007/s00787-016-0909-3>). Resistance in assessing and identifying early markers might be related to several factors, and might be rooted in genuine difficulties in assessing social, emotional and behavioural difficulties at an early age, as well as reluctance to label and 'stigmatize' children (Carter, A. S., Briggs-Gowan, M. J. and Davis, N. O. (2004), Assessment of young children's social-emotional development and psychopathology: recent advances and recommendations for practice. Journal of Child Psychology and Psychiatry, 45: 109–134. doi: 10.1046/j.0021-9630.2003.00316.x). However, early detection, particularly in at-risk children, might prove to be very useful in establishing early intervention.

In summary, there is increasing evidence that early social, emotional and behavioural difficulties are broadly predictive of an array of psychological and developmental problems later in life. Disentangling whether the range of difficulties seen in social, emotional, and behavioural development are specific and track over time, or whether they index more general vulnerability remains to be established. Our ability as healthcare professionals to adequately detect them seems limited by a range of factors. Ultimately, detection is crucial for tertiary prevention and early intervention. A range of assessment instruments have been developed in recent years that specifically assess infant social, emotional and behavioural difficulties; further testing not only of their psychometric properties, but also of their acceptability to parents and healthcare professionals will aid to widen their use and availability. Further investigation of barriers and obstacles to early identification

amongst healthcare professionals who have most contact with infants, and parents might also aid any such effort.