Reviewer’s report

Title: Anxiety at Age 15 Predicts Psychiatric Diagnoses and Suicidal Ideation in Late Adolescence and Young Adulthood: Results From Two Longitudinal Studies

Version: 0 Date: 18 Jul 2019

Reviewer: Stéphane Paquin

Reviewer's report:

General:

Very interesting paper and well written paper studying the impact of adolescent anxiety levels on young adulthood negative outcomes.

The study shows that adolescent anxiety seems to have an independent effect on young adulthood negative outcomes over childhood neurodevelopmental disorders (ADHD, ASD, DCD). It also shows that different levels of adolescent anxiety have a significant impact, even at levels that would place about one fifth of the population at risk. The study leads to a very interesting conclusion suggesting future research should look into the developmental sequence from childhood neurodevelopmental disorders to adolescence anxiety to young adulthood negative outcomes.

Strengths:

The study has multiple strengths. Statistics are strong and adequately executed. Authors controlled for the fact that anxiety is cooccurring with other disorders (ADHD, ASD, DCD) that have stronger associations with the included negative outcomes (suicide attempts and anxiety-, bipolar/psychotic-, depressive-, and alcohol and drug misuse disorders). Also, participants with negative outcomes flagged at 15 years were removed to focus on 'new' negative outcomes by young adulthood. Nested twin data were handled with a cluster-robust sandwich estimator.

Limitations:

All the limitations I noted while reading the paper are already described in the limitations section.

I would still have liked to see variables associated with the propensity to use public services (such as education level, proximity to services, financial adversity…) included as controls.
I only have a three minor comments:

1. The use of an emotional problem scale as an indicator of anxiety is not ideal. While it is probably the best that can be done with these data, the authors could provide a little more convincing argument for reader not familiar with the different scales. The Essau & al. (2012) paper show, at most, a correlation of .42 between the emotional problem scale from the SDQ and a generalized anxiety measure from the Spence Children's Anxiety Scale (SCAS). Other papers such as the Muris & al. (2003) paper show a .73 correlation between the emotional problem scale and a direct anxiety measure. Before I found the Muris paper, I was not convinced by the use of the emotional problem scale as an indicator of adolescent anxiety. Maybe the authors could make a better argument for the use of the emotional problem scale as an indicator of adolescent anxiety.

2. The authors state in their limitation that the labels 'normal', 'borderline', and 'abnormal' are not clinical construct, but they still use the terms 'subsyndromal' and 'under the diagnostic level' in the text. It is stated early in the text that their approach allows to investigate the effect of anxiety level that are below the diagnostic threshold and I was intrigued at first. I would like to see the same nuance mentioned in the limitations used throughout the text. While it is important to study how different levels of anxiety are associated with future negative outcomes, I did not see enough details in the description of the data to justify interpreting their 'borderline' category as 'under the diagnostic level'.

3. In the discussion, I think that transforming hazard ratios in percentages to eye catchingly high numbers ('risk elevation of 488%'). I don't think these high numbers are well contextualized. It is true that the abnormal anxiety category is more at risk to develop depressive disorders, but these percentage can become very large pretty quickly if the disease is rare in the reference category. I would rather prefer the authors stick with the hazard ratios presented in the tables or that they convert the ratios into actual probability of a disease that are compared. For example, instead of 'risk elevation of 488%' they could update the corresponding 3.5 / 0.8 (in Table 1 Self-report - Depressive disorders) with results from the Cox model.

Varia:

Last sentence of the Attrition paragraph on page 7, should probably read "[...] parents responded at age 9/12 only differed statistically [...]"
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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I am able to assess the statistics

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