

Editorial

Research into hallucinations and psychotic-like symptoms in children: implications for child psychiatric practice

M. Elena Garralda

**Summary**

There is a growing research interest in childhood hallucinations as predictors of psychotic states. This work appears to have limited direct relevance for clinical child psychiatric practice, but it highlights the continuing relevance of research into precursors of psychotic states and into the determinants of clinically relevant hallucinations in children.

Declaration of interest

None.

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Although hallucinations are a central feature in child psychotic states, it has long been recognised that they are also experienced as part of non-psychotic psychiatric and physical disorders and by mentally healthy children and young people.¹ Hallucinations are similarly reported by general adult populations, where in addition to psychotic states they have been linked to substance misuse, stressful experiences, neurotic symptoms and reduced intellectual ability. They can be induced by conditions that alter level of awareness as in sleep, sensory or food deprivation and confusional states. In recent years there has been a growing interest in the psychiatric literature in the study of childhood psychotic-like symptoms as possible predictors of psychotic states. This editorial considers clinical implications of this research, especially on hallucinations as the most commonly studied symptom, for child psychiatric practice.

The assessment and clinical implications of childhood hallucinations

Clinically when a child presents with hallucinatory-like experiences, the first step is to clarify whether these are perceptual illusions or misrepresentations of sensory inputs, whether they are thoughts or perceptions, whether related to imaginary friends – usually under the child's control – or linked to sleep, fever or other lowered awareness states. This is not always straightforward: in younger children and in those with intellectual disability it may require careful questioning from clinicians experienced in both interviewing children and diagnosing psychotic states. Differentiating hallucinations from dreams is especially difficult in children under 7 years of age because of cognitive developmental immaturity. Simple hallucinations such as occasionally hearing one's own name called, or fleetingly seeing shadows out of the corner of one's eye, will not be regarded as clinically significant. Hallucinations or other psychotic-type symptoms acquire clinical significance when complex, persistent and distressing, and may lead to emergency psychiatric referrals.¹

This depth of phenomenological enquiry is usually lacking in the current research on childhood psychotic-like symptoms,

raising the issue of its significance for child psychiatric practice. The research has been conducted on predominantly non-clinical epidemiological samples, often based on answers from children of different ages to simple questions such as 'have you ever heard voices or sounds that no one else can hear?', which may identify all sorts of perceptual phenomena ranging from the trivial to the clinically significant. Illusions or simple hallucinations may be expected to be more commonly represented in a general population, whereas in clinical psychiatric samples more complex phenomena are described.^{2,3} This makes research findings difficult to translate into clinical practice.

In the presence of confirmed distressing complex hallucinations, the clinician will aim to clarify whether they are a by-product of brain abnormalities in the context of high fever, migraine, epilepsy, drug toxicity, illicit substance misuse or other examples of brain or sleep dysfunction that alter the level of consciousness, or whether they are part of an established psychiatric disorder. Epidemiological studies have rarely attempted to assess these issues or to understand the symptoms in the context of coexisting psychiatric or medical disorders, limiting their significance for clinical work

Psychotic-like symptoms in children as precursors of adult psychotic states

Given the fact that most children with schizophrenic spectrum disorders experience hallucinations and that the symptoms are far less commonly part of the clinical presentation in other psychiatric disorders, a primary task for the psychiatrist is to ascertain whether complex hallucinations are an expression of a schizophrenic or related illness.³ Nevertheless, because schizophrenia is so rare in childhood, children presenting with hallucinations will commonly have other psychiatric disorders. Childhood hallucinations in the absence of other psychotic symptoms can be linked to a range of common psychiatric disorders;¹ they can also be part of more complex clinical pictures such as emerging schizotypal disorders.

The existing evidence from clinical samples indicates that hallucinations in isolation do not appear to increase the risk for adult schizophrenia in children with psychiatric disorders.^{1,2} How is this to be reconciled with findings that schoolchildren in the general population who respond positively to questions screening for hallucinations and delusional thoughts are reported

to have an increased risk for schizophreniform diagnoses as young adults?⁴ The initial interest raised by this research, which was based on a small number of individuals with psychotic symptoms, has subsequently been tempered by the realisation that the positive predictive value of psychotic-like symptoms for adult psychoses – whether from self-rated questionnaires or from more discriminating research interviews – is low^{5,6} and therefore of limited use for psychosis prevention.

Even in children with the more troublesome psychotic symptoms – some of whom might qualify for one of the ‘at risk mental states’ categories – one-fifth have been reported as developing psychotic-like disorders as young adults. There are moreover differences in prevalence and age trends: whereas psychotic symptoms are more common in children than in adolescents,⁵ the prevalence of psychoses rises steeply in adolescence. In line with these observations, the National Institute for Health and Care Excellence guideline *Psychosis and Schizophrenia in Children and Young People* in the section on ‘possible psychosis’ places the treatment of transient or attenuated psychotic symptoms within the context of a range of psychiatric conditions and advises against antipsychotic treatment with the aim of decreasing the risk of psychosis.⁷

It is possible that the predictive value from general population studies will be accounted for by the small number of children with psychotic symptoms where more complex hallucinations coexist with the neurocognitive and social deficits, behavioural and mood dysregulation known to be linked to an increased risk for schizophrenia.⁸ Future epidemiological research on precursors of adult schizophrenia might therefore profitably focus on children with multiple deficits rather than solely on the presence of broadly defined positive psychotic symptoms such as hallucinations. Similarly for the practising child psychiatrist, ongoing monitoring and mental health promotion might be more especially focused on children with the more complex symptoms and multiple deficits.

Hallucinations in children with non-psychotic psychiatric disorders: dissociation, stress and mood changes

Epidemiological work has highlighted associations of psychotic-like symptoms with bullying and suicidality, and this has potential relevance for clinical work. However, this work has either failed to or only rarely controlled for the confounding effects of underlying neurodevelopmental and/or social anomalies and psychopathology. Although general links with psychiatric disorders and their severity have been reported,⁹ more specific associations of hallucinations were suggested by early clinical studies comparing children and young people with non-psychotic psychiatric disorders, with and without hallucinations, where the groups were matched on both disorder type and severity (measured by in-patient status). This identified in children with hallucinations an enhanced and enduring dissociative tendency (as shown by derealisation and dissociative episodes which, like the hallucinations, tended to persist into adulthood) in addition to an excess of neurodevelopmental deficits (such as lower intellectual and reading ability, verbal/performance intellectual discrepancies), of illness precipitant stressors and mood changes.²

It seems possible that, in combination, this set of dissociative and neurocognitive vulnerabilities together with trauma/stress-related mood changes impair the ability to maintain adequate arousal and vigilance levels, increasing the risk of hallucinations arising into consciousness. Associations of persistent voice hearing and psychotic symptoms with both emotional triggers and

dissociative experiences have been confirmed subsequently, as have links between psychotic experiences, low intellectual function and affective dysregulation in adolescents.^{9,10} This would appear to indicate that further exploration of the determinants of dissociative states and of the perceptual correlates of mood changes could be enlightening for the understanding of childhood hallucinations.

In non-clinical settings childhood hallucinations do not for the most part cause substantial suffering or problem behaviours¹¹ and epidemiological studies report high rates of symptom discontinuation,⁹ making treatment often unnecessary. The findings from clinical samples, borne out by clinical reports, suggest that reducing stress – which among other stressors may include bullying – the treatment of concurrent depression and anxiety and of post-traumatic stress disorders will improve psychotic symptoms, as will discontinuation of illicit drug use. Accordingly, although hallucinations may become a central clinical concern and require treatment in their own right,¹ more commonly they can take backstage in the management of the primary presenting psychiatric and social difficulties, and of any coexisting suicidal ideation and behaviours.

Hallucinations deserve particular attention and monitoring in clinical practice when complex (i.e. containing a narrative, multiple voices, mutisensory), distressing and impairing, when they are linked to physical illness and to active psychopathology and suicidality. They may also be pointers to the presence of possibly unacknowledged cognitive vulnerabilities and traumas in children’s lives.

Conclusion

The recent epidemiological research interest in child psychotic-like symptoms appears to have limited implications for the understanding and management of hallucinations in clinical child psychiatric practice. It is suggested that the study of precursors of psychotic states will be better served by sampling children with complex hallucinations and additional neurocognitive and psychosocial risks, and that a better understanding of the determinants of dissociative states and of the perceptual correlates of mood changes may help to inform the clinical management of children with ‘psychotic-like’ symptoms.

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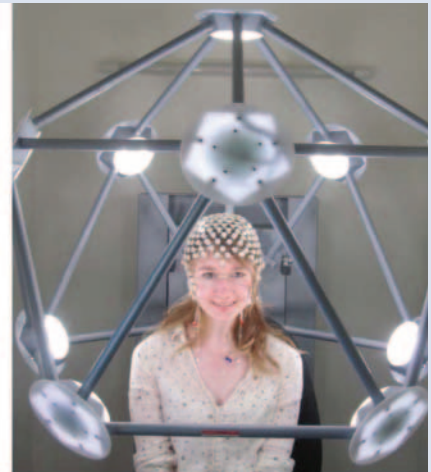
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psychiatry in pictures

The neuroscientific legacy of Anna Freud

Hannah L. Pincham and Elizabeth J. V. Harding



From the left, clockwise: The exterior of the Anna Freud Centre in London, UK; a photogrammetry system that helps to increase accuracy of the neuroimaging data; an infant wearing a high-density electroencephalography net.

In 1941, Anna Freud created the Hampstead War Nurseries in London to provide practical, emotional and psychological support for children affected by the Second World War. The Hampstead Clinic opened a decade later and together the centres had four main goals: to provide therapy for needy children, to provide specialised child-focused training for professionals, to improve education and society through psychoanalysis and to support research. The clinic, renamed the Anna Freud Centre, continues to offer psychiatric and psychological support to young people. The developmental neuroscience research arm reflects the Centre's melding of old with new. Neuroscientific techniques including high-density electroencephalography are used to investigate the brain basis of various aspects of paediatric mental health, such as abnormal attachment in infants and conduct disorder in adolescents.

Anna was Sigmund Freud's sixth and final child, born in Vienna in 1895. She grew up surrounded by psychoanalysis but initially trained as a teacher before joining the Vienna Psychoanalytic Society in 1922. During the 1920s, along with others, she championed the application of psychoanalytic techniques to childhood and began to theorise about and lecture on child analysis. In 1938, she emigrated with her family to London.

While Anna Freud is recognised primarily for her work in psychoanalysis, she also played an active role in research and appreciated the importance of integrating psychoanalysis with ideas from other disciplines. That the modern-day Anna Freud Centre uses neuroscience to inform theory and practice and is, therefore, in keeping with Anna Freud's multidisciplinary heritage. Despite her beneficial impact on a range of psychoanalytic, educational, legal and social spheres, much of her initial input has long been forgotten. Through embracing modern technologies and approaches, the Anna Freud Centre's research may help to reverse this trend.

Given that contemporary psychiatry often involves delving into, or acknowledging, the past in order to improve the future, it is in a similar vein that the theoretical and historical legacy of Anna Freud continues to inform the contemporary practice of, and research into, mental health in young people.

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