Author’s response to reviews

Title: Assessing the effects of the nursing education reform on the educational environment in Tajikistan: a repeated cross-sectional analysis

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Author’s response to reviews:

Dear Dr. Suh-Ing Hsieh,

Thank you for your email dated 8 September 2019 and the reviewers’ comments on the manuscript entitled "Assessing the effects of the nursing education reform on the educational environment in Tajikistan: a repeated cross-sectional analysis". In your response to the initial submission, you invited us to conduct revisions to the manuscript once we had considered the feedback from the two peer reviewers. We are very grateful for the insightful comments put forward, and have considered each of them carefully.

Below, please find our answers to each of the comments raised by the two reviewers, along with the action that has been taken to address the specific concerns.

We remain at your disposal to clarify any further questions and look forward to your final decision. Thank you very much for your consideration.

Yours sincerely,

Filippo Lechthaler (on behalf of all co-authors)

Reviewer 1 (Panayota Sourtzi)

1 In the background section it could be useful to add a short description of the nursing education programme, e.g. level, duration, comparison with international accepted standards. Also to explain the relationship between general nursing education and family nursing; is it included in the undergraduate programme or is it a postgraduate education? in that case there are perhaps more explanations needed.
Answer: Thank you for highlighting this omission. We have clarified that nurse education in Tajikistan is still a pre-service training (i.e. not at university level) and is offered by several medical/nursing colleges. All nurse students follow a common track for the first three years after which they can enrol in a fourth year to qualify as either a family nurse or a midwife. For details please see lines 72 to 78 of the manuscript.

2 The aim of the study is not explicit in the methods section.

Answer: We thank the reviewer for point this out. We have added the study’s objective to the methods section.

"The aim of this study was to measure and analyse changes in the perceived educational environment in two nursing colleges (Dushanbe and Kulob) between the years 2015/2016 and 2018 and to discuss possible contributions of the educational interventions to these changes."

3 There is no reference on the ethical dimension of the study. Anonymity of the participants is a part of it but who gave the permission to perform the study?

Answer: According to the journal guidelines, detailed information on the ethical aspects of this study are given in the declaration section at the end (“Ethics approval and consent to participate”). More specifically, this study took place in the frame of the Swiss Agency for Development and Cooperation (SDC)-funded Medical Education Reform Project, credit proposal no. 7F.07030.03.01. Furthermore, at the time of implementation a study protocol was prepared and submitted to the MoHSP for ethical clearance which was granted in the form of an order on the 9th October 2018. Additionally, agreements were received from the two nursing colleges concerned. Before distribution of the questionnaire, staff explained to all participants that participation in the study was voluntary, anonymous, and would in no way influence their academic success. All participants provided written consent.

4. Was cultural adaptation of the research tool applied?

Answer: Apart from translation, no cultural adaptations were applied to the DREEM tool. So to address the concern of the reviewer, possible caveats are now discussed in the limitation paragraph in the discussion section. In particular:

"Last, participants’ responses to the items may be culturally sensitive. Apart from translation, no cultural adaptation of the DREEM tool has been applied for the present study. This may represent are risk of bias and measured scores must therefore be interpreted with caution."

5 There is a reference in an open question in the methods section but no mention in the results and discussion of possible findings out of it.

Answer: We have included an open question to the questionnaire to capture possible additional areas to be improved in the educational reform. Indeed, for the sake of consistency, the analysis of the open question has been supressed in the initial version of the manuscript. Following the reviewer’s advice, we have now included a short paragraph in the methods and discussion section on the corresponding findings – the focus of the analysis and discussion, however, remains on the quantitative DREEM
Results

"In 2015/2016, most students’ comments (71.4%) were related to the lack of infrastructure. This issue appeared to be perceived less prominently by students in 2018 (9.4%). The second most important issue in 2015/2016 in relative frequencies were remarks about finance related issues constituting 27.2% of the comments. This fraction has as well decreased to 5.9% in 2018."

Discussion

"Results from the open questions point to improvements in the teaching equipment and infrastructure."

Reviewer 2 (Sung-Ching Pan)

6. Actually what's the education reform? It may be listed in supplement or briefly described in material/method part

Answer: The specificities of the educational reform in nursing education were already part of the introduction. However, we improved the formulations such that it becomes clearer for the readers. The according section now reads:

"The educational reform in nursing education between 2015/2016 and 2018 was therefore designed to address the over-emphasis on factual learning and foster competency-based training. More specifically, practical Skills Labs were launched to practice proper procedures on manikins and dummies, as well as other training equipment. Furthermore, a tutorship program was started for 4th-year students for which skilled nurses were selected and trained as clinical tutors. 4th-year students are now better supervised and guided by these clinical tutors while working for seven weeks in clinics and rural health centres. An exchange visit was organized for clinical tutors as well as for teachers at nursing colleges. Teachers’ didactical skills were further addressed in visits of international experts and through didactical trainings."

7. Why did not choose the same students for serial questionnaires?

Answer: The reviewer raises here a valuable methodological aspect. Indeed, a repeated comparison of the same students and application of panel data methodologies (such as a fixed or random effects estimator) would have allowed to control for unobserved heterogeneity in the study population and refine the identification of the intervention’s impact. The authors have opted for a repeated cross-sectional design to include 4th year students in the baseline sample (2015/2016). This was necessary to compare 2nd and 4th year students. 4th year students would not have been enrolled at the colleges after 3 years of intervention to include in the endline study (2018). A corresponding sentence has been added to the limitation section:

"Furthermore, the repeated cross-sectional design did not involve the observation of individuals over time which prevented the application of a panel regression model to control for unobserved heterogeneity in the study population."