Systematic review of long-term outcomes of Psychotic-like Experiences that originate in childhood or adolescence

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BACKGROUND

- Psychotic-Like Experiences (PLEs) are defined as subtle, sub-clinical hallucinations or delusions which do not reach clinical threshold- they can be common within the general population.

AIM

- To review studies following up children and adolescents with onset of PLEs before 18 years, assessing all potential mental health and psychosocial outcomes, to inform prognosis and guide clinical practice.

METHOD

- A systematic literature search was conducted using Medline, PsycINFO, and EMBASE.
- Studies were included if they were published in English and were quantitative cohort studies (prospective or retrospective) that followed up children and adolescents with onset of PLEs occurring before the age of 18
- Studies were excluded if the article did not report on PLEs or symptoms that met the criteria for the definition, PLEs onset reported only in over 18's or followed those who already had a diagnosis of a psychotic disorder.
- All mental health outcomes at follow-up were assessed, identifying the risk of developing a disorder, psychopathology and general/social functioning difficulties.

- *2646 articles generated from the search were screened*
- *85 full text articles were reviewed*
- *31 articles met eligibility criteria*

DISCUSSION

Clinical Implications:

- Provides reassurance that most mild symptoms of PLEs in younger children are benign and transitory, subsequently this can prevent unnecessary worry and intervention.
- Raise public awareness, reduce stigma and anxiety, empower help-seeking and therapeutic engagement.

Factors to consider in future research:

- Identifying factors that may contribute to worse outcomes in children/adolescents with PLEs & factors that are predictive of a psychotic prodromal syndrome.

STRENGTHS

- Novel systematic review
- Clinically relevant.
- Broad initial search strategy to enable identification of relevant articles.
- Majority of included cohort studies were of high quality with large sample sizes, prospective data and mostly published within the last 2 decades.
- Approximately half of the studies assessed PLEs in under 10s.
- The majority of studies used standardised tools to assess PLEs.

LIMITATIONS

- No universal definition of PLEs.
- The cohort studies included were extremely heterogenous which made comparisons difficult.
- Confounders such as sex, social status, culture, trauma and comorbidities were not specifically addressed in this review.
- Approximately a third of the studies included also followed up individuals with PLEs onset after 18 years.

CONCLUSION

- PLEs onset in younger children (age < 14 years) is more likely to remit and is possibly a developmental variation.
- Greater likelihood of later psychopathology or disorder with later childhood/adolescent PLEs onset

RESULTS

Outcome	Evidence from studies
Persistence or remission of PLEs	• Between one and three- quarters of children and adolescents had discontinuation of PLEs after 1 or 2 years (*e.g. Askenazy, et al., 2007, Downs et al., 2012).* • Longer term follow-up studies showed higher PLEs discontinuation rates and a greater rate of remission of PLEs in younger children (e.g. *Bartels-Velthuis et al., 2016)*
Transition to clinical psychosis	• Transitions from PLEs to clinical psychosis were between 0 and 25% over 1 year, and 6 and 36% over two years *(e.g. Armando, M., et al., 2015, Calkins et al.,2017).* • Generally, those who transition from PLEs to clinical psychosis are more likely to develop psychosis soon after the onset of PLEs making it difficult to differentiate between benign PLEs and a prodromal syndrome *(e.g. Hengartner et al.,2017).* • Relationships were inconclusive between childhood PLEs and psychosis with longer follow-up studies *(e.g. Fisher, et al., 2013).* • Lower severity of PLEs was associated with lower rates of developing clinical psychosis *(e.g. Fisher, et al., 2013).*
Mood disorders	• Transitions to non-affective psychoses were more common than affective psychoses (e.g. *Amminger et al., 2006).* • Persisting PLEs did not invariably result in persisting depressive symptoms but were likely co-occurences *(e.g. Yamasaki, S., et al., 2018).* • Some studies suggest an increased risk or association with a future mood disorder in young people who have PLEs *(e.g. Addington, J., et al., 2018).*
Anxiety and other emotional disorders	• A close relationship between anxiety/anxiety disorders and PLEs but no clear evidence of a temporal relationship *(e.g. Askenazy, F.L., et al., 2007).*
Substance use disorders	• Increased risk of substance use disorder at follow-up *(e.g. Cederlöf, 2017).* • However, the risk was negligible when a sample of younger children with PLEs were followed up *(e.g. Bartels-Velthuis, et al., 2016)*
Suicide and self-harm	• An increased risk of suicide attempt *(e.g. Connell et al., 2016).*
General and neurocognitive functioning	• Associations with conduct or behavioural difficulties at follow-up were reported *(e.g. Bartels-Velthuis et al., 2011).* • Poorer social and global functioning outcomes associated with PLEs *(e.g. Armando., et al., 2015).* • Some associations attenuated after adjusting for confounders *(e.g. Downs et al., 2012).* • Disordered eating behaviours were more prevalent among young people with PLEs *(e.g. Solmi et. al, 2018).* • Decrease in cognitive functioning was associated with PLEs, speed of processing and working memory were most affected (*Addington, et al., 2018).*

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