

IDENTIFYING PEOPLE AT RISK OF PERSISTENT METHAMPHETAMINE-RELATED PSYCHOSIS

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Introduction and Aims

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.

Design & Method

A longitudinal prospective cohort study of dependent methamphetamine users who did not meet DSM-IV criteria for schizophrenia or mania¹.

Definitions of transient and persistent psychotic symptoms:

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

- no psychotic symptoms (n = 110);
- psychotic symptoms only when using methamphetamine (transient symptoms, n = 85); and
- 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 Scale² items of suspiciousness, hallucinations or unusual thought content.

MARKERS FOR PERSISTENT PSYCHOTIC SYMPTOMS

Delusions of reference
Delusions of thought insertion
Visual hallucinations
Complex auditory hallucinations
Olfactory hallucinations
Tactile hallucinations
Family history of a primary psychotic disorder (e.g., schizophrenia, mania/bipolar)
Current major depression

Four or more markers
- 70% have persistent psychosis

Less than four markers
- 78% have transient psychosis

Predictor variables:

- Lifetime psychotic symptoms assessed using the schizophrenia section of the Composite International Diagnostic Interview.

- Clinical factors previously associated with psychosis risk³: 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.

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.

¹ McKetin R, Lubman DI, Baker AL, Dawe S, Ali RL. Dose-related psychotic symptoms in chronic methamphetamine users: Evidence from a prospective longitudinal study. *JAMA Psychiatry*. 2013;70:319-24.

² Lukoff D, Nuechterlein KH, Ventura J. Manual for the expanded Brief Psychiatric Rating Scale. *Schizophrenia Bulletin*. 1986;12: 594-602.

³ McKetin R, Gardner J, Baker AL, Dawe S, Ali R, Voce A, Leah LS, Lubman DI. Correlates of transient versus persistent psychotic symptoms among dependent methamphetamine users. *Psychiatry Res*. 2016;238:166-71.

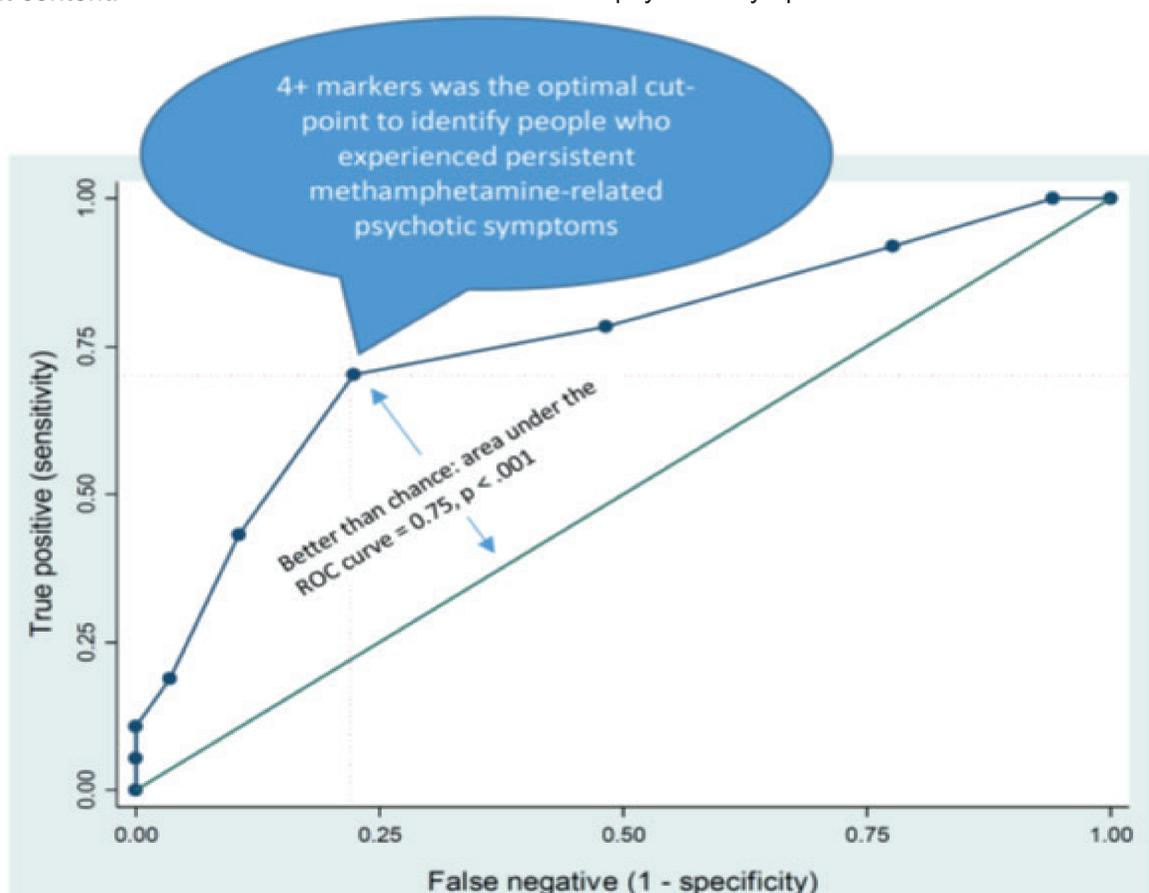


Figure 1: ROC curve for markers of persistent (cf. transient) psychotic symptoms among people who use methamphetamine