Methamphetamine can produce a psychotic episode virtually indistinguishable from paranoid schizophrenia. While symptoms typically recede with detoxification, some people experience symptoms that persist beyond the use of the drug and may reflect the precipitation of schizophrenia. This study explored whether there were markers that could differentiate between people at risk of experiencing persistent (vs. transient) psychotic symptoms arising in the context of methamphetamine use.

**Definitions of transient and persistent psychotic symptoms:**

Four non-contiguous 1 month observation periods were used to identify participants who had the following:

(i) no psychotic symptoms (n = 110);
(ii) psychotic symptoms only when using methamphetamine (transient symptoms, n = 85); and
(iii) psychotic symptoms both when using methamphetamine and when abstaining from methamphetamine (persistent symptoms, n = 37).

Psychotic symptoms were defined as a score of 4 or greater on any of the Brief Psychiatric Rating Scale items of suspiciousness, hallucinations or unusual thought content.

**Predictor variables:**
- Lifetime psychotic symptoms assessed using the schizophrenia section of the Composite International Diagnostic Interview.
- Clinical factors previously associated with psychosis risk: DSM-IV diagnoses of childhood conduct disorder, current major depression, social phobia, and panic disorder; male gender, early onset methamphetamine use, family history of a primary psychotic disorder. The three symptom groups (no symptoms, transient symptoms and persistent symptoms) were compared on predictor variables. Receiver Operating Characteristics analysis was used to explore whether these predictors could differentiate between transient and persistent psychotic symptoms.

Four or more of these markers identified participants with persistent psychotic symptoms with 70% sensitivity and 78% specificity (area under the curve = 0.75, p < .001) (Figure 1).

**Key Findings**

Transient psychotic symptoms were associated with lifetime persecutory delusions and tactile hallucinations, and also being male, having an anxiety disorder, childhood conduct disorder, and early onset methamphetamine use.

Persistent psychotic symptoms were additionally associated with a higher lifetime prevalence of tactile hallucinations, hallucinations in various other modalities (complex auditory, visual, and olfactory), delusions of reference and thought insertion, a family history of psychotic disorders, and major depression. Four or more of these markers identified participants with persistent psychotic symptoms with 70% sensitivity and 78% specificity (area under the curve = 0.75, p < .001) (Figure 1).

**Discussion**

Individuals who have previously experienced psychotic symptoms other than persecutory delusions and tactile hallucinations are at elevated risk of experiencing prolonged psychotic symptoms in the context of methamphetamine use. These symptoms can be used in conjunction with other clinical risk factors for psychosis to identify patients who may benefit from early intervention for psychosis.

**Figure 1:** ROC curve for markers of persistent (cf. transient) psychotic symptoms among people who use methamphetamine.

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