Reviewer’s report

Title: Suicide risk, personality disorder and hospital admission after assessment by psychiatric emergency services

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Reviewer: Pekka Jylhä

Reviewer’s report:

I find the topic of "Suicide risk, personality disorder and hospital admission after assessment by psychiatric emergency services" interesting and also of importance. The authors have studied the association of the level of suicide risk, personality disorder diagnosis and need for voluntary/involuntary hospital admission evaluated by psychiatric emergency services (PES). Observational data has been gathered from three areas in the Netherlands between 2007 and 2016. The authors found that suicidal patients with personality disorder (PD) were less likely to be admitted voluntarily to the hospital than patients without PD. However, if the risk for suicide was evaluated to be moderate or high there was no difference between the groups in the probability for involuntary admission.

I have some comments of the manuscript:

1. In the Methods section the authors describe the four criteria for emergency involuntary admission. The first criteria is the presence of a mental disorder. Can you be more specific? What kind of mental disorder? Any axis I or even axis II disorder?

2. The authors state that they controlled the sociodemographic variables, the clinical factors, psychiatric diagnosis and environmental factors in the analyses. In table 1 are shown the involuntary admission rates for axis I disorders e.g. for psychotic disorder patients it was 40.9%. Was axis I disorders (especially psychotic disorder) taken into account in regression models shown in table 2 and also in figures 1a and 1b? If so, would you please show the estimates. And if not, what was the reason for that? Furthermore, why are the 95% confidence intervals and p-values not shown in the table 2? They should be shown.

3. I don't quite understand the sentence, how the authors describe figure 1 in the text "For patients in the low versus high-suicide risk group the difference in voluntary admission rate between people diagnosed with PD and other diagnosis is estimated at 0.28 versus 0.45, respectively". If I understand the figure right, the probability of admission in PD group is 0.32 (high risk) and 0.13 (low risk) and within no PD group 0.45 (high risk) and 0.28 (low risk). Was the difference in voluntary admission between the groups statistically significant? What are the actual numbers of PD and non-PD patients in voluntary and also in involuntary admission to hospital?
4. The second paragraph of the Discussion is not based on the results of this study. The authors state at the end of the paragraph that they speculate, but also the first sentence of the paragraph is speculation.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

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

Yes

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

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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