



Review article

Prevalence and correlates of cognitive impairment in euthymic adults with bipolar disorder: A systematic review



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ABSTRACT

Background: Previous reviews have identified medium-large group differences in cognitive performance in adults with bipolar disorder (BD) compared to healthy peers, but the proportion with clinically relevant cognitive impairment has not yet been established. This review aimed to quantify the prevalence of cognitive impairment in euthymic adults with BD, and to describe sociodemographic, clinical and other factors that are significantly associated with cognitive impairment.

Methods: Systematic literature review. The population was euthymic community-dwelling adults with BD, aged 18–70 years, and recruited consecutively or randomly. The outcome was cognitive impairment, relative to healthy population norms. Electronic databases and reference lists of relevant articles were searched, and authors were contacted. Original cross-sectional studies published in peer-reviewed English-language journals from January 1994 to February 2015 were included. Methodological bias and reporting bias were assessed using standard tools. A narrative synthesis is presented together with tables and forest plots.

Results: Thirty articles were included, of which 15 contributed prevalence data. At the 5th percentile impairment threshold, prevalence ranges were: executive function 5.3–57.7%; attention/working memory 9.6–51.9%; speed/reaction time 23.3–44.2%; verbal memory 8.2–42.1%; visual memory 11.5–32.9%. More severe or longstanding illness and antipsychotic medication were associated with greater cognitive impairment.

Limitations: The synthesis was limited by heterogeneity in cognitive measures and impairment thresholds, precluding meta-analysis.

Conclusions: Cognitive impairment affects a substantial proportion of euthymic adults with BD. Future research with more consistent measurement and reporting will facilitate an improved understanding of cognitive impairment burden in BD.

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1. Introduction

Bipolar disorder (BD) is known to be associated with cognitive impairment, which persists between illness episodes and contributes to functional disability. Impairment is typically found on tests of attention, working and episodic memory, processing speed and executive function, with significant group differences of medium to large effect size compared to healthy comparison groups (Arts et al., 2008; Bourne et al., 2013; Mann-Wrobel et al., 2011; Robinson et al., 2006). Although such group-level differences have been consistently reported, the proportion of adults with BD who have clinically relevant levels of cognitive impairment has not yet been clearly established. It is likely that there is marked within-group variation, ranging from normal performance through to severe multi-domain impairment. It has been argued that if overall group differences are being driven by a subgroup of patients with marked levels of impairment, this serves to obscure the true picture of cognitive impairment in the BD population, which in fact may be severe for some and absent for many others (Iverson et al., 2011).

There are a number of reasons why it would be beneficial to establish the prevalence of cognitive impairment in the BD population. From a clinical point of view, cognitive impairment is a major contributor to the overall burden of disability in mood disorders, and is a target in its own right for therapeutic intervention. Service planning would be helped by clearer information about numbers and characteristics of those who are likely to need more clinical or social care input to manage the disabling effects of cognitive impairment. From a research perspective, shifting our focus to identifying subgroups with cognitive impairment will facilitate efforts to understand why some people with BD experience significant problems with cognition while others remain unimpaired. This, in turn, may help to identify particular risk factors for clinically significant cognitive impairment.

1.1. Objectives

1. To determine the prevalence of cognitive impairment in euthymic adults with a history of BD.
2. To describe sociodemographic, clinical and other factors that are associated with cognitive impairment in BD.

1.2. Scope of review

The population of interest was community-dwelling adults with a history of BD (the exposure), who were euthymic at the time of assessment. The outcome of interest was cognitive impairment, measured using standardised tests; presence or absence of impairment was defined with reference to healthy population norms. Since the aim was to determine prevalence, only cross-sectional results were considered (cross-sectional studies or baseline results from cohort studies or trials).

2. Materials and methods

The review was conducted according to a structured protocol which followed PRISMA-P guidance (Moher et al., 2015). The protocol was registered on the PROSPERO database on 16 March 2015 (reference number CRD42015017558; http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42015017558). Reporting is in accordance with PRISMA and MOOSE guidelines (Moher et al., 2009; Stroup et al., 2000).

2.1. Eligibility criteria

The following inclusion criteria were applied during the search and screening process: original research published in peer-

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