Reviewer's report

Title: Psychostimulant prescribing trends in a paediatric population in Ireland: A national cohort study

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Reviewer: Ilse Truter

Reviewer's report:

It is a well-written and relevant manuscript. The authors examined the prescribing of psychostimulant medication over a 10 year period in Ireland in children and adolescents up to the age of 15 years.

Minor essential revisions

The term “paediatric” should be explained from the outset – in this study, “paediatric” included all patients from birth to 15 years. It therefore includes children and also adolescents.

Last paragraph of the “Background” section – add the word “data” to the end of the second last sentence – “… dispensed medication data”.

Reference 25: Year of publication is missing.

In the methodology section it is indicated that the data represented approximately 28% of Irish children but over-represented socially deprived populations. Do the authors expect different results if the data were representative of all socio-economic classes? They do mention under “Strengths and weaknesses of the study” that children from socially deprived backgrounds are more likely to receive a psychostimulant prescription and they use an Australian reference (reference 35), however, this is not the case in all countries. In our country, it is the exact opposite – children in the higher socio-economic groups are more likely to receive psychostimulant medication. It would be interesting if the authors can add a sentence giving an opinion on how they think it would have changed the results of their study if Irish children from all socio-economic groups were included.

The authors refer to prescribing to patients in the 0-4 year age group. This should be briefly elaborated on, since the medication for ADHD is not indicated in this very young age group. The reader is left with questions such as which dosage forms were dispensed (tablets?), dosages prescribed, and length of therapy – was treatment for full months/extended periods to this young age group?

Limitations of the study should be clearly indicated.

Major compulsory revision (or at least a statement acknowledging these limitations if it is not possible to change)
My biggest criticism of this paper is that the quantity dispensed per prescription is not mentioned, neither the dosage form. Length of therapy is also not mentioned despite the authors having access to data spanning 10 years. Especially since diagnoses are not available, it is important to consider dosages and length of treatment. It may be that some psychostimulant, psycholeptic or antidepressant medication may only have been dispensed for a short period (for example, 3, 5 to 7 days), in which case the number of prescriptions cannot be directly compared to prescriptions dispensed for a period of a month. In addition, antidepressants are also used for enuresis in young children. If only for occasional use, in low quantities or in low doses, the results of this paper may give a skewed result of what is actually happening in this patient population.

The authors should be encouraged to also analyse and report on the prescribing patterns in the 16 to 24 year age group in a follow-up study.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.