

Family history of neurodevelopmental and mental health problems in children with functional tics

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Background:

Poor parental mental health is a risk factor for childhood mental health problems (Essex et al., 2006). Parental influence on child mental health problems can be passive via the passing on of vulnerability genes to mental health disorders or active via parenting (Bolhuis et al., 2021). Vulnerability factors for the development of functional symptoms include case history of anxiety disorders and/ or neurodevelopmental disorders (Han et al., 2022). One would therefore expect increased levels of anxiety and neurodevelopmental disorders in families where children develop functional symptoms. Parental anxiety is also thought to be linked with maintenance of functional symptoms (Newton et al., 2019). We seek to explore the prevalence of parental mental health problems in children with functional tics. We hypothesize higher levels of anxiety and neurodevelopmental disorders in family members compared to other mental health problems and that this will be elevated compared to population norms. We hope to explore patterns of familial influence.

Methods:

A detailed case series of children (N=62) aged 8 to 17 years old presenting to the specialist tic/Tourette service and subsequently diagnosed with functional tics are described. A chart review of their referral letter and assessment was undertaken to determine the family history of mental health disorders.

Results and Preliminary Conclusions:

The mean age of the sample was 14.28 years, 87.1% were cisgender female, 12.9% were cisgender male, and 11.3% identified as non-binary or transgender. 66.1% were white British. 80.6% of children had a diagnosed psychiatric condition in addition to functional tics: 72.6% of those had anxiety, 17.7% had depression, 14.5% had PTSD, 3.2% had specific phobia, and 3.2% had eating disorders. 75.8% had a diagnosis or suspected diagnosis of neurodevelopmental diagnosis (67.7% ASD, 41.9% ADHD), 24.2% had Tourette syndrome, 9.7% had OCD, and 6.5% had a specific learning disorder (SpLD).

38.7% had a first degree relative with a neurodevelopmental diagnosis: ADHD (17.7%), ASD (16.1%), tics (16.1%), a SpLD (11.3%), and OCD (3.2%). 37.1% had a second degree relative with a neurodevelopmental diagnosis. 19.4% had both a first and second degree relative with a

neurodevelopmental diagnosis. 56.5% had a first degree relative with a psychiatric diagnosis; anxiety (30.6%), depression (29%), PTSD (12.9%), personality disorder (6.5%), addiction (3.2%), and bipolar disorder (1.6%). 33.9% had a second degree relative with a psychiatric diagnosis. 19.4% had both a first and second degree relative with a psychiatric diagnosis.

Adult UK population base rates for anxiety are 5.9%, depression 3.3%, OCD 1.3%, PTSD 3.7-5.1%, bipolar disorder 2-3%, psychosis 0.7%, alcohol addiction 1%. As expected from Han et al. (2022), adults who were related to children with functional tics reported increased levels of anxiety and neurodevelopmental disorders compared to other mental health disorders and compared to population base rates. Patterns of familial influence will be further explored by June 2022.

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