Social anxiety in middle childhood: link with behavioural inhibition when young

QUESTION

Question: Is behavioural inhibition in early childhood a risk factor for mood, disruptive behaviour or anxiety disorders in middle childhood?

People: 284 children aged 21 months to 6 years, whose parents had been treated for DSM-III-R panic disorder or major depression without panic disorder or agoraphobia, or whose parents did not have major anxiety or mood disorders and had never received psychiatric treatment. Main exclusions: acute psychosis or suicidal behaviour in parents.

Setting: Parents with panic disorder or major depression were recruited from hospital out-patient and Health Maintenance Organizations settings and the control group was recruited through community and hospital-based advertising; recruitment 1993–8.

Risk factors: Behavioural inhibition at baseline (assessed through three age-specific, laboratory-based observational protocols).

Outcomes: Mood, disruptive behaviour or anxiety disorders in middle childhood as assessed by the DSM-III-R or IV-based Kiddie Schedule for Affective Disorders and Schizophrenia, Epidemiologic Version (K-SADS-E). Mothers were interviewed for all children, and children aged over 12 years (n = 45) were also interviewed directly.

METHODS

Design: Prospective cohort study.

Follow-up period: Median 5 years. Mean age at follow-up, 9.6 years. 77% of children completed 5-year follow-up.

MAIN RESULTS

There was no effect of behavioural inhibition (BI) on the overall rates of any mood disorder (7% for BI children, disruptive behaviour (22% BI vs 25% non-BI) or anxiety disorder (55% BI vs 49% non-BI; differences not significant). In analyses of specific anxiety disorders, behavioural inhibition in early childhood increased the risk of social anxiety (social phobia or avoidant disorder) in middle childhood (AR for social anxiety: 28% in children with BI vs 14% in children without BI; OR 2.37, 95% CI 1.1 to 5.1). There was no effect of behavioural inhibition (BI) on other anxiety diagnoses. Subgroup analysis in 153 children who did not have social anxiety at interim analyses (at mean age 6 years) showed that behavioural inhibition increased the risk of new onset social anxiety (OR 3.17, 95% CI 1.19 to 8.48).

CONCLUSIONS

Behavioural inhibition in early childhood is a risk factor for subsequent development of social anxiety in middle childhood.

ABSTRACTED FROM


Notes: Three children were not included in the analyses as they exhibited behaviours of both inhibition and disinhibition at baseline. For children aged over 12 years, if diagnostic criteria were met in either the parent or the child interview, diagnosis was considered positive. Although the researchers did formally analyse the concordance rates for the parent and child pairs, these rates appear to be high (about 65% of anxiety disorder diagnoses and 100% of social anxiety disorders were based on mother or child report only). Authors report that this method is commonly used, but the reliability of this method of diagnosis is unclear. Importantly, the majority of children in the study were from parents with a psychiatric disorder. The researchers attempted to control for the contribution of parental diagnosis to risk of anxiety. There was no indication of the validity of the battery of observational protocols used to assess behavioural inhibition at baseline.

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Source of funding: National Institute of Mental Health.

COMMENTARY

For many years, behavioural inhibition (BI), a temperament trait characterised by reticent behaviour in unfamiliar situations, has been linked to childhood anxiety disorders, family history of anxiety and mood disorders, and chronically high sympathetic nervous system arousal.1 The developmental trajectories of BI children are still being studied, however, as some appear to become less inhibited over time while others develop anxiety disorders. This paper adds to an emerging literature suggesting a specific vulnerability to social anxiety in BI children and adolescents.2 It demonstrates the power of longitudinal studies to tease apart risk factors (such as BI) from their possible sequelae (such as social anxiety). This is not possible in cross-sectional designs, where phenomenological overlap or other factors could account for associations.

Although needing replication with a more ethnically diverse sample, this study’s methodological strengths include a high proportion of sample follow-up, blind ratings of key constructs, and analyses that co-vary for potential confounding factors. The authors include a helpful summary of advice which paediatricians can offer to parents of BI children, including giving children empathic encouragement to face avoided people and situations, rewarding children for facing feared situations, and creating opportunities for children to habituate to new situations. A screen to help paediatricians identify BI children (for example, observing how readily children approach same-age peers in the waiting room) might have been a useful addition, especially for 4–6-year-olds as BI at this age was most consistently linked to subsequent social anxiety.

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Competing interests: None declared.


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*Evid Based Mental Health* 2008 11: 27
doi: 10.1136/ebmh.11.1.27

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