

Which environmental factors are associated with prodromal psychotic symptoms in individuals with 22q11.2 deletion syndrome?

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Abstract

Background: The 22q11.2DS (22q11.2 deletion syndrome) is a model of both genetic vulnerability and early traumatic experiences, yielding a varied phenotype, including a high prevalence of psychotic disorders. The factors leading to only a proportion developing prodromal psychotic symptoms are largely unknown, despite the prodromal phase being hailed as a key time for intervention. We investigated the relationship between: stressful and positive life events (SLEs and PLEs), family environment, socioeconomic background, birth order and season, and prodromal and psychotic symptoms.

Method: Variable and prodromal/ psychotic symptom data was collected using questionnaires created by Cardiff University ECHO study and the SIPS (structured interview for prodromal symptoms), and subsequently analyzed using SPSS. The sample size was between 22-48 individuals for different variables, mean age: 15.7, 54.2% females.

Results: Individuals with prodromal psychotic symptoms had significantly lower: PLEs, cohesion, conflict and family environmental scores (corresponding to better cohesion and family functioning and less conflict): M:26.93, SD:3.86 and M:32, SD:1.92, $p=0.002$, M:54.53, SD:7.94, M:65.43, SD:3.46, $p=0.003$ and M:27.6, SD:4.72, M:33.43, SD:2.070, $p=0.006$, M:1.04, SD:1.72 and M:1.71, SD:1.31, $p=0.016$. Individuals with prodromal psychotic symptoms had non-significantly higher SLEs and deprivation index: M:1.87, SD:1.73 and M:6, SD:2.75, M:6.92 SD:1.83, $p=0.239$. A non-significantly increased relative risk was present for spring/winter births, relative to autumn/summer: RR:1.21, CI:0.79-1.86, $p=0.364$. No significant differences were found for self-esteem and birth order.

Conclusion: Our findings demonstrate the interplay between environmental factors and genetic vulnerability in the development of prodromal psychotic symptoms. Thus, providing potential opportunities for early intervention to create a more supportive developmental environment.

Key words: prodromal psychotic symptoms, psychotic disorders.



Biography:

Seline Ismail-Sutton is pursuing her Medicine at Cardiff University, United Kingdom. She is extremely passionate about Paediatric Mental Health. She has been fortunate to be part of the Cardiff ECHO study researching 22q11.2 Deletion Syndrome. The study has followed up children and adolescents with this syndrome. The study has found a high rate of mental health conditions including anxiety, ADHD and psychotic symptoms in this cohort. She has researched how these psychotic and pre-psychotic symptoms are related to environmental factors. She believes research into genetic syndromes and mental health is crucial, enabling early intervention to be conducted and subsequently reduce the incidence of mental health disorders.

Speaker Publications:

1. "Prefrontal brain stimulation during food-related inhibition training: effects on food craving, food consumption and inhibitory control"; Royal Society Open Science / 2019 / 6(1):181186. DOI: 10.1098/rsos.181186.
2. "Cognitive deficits in childhood, adolescence and adulthood in 22q11.2 deletion syndrome and association with psychopathology"; Translational Psychiatry. / 2019 / 10(1):53 DOI: 10.1038/s41398-020-0736-7.

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