

**COCHRANE
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First rank symptoms for schizophrenia[†]

Karla Soares-Weiser, Nicola Maayan, Hanna Bergman, Clare Davenport, Amanda J. Kirkham, Sarah Grabowski & Clive E. Adams

[†]This review is an abridged version of a Cochrane Review previously published in the *Cochrane Database of Systematic Reviews*, 2015, Jan 25, Issue 1, CD010653 (see www.thecochranelibrary.com for information). Cochrane Reviews are regularly updated as new evidence emerges and in response to feedback, and the Cochrane Database of Systematic Reviews should be consulted for the most recent version of the review.

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See commentary on pp. 147–149, this issue.

Background

Early and accurate diagnosis and treatment of schizophrenia may have long-term advantages for the patient; the longer psychosis goes untreated the more severe the repercussions for relapse and recovery. If the correct diagnosis is not schizophrenia, but another psychotic disorder with some symptoms similar to schizophrenia, appropriate treatment might be delayed, with possible severe repercussions for the person involved and their family. There is widespread uncertainty about the diagnostic accuracy of First Rank Symptoms (FRS); we examined whether they are a useful diagnostic tool to differentiate schizophrenia from other psychotic disorders.

Objectives

To determine the diagnostic accuracy of one or multiple FRS for diagnosing schizophrenia, verified by clinical history and examination by a qualified professional (e.g. psychiatrists, nurses, social workers), with or without the use of operational criteria and checklists, in people thought to have non-organic psychotic symptoms.

Search methods

We conducted searches in MEDLINE, EMBASE, and PsycInfo using OvidSP in April, June, July 2011 and December 2012. We also searched MEDION in December 2013.

Selection criteria

We selected studies that consecutively enrolled or randomly selected adults and adolescents with symptoms of psychosis, and assessed the diagnostic accuracy of FRS for schizophrenia compared to history and clinical examination performed by a qualified professional, which may or may not involve the use of symptom checklists or based on operational criteria such as ICD and DSM.

Data collection and analysis

Two review authors independently screened all references for inclusion. Risk of bias in included studies was assessed using the QUADAS-2 instrument. We recorded the number of true positives (TP), true negatives (TN), false positives (FP), and false negatives (FN) for constructing a 2 x 2 table for each study or derived 2 x 2 data from reported summary statistics such as sensitivity, specificity, and/or likelihood ratios.

Main results

We included 21 studies with a total of 6253 participants (5515 were included in the analysis). Studies were conducted from 1974 to 2011, with 80% of the studies conducted in the 1970s, 1980s or 1990s. Most studies did not report study methods sufficiently and many had high applicability concerns. In 20 studies, FRS differentiated schizophrenia from all other diagnoses with a sensitivity of 57% (50.4% to 63.3%), and a specificity of 81.4% (74% to 87.1%). In seven studies, FRS differentiated schizophrenia from non-psychotic mental health disorders with a sensitivity of 61.8% (51.7% to 71%) and a specificity of 94.1% (88% to 97.2%). In sixteen studies, FRS differentiated schizophrenia from other types of psychosis with a sensitivity of 58% (50.3% to 65.3%) and a specificity of 74.7% (65.2% to 82.3%).

Authors' conclusions

The synthesis of old studies of limited quality in this review indicates that FRS correctly identify people with schizophrenia 75% to 95% of the time. The use of FRS to diagnose schizophrenia in triage will incorrectly diagnose around 5 to 19 people in every 100 who have FRS as having schizophrenia and specialists will not agree with this diagnosis. These people will still merit specialist assessment and help owing to the severity of disturbance in their behaviour and mental state. Again, with a sensitivity of FRS of 60%, reliance on FRS to diagnose schizophrenia in triage will not correctly diagnose around 40% of people that specialists will consider to have schizophrenia. Some of these people may experience a delay in getting appropriate treatment. Others, whom specialists will consider to have schizophrenia, could be prematurely discharged from care, if triage relies on the presence of FRS to diagnose schizophrenia. Empathetic, considerate use of FRS as a diagnostic aid – with known limitations – should avoid a good proportion of these errors.

We hope that newer tests – to be included in future Cochrane reviews – will show better results. However, symptoms of first rank can still be helpful where newer tests are not available – a situation which applies to the initial screening of most people with suspected schizophrenia. FRS remain a simple, quick and useful clinical indicator for an illness of enormous clinical variability.

Assessed as up to date: 2 Dec 2013