Reviewer’s report

Title: Mental Health in Adolescents with Type 1 diabetes: Results From a Large Population-Based Study

Version: 1 Date: 1 September 2014

Reviewer: Maureen C Monaghan

Reviewer’s report:

This manuscript uses data from a large, population-based study in Norway to compare adolescent self-report data on mental health symptoms in youth with type 1 diabetes to the general population. The manuscript is well-written and answers a concise, focused research question. The methods are appropriate and well-described and the data collection procedures represent a significant strength of the study. However, it is unclear if the sample represents all youth or is specifically comparing “healthy” peers to youth with diabetes. The finding that mental health symptoms are not elevated in youth with diabetes is an important contribution to the literature and the topic would be of significant interest to the readership of BMC Endocrinology, particularly if the sample surveyed were better characterized. I offer the following suggestions to the authors:

Major Compulsory Revisions:
1. It is essential to know the population of comparison for youth with type 1 diabetes. What other chronic conditions are represented in the study (e.g. type 2 diabetes, asthma, GI disorders, psychiatric conditions)? Was there a difference if youth with diabetes were compared to youth with no chronic conditions instead of the entire sample? As this dataset is quite large, it is likely that these results would not change. However, it is helpful to characterize the comparison sample if possible.

Minor Essential Reviews:
1. It is a significant limitation that the authors do not have information about diabetes diagnosis, glycemic control, and disease duration in youth. It is possible that youth with type 2 diabetes are treated with insulin. Do the authors have any information about the rate of youth who reported a diagnosis of diabetes but no insulin use and, if so, does this match the population estimates for type 2 diabetes?
2. The authors interchangeably use “youth@hordaland-survey” and “ung@hordaland study” to describe the data. Please use one term consistently.
3. The authors hypothesize that more widespread pump use may be partially responsible for the lack of elevation on any measure in youth with type 1 diabetes. However, the introduction states that only 64% of Norwegian youth use insulin pumps, meaning that a significant percentage are still on more conventional insulin regimens. Do the authors have any other factors that may
contribute to the findings (e.g. less stigmatization, greater access to peers through online communities, more sensitive regimens that allow for better matching of diet to insulin through multiple daily injections and not just pump use)?

4. There are a number of small typos throughout the manuscript (e.g. “diabtetic” instead of “diabetic” on line 7, page 3; “ti” instead of “to” on line 8, page 3; “helth” instead of “health” line 6 page 4; “distiurbances” instead of “disturbances” line 6, page 4). Please carefully edit for spelling.

Discretionary Revisions:

1. The comparison of mental health symptoms in youth with and without diabetes is somewhat more nuanced than the authors present, and there have been studies that do not demonstrate an increased risk for psychopathology in youth with type 1 diabetes (e.g. Lawrence et al., Prevalence and Correlates of Depressed Mood Among Youth with Diabetes: The SEARCH for Diabetes in Youth Study, Pediatrics, 2006). Further, while the rates of mental health issues may not be necessarily elevated in comparison to healthy peers, the implications for untreated mental health disorders in youth with chronic illness is significant and even normative levels of psychopathology should be identified given the potential impact on self-care behaviors and health. This may warrant a brief mention in the clinical implications.

Level of interest: An article of importance in its field

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