Reviewer’s report

Title: Student-teacher relationship trajectories and mental health problems in young children.

Version: 2 Date: 15 June 2014

Reviewer: Tina Kretschmer

Reviewer’s report:

Overall I find the revision responsive to my own and the other reviewer’s comments and think the authors have done a good job in adding necessary detail and highlighting why this study is an important contribution to the literature. I do have some concerns that remain, however, and list them below.

1) Minor essential revision: I think the organization of the introduction can be improved to ease readability. The authors have added much of the detail that was requested by reviewers to the present study section when other places would feel more natural. For instance, why an Australian sample provides additional information should be included on page 7, where the authors note that such research has not been conducted in Australia. Similarly, the justification for the method may be better placed on page 6 where the authors discuss limitations in previous studies’ methodological approaches.

2) Minor essential revision: The authors state that they have added more detail on why they expect different trajectories of teacher-student relationship quality on pages 9 and 10. I may not have been clear enough but I am still not convinced. The added information refers to individual variation (I don’t contest the existence of that), which makes me wonder why the authors did not perform latent growth models but insist on deriving classes. Developmental subgroups have been identified for many phenomena but I do not find the argumentation provided here very convincing. I reiterate my previous comment that a stronger justification for group-based modeling is needed; this justification may compare the group-based approach to other person-centered methods such as latent growth modeling, which also does not work with averages. I’m aware of the paragraph on this issue on page 18 but don’t find it very convincing given that it has not been derived theoretically why specific patterns would be “highly unlikely” – especially since these patterns are essentially found and then grouped. The authors also return to this issue on page 18 where a study by Andruff is cited to underline why three different developmental patterns are highly likely. Unfortunately, I cannot open this study as the server that hosts the journal seems to be having problems but I think this study may need to be introduced in more detail if it indeed is on teacher-student relationships (and not, like the title suggests, a primer on mixture models).

3) Minor essential revision: I have difficulty understanding the proc traj procedure (I’m not a SAS user but this may also be the case for other readers) – what
exactly is meant by treating the latent class variable as a missing data problem and a joint likelihood is estimated (p. 19). Is there a way to explain this is more layman terms?

4) Minor essential revisions:
Page 13, line 4 – I think there may be a word (“from”?) missing.
Page 13, third line from the bottom – “SDQ” is used as abbreviation before it is introduced
Page 15 “measurement invariance tests were conducted using nested models in Structural Equation Modeling” – is this a name of a SAS macro? This sentence sounds awkward to me.
Page 17, 4th and 2nd line from bottom – spacing around “=” is not consistent
Page 22 “trajectories on student-teacher relationship quality” – should this be “of”?

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests