Reviewer's report

Title: A modest start, but a steady rise in research use. A longitudinal study of nurses during the first five years in professional life.

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Reviewer: Anne Sales

Reviewer's report:

1. Is the question posed by the authors new and well defined?

The overall question of the trajectory of newly graduated baccalaureate prepared nurses' use of research evidence in practice, measured by three categories of “research utilization” that have been used previously in the literature, is novel. It is put into an important context of changes in a complex and evolving health care system(s), although these changes are not measured along with the self-reported behavior of the new graduates. As a result, in terms of the information available in this paper, the conclusions that can be drawn are limited.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?

The methods are appropriate. The work could probably be replicated by referring to prior published work by these authors and the team that fielded the LANE survey initially.

3. Are the data sound and well controlled?

Unfortunately, key variables related to the context faced by the graduate nurses over the period of study are not available. As a result, the conclusions that can be drawn are limited, which is appropriately reflected in the paper, but this results in a paper that is less interesting than it might otherwise be.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

No discussion of data deposition, nor of availability to other interested researchers. However, without knowing more about the rules governing data deposition and sharing in Sweden through the relevant funding agencies, I cannot comment on adherence to relevant standards. This is an area that the authors could comment on.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

Yes. The conclusions are limited, but this is appropriate.

6. Do the title and abstract accurately convey what has been found?
Yes.

7. Is the writing acceptable?

Yes, this is a well-written paper.

- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

None.

- Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. I think the limited approach to missing data and dealing with these is a bit problematic. I’m unconvinced that use of `auxiliary` variables is adequate, but I doubt that using multiple imputation, which I think would be reasonable in the situation described, would alter the findings much. I think a comment about alternative approaches that might also be reasonable would be important.

2. Although I thought the discussion about the non-linearity of the trends in the three forms of research utilization was reasonable, it was also not as clear as it could be. First, the data were not actually collected in a linear approach. The categorical use of frequency by shift is actually a very complex non-linear computation to ask respondents to undertake, and I’m not surprised that the results were not linear. However, I would also not expect the results to be linear—I would expect frequent users to be quite different in their trajectories over time than non-frequent (or essentially `never`) users. I think this discussion could be both simplified and clarified.

3. There is no discussion about issues of social desirability and the responses to the questions in the survey. It seems very likely that professional nurses would be reluctant to say that they do not use research at least some of the time, and perhaps the full range of response categories should not be used, but instead, the categories should be dichotomized to try to distinguish between socially desirable responses that indicate `some` use, and nurses who indeed do use research findings with regularity.

- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. A comment on repurposing and data availability would be helpful, given the large sample size and utility of this data set.

**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.