Persistent, distressing psychotic-like experiences associated with impairment in youth
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In a new study, researchers examined the association between distressing and persistent psychotic-like experiences (PLEs) in youth and important risk factors for psychopathology. The researchers found that youth who indicate they have persistent, distressing PLEs show impairment in a variety of areas such as cognition and reported psychopathology, highlighting the long-term challenges these children may face and the need for early intervention and support. The study, funded by the National Institutes of Health, appears in *Molecular Psychiatry*.

"Although we know some children have psychotic-like experiences, it has remained unclear which will go on to develop psychotic disorders later in life," said Shelli Avenevoli, Ph.D., deputy director of the National Institute of Mental Health (NIMH) and an author on the study. "This study shows that children who have persistent, distressing psychotic-like experiences face significant challenges during development, suggesting the value of early intervention for all children with these experiences, regardless of whether they go on to develop psychotic disorders."

More than 17% of children between the ages of 9 and 12 experience PLEs, such as mild perceptual abnormalities or delusional thoughts. However, only a small subset of these children will develop psychotic disorders. One factor that could help distinguish clinically relevant PLEs from benign ones is whether the psychotic experiences are persistent and/or distressing. In this study, lead author Nicole Karcher, Ph.D., of the Washington University School of Medicine, St. Louis, and colleagues examined the extent to which persistent and/or distressing PLEs were associated with risk factors for psychosis.

The researchers utilized data from the Adolescent Brain Cognitive Development (ABCD) study, a large-scale research effort that is collecting data on 9 and 10-year-olds across the U.S. The researchers used data collected at three timepoints between Sept. 1, 2016 and Oct. 15, 2018. This included baseline data taken near the beginning of the study period and data collected one and two years later. At each of these timepoints, children were assessed for PLEs and level of distress associated with the experiences.

The researchers used this data to form four groups: a persistent distressing PLEs group, a transient distressing PLEs group, a persistent non-distressing PLEs group, and a transient non-distressing PLEs group. PLEs were considered persistent if they were reported during at least 2 waves of data collection and distress was assessed using a self-report survey.

They then examined differences in various risk factors for psychosis between these four groups.
These factors, measured at the first baseline timepoint, included indicators of psychopathology, functioning (e.g., how children are doing in school and use of mental health services), cognitive abilities, developmental milestone achievement, environmental adversity, adverse childhood experiences, and brain structure and function.

Overall in the study, the greatest functional impairments and mental health service utilization were seen in those with both distressing and persistent PLEs. In addition, youth who experienced persistent, distressing PLEs had greater bipolar, externalizing, and internalizing symptoms than youth without persistent, distressing PLEs. The most significant impacts on cognitive functioning, such as greater deficits in fluid cognition, including working memory and receptive language, were also seen in youth with persistent, distressing PLEs. Youth with persistent, distressing PLEs also experienced more significant environmental adversity than their counterparts, such as higher overall deprivation levels and more adverse childhood experiences.

The researchers also found that youth who experienced distressing PLEs, whether transient or persistent, had delayed developmental milestone achievement, lower cortical and subcortical brain volumes, and differences in brain network connectivity compared with youth who had non-distressing PLEs.

"These novel longitudinal data underscore that it is often only in the context of distress that persistent PLEs are related to impairments," said Dr. Karcher.

The findings of this study indicate that children with persistent, distressing PLEs show elevated risk factors in domains such as psychopathology, functioning, and cognitive performance. These results suggest that persistent, distressing PLEs represent an important screening indicator of youth who go on to develop long-term challenges, regardless of whether they go on to develop psychotic disorders, and may indicate which children are prime candidates for early intervention.

**More information:** Nicole R. Karcher et al,