THE CLINICAL PROFILE OF METHAMPHETAMINE PSYCHOSIS: A SYSTEMATIC REVIEW

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AIMS

- Methamphetamine can produce psychotic reactions in up to 60% of those using the drug[1]. Clinical presentations of meth/amphetamine associated psychosis (MAP) can be virtually identical to schizophrenia with co-morbid substance use[2], leading to misdiagnosis, inadequate treatment and poor prognosis.
- While the presence of hallucinations and delusions in MAP is well documented[3], the relationship between other psychotic symptoms and MAP is less clear[4].
- This systematic review aims to synthesised previous research examining psychotic symptoms associated with MAP to document its broader symptom profile.

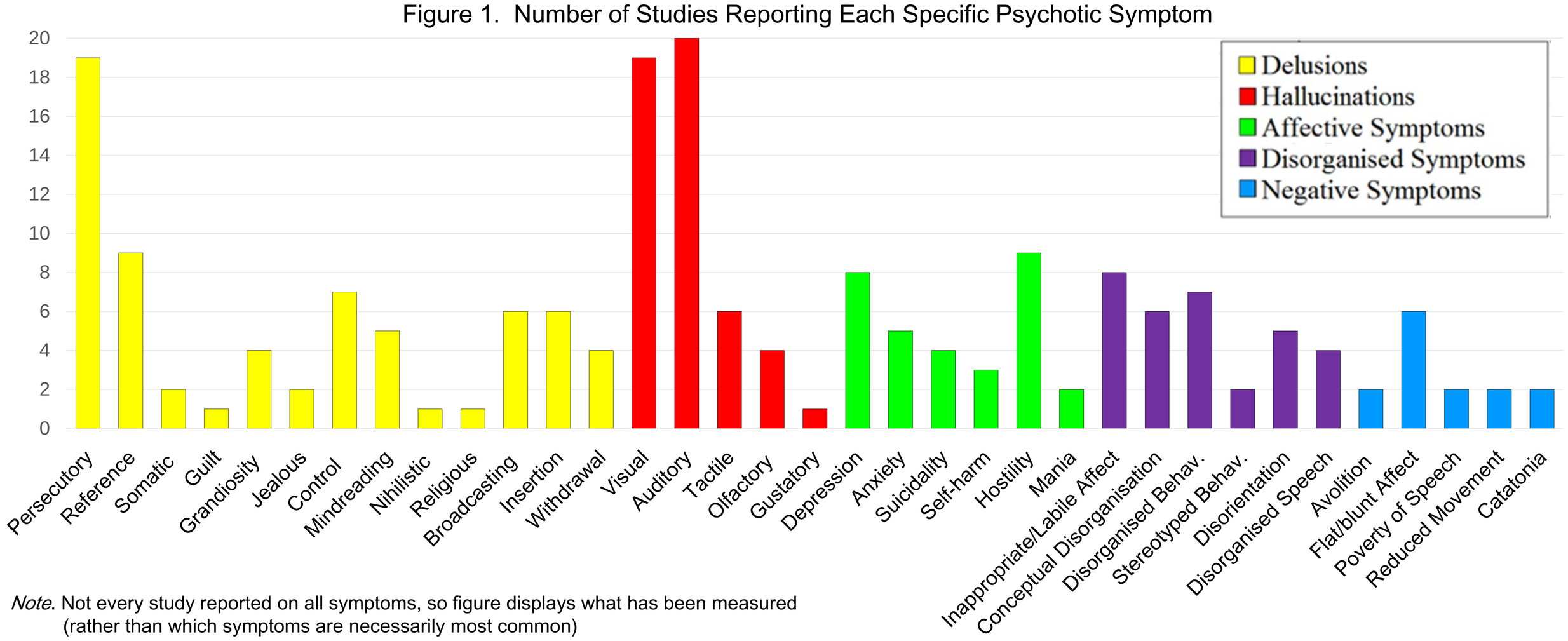
METHOD

- *Medline, PubMed, PsychINFO, Scopus* and *Ovid* were searched for peer-reviewed empirical studies published in English (total of 4402 articles identified). After deleting duplicates, 2412 abstracts were screened for relevance. After excluding 2080 irrelevant abstracts, 332 full text articles were assessed for eligibility.
- Articles were included if they examined the symptom profile of psychotic symptoms in individuals who were either i) diagnosed with MAP, ii) identified as having MAP, or iii) diagnosed with substance-induced psychosis with concurrent methamphetamine use.
- A total of 89 articles were eligible. Findings from cross-sectional (n=14) and case control (n=18) studies are reported here.

RESULTS

- 32 studies were identified, with a majority being from Japan (n=12), East Asian and Pacific countries (n= 8), and the USA (n=7). The mean sample size was 75 (range of 6 – 289). Most studies recruited from in-patient clinical settings (n=27). Participants were primarily men who were dependent on methamphetamine.
- The most commonly reported symptoms (Fig 1) were auditory hallucinations (62% of studies), visual hallucinations (60%), and delusions of persecution (60%).
- Affective symptoms were commonly identified, particularly hostility (reported in 28% of studies), depression (25%) and suicidality (19%).
- Symptoms of disorganisation were reported in 6-25% of studies, with the most common being inappropriate affect (25%) and conceptual disorganisation (22%).
- Negative symptoms were reported infrequently (6% of the studies) with the exception of flattened affect (19%).

Figure 1. Number of Studies Reporting Each Specific Psychotic Symptom



Note. Not every study reported on all symptoms, so figure displays what has been measured (rather than which symptoms are necessarily most common)

DISCUSSION

- The dominance of delusions and hallucinations supports the applicability of the DSM-V criteria[5] for substance-induced psychosis, often used to diagnosis MAP.
- The presence of affective symptoms and MAP may be due to high rates of co-morbid anxiety and major depression among regular users[6]. Assessment and management of these affective symptoms in patients presenting with MAP may be warranted.
- This review highlights the challenges for medical staff and police in dealing with high levels of hostility associated with MAP.
- Previous findings that negative psychotic symptoms are predominately absent from MAP are supported[3]. The absence of negative symptoms may help clinicians differentiate between MAP and schizophrenia and provide appropriate treatment.
- Limitations: Symptom profile may be confounded by undiagnosed schizophrenia as many studies did not formally diagnose MAP. These results cannot be generalised to (i) recreational users who typically have less psychiatric co-morbidity than dependant users from in-patient populations, or (ii) populations outside Japan and the USA which have different methamphetamine use patterns and genetics.

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