

An Association Between Childhood Language Development and Psychotic Experiences in Adolescence

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Introduction

Psychosis occurs when an individual perceives a reality that does not match those around them. The core features include hallucinations, delusions and disorganised speech. It affects around 3% of the population, mostly in young adults, and is associated with poor social outcomes.

Language plays an important role in our social functioning. Disturbance in language has been well documented in people experiencing psychosis. Such as a decrease in the use of formulaic language, and increase in semantic incoherence. These are some of the language patterns that have been identified (**Figure 1**). Both formulaic language and semantic coherence rely on the social environment.

Figure 1: Language Patterns observed in Psychosis

Formulaic Language

- Fixed verbal expressions e.g. idioms, pronouns, etc
- Requires little effort to form
- Reduced in people with Schizophrenia

Semantic Incoherence

- The flow of meaning is disrupted
- Excessive changing of topics
- Diminished linking of sentences

Expected Outcomes

In comparison to the Control Group, the Case Group are expected to show:

- an *increase* in **Semantic Incoherence**.
- a *decrease* in the use of **Formulaic Language**.

Therefore, demonstrating that language impairments are longitudinally associated with later psychotic like experiences.

Future Implications

Findings may lead to

- furthering our understandings of the aetiology of psychosis.
- improved prediction outcomes of psychosis.
- remedial or preventative interventions which target childhood language impairments.
- an impetus and focus on improving childhood language development.
- a decrease in the risk of developing psychosis later in life.

The Research



The research will investigate whether subtle language impairments can be seen in the childhood of those who later developed psychotic like experiences (**Figure 2**).

It uses data from the Avon Longitudinal Study of Parents and Children (ALSPAC).

Participants who reported psychotic like experiences at ages 12, 18 or 24, form the Case Group. Those who did not, the Control Group. Audio recordings of their speech at 8 years of age was obtained, which will be transcribed and prepared for automated language analyses (**Table 1**).

The analyses will attempt to detect these subtle language patterns, and also ascertain whether differences exist between both groups.

Figure 2: Psychotic Like Experiences as a Risk Factor of Psychosis

Psychotic Like Experiences:

- Is a subthreshold form of psychosis, which shares similar features, but differs in frequency and severity.
- A risk factor of psychosis
- Shares similar risk factors i.e. childhood trauma
- As a prevalence of around 7% in the general population, with 20% of cases being persistent and 80% being transient.
- Findings led to the suggestion of psychosis existing on a continuum with healthy populations.

Table 1: Language Analyses

Language Analysis	Speech Pattern
Frequency in Language Analysis Tool (F.L.A.T)	Formulaic Language
Latent Semantic Analysis	Semantic Incoherence

References

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