**Reviewer’s report**

**Title:** Prevalence and comorbidity of attention deficit hyperactivity disorder in Spain: a study protocol for extending a systematic review with updated meta-analysis of observational studies

**Version:** 0 **Date:** 05 Dec 2018

**Reviewer:** Darren Roddy

**Reviewer’s report:**

This protocol aims to investigate the epidemiology of ADHD through metaanalysis of pooled prevalence data in Spain.

Overall the protocol looks comprehensive, and considering this research team has already published a previous metaanalysis of ADHD in Spain in 2012 (BMC Psychiatry 12(1):168), the protocol quite rightly follows most of the methods outlined in that previous paper. This protocol aims to expand this by including a) studies since 2013 b) adult ADHD, and c) comorbidities. This is a worthwhile effort.

The actual protocol looks fine.

A few minor points to improve the paper...

Why are you doing this now - apart from newer data extraction techniques and new studies in other countries - e.g. more emphasis on comorbidities in the literature maybe? Changes in diagnostic criteria since 2012?, better ADHD awareness in Spain?

Where does Spain sit in the ADHD prevalence continuum (6.8% in your previous metanalysis seemed on the high end; what explanation was there for this? - better services in Spain compared to other countries maybe?

What specific co-morbidities are expected? Can you reference other studies that look at comorbidities in ADHD in other countries, as a guide for what comorbidities you may be looking for? Are these comorbidities expected to differ between childhood and adult ADHD?

There is some evidence that adult ADHD is more like ADD. Will you also be including ADD in your analysis (children and adults)?

There have been subtle changes in the diagnostic criteria from DSM IV to V for ADHD. Are these expected to alter the prevalence of ADHD? Also, one very minor point, you mention just DSM IV in the data collection section, but then include DSM V in the data analysis section. By the way, I like the analysis by "most recent diagnostic system" angle.

Overall however, this protocol seems fairly comprehensive.
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