Author's response to reviews

Title: Registered Nurse to Bachelor of Science in Nursing: Nesting a fast track to traditional generic program, teachings from nursing education in Burkina Faso

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Version: 4 Date: 1 July 2015

Author's response to reviews: see over
Dear Editor,

Thank you for giving us the opportunity to revise our manuscript (MS: 5748377931132614). We greatly appreciated the comments and suggestions. In this revised manuscript, as recommended, we reshaped the background to fit with the three defined aims (Please see from p. 4, line 1 to p.8, line 6). Furthermore, as advised, we have provided more information regarding items of questionnaire and how they were rated and analyzed (Please see on p.9, lines 3-17). As recommended, the content of the discussion and implication have been extensively revised. We further outlined specific recommendations on research, education, and practice.

We have taken all the comments into consideration and have carefully addressed each, one by one, while revising the manuscript. The final draft of the revised manuscript has been proofread for English by two co-authors and an independent reviewer.

All authors have participated in the conception and design, or acquisition of data, or data analysis and interpretation, or drafting the article, or revising it critically for important intellectual content. We have seen and approved the final version. We believe that the manuscript represents an honest work. We also declare that we have no conflicts of interest in connection with this paper.

I, as the corresponding author, take full responsibility for the contents of the paper. I had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

Sincerely,
Responses to Academic Editor:

We really appreciate the detailed review on our manuscript. As advised, we have addressed the points raised.

1. Removal of additional files: as recommended by the editor, we removed the additional files 1 and 2.

2. Background of the study: We extensively revised the background and harmonised the content to fit with the aim of study. Please see from p.4, line 1 to p.8, line 6.

3. Methods section: According to the comments of the reviewer, we revised the Methods section. Specifically, we provided details on the questionnaire items, how they were rated and analysed. Please see on p.9, lines 3-17.

4. Grammatical errors and format issues: According to the comments of the reviewer, in addition to English speaking co-authors, we solicited independent proofreading. We also revised the presentation format.

5. The contents in the discussion and implication: We extensively revised, reshaped, and tighten the discussion part. As recommended, we also tighten the conclusion and shaped the recommendations to highlight their implication for education, research and field practice. Please see on p.11, line 1 to p.13, line 5.
Responses to Reviewer:

We really appreciate your detailed review of our manuscript. The comments were very helpful in improving the presentation of our study. We have tried to address point-by-point each specific comment raised in this revised manuscript.

Background

#1) As suggested, we have restructured the background, tightened, and amended it to harmoniously fit with the aim of study.

Following are the main amendments:

Paragraph 1: (p. 4, lines 2-7)

No major changes were made in that paragraph. We however improved it by:

- Adding: "of nurses" and "(or fast-track in other literature)"

Please see on p.4, line 6.

- We removed from the present text: "The programs, Bachelor of Science in Nursing (BSN) and to certain extent, Master of Science in Nursing (MSN) are the commonly fix on."

Paragraph 2: (p. 4, lines 8-16)

We extensively restructured it, in:

- Adding introductory sentence. It is read as:

"Master of Science in Nursing (MSN) programs and especially the Bachelor of Science in Nursing (BSN) are most concerned. The literature reveals an array of options: […]"

Please see on p.4, lines 8-9.
We reframed and tightened the following exert:

"For decades, industrialized countries have tried and reported on various pedagogic strategies in nursing education programs, while in the sub-Saharan Africa (SSA), despite the nursing education scope and endeavor to working at the forefront, very little is published. The present study was prompted to assess the development and refinement of the fast-track program recently developed in Burkina Faso, and as establish a research-based evidence on this subject in SSA."

Please see on p.4, lines 12-16.

- The sentence below was rephrased and moved down (to current paragraph 4), for a more coherent and flowing reading:

"Theoretically, the concept of accelerated program dates back to 1950’s when an associate degree nursing education program was developed to meet short-term system needs of the post-ward United Stated (US) [4]."

Please see on paragraph 4, p.5, lines 5-6.

**Paragraph 3 and 4: (from p.4, line 18 to p.5, line 16)**

- We removed the title "Literature review" to improve the reading flow and consistency. And the subtitle «Tracking program system and nursing competence outcome» was changed into «Fast-track programs and nursing competence outcomes »

Please see on p. 4, line 18.

The three adjacent paragraphs were streamlined for coherence and clarity. Sentences were restructured, simplified to support the study aims. Therefore, some sentences
were moved among paragraphs to contextualise the purpose of the study (1 & 2), or because they added no value to the background (3), or again tightly reframed (4).

*(1) Was moved (from the former paragraph 3 of the subtitle «Nursing programs and entry routes in Burkina Faso») to current paragraph 4: "The concept of fast track program dates back to 1950’s, when an Associate Degree Nursing (ADN) education program was developed to meet short-term system needs of the post World War II United Stated (US) [4]."

Please see on paragraph 4, p.5, lines 5-6.

*(2) Was removed from paragraph 3 subtitled « Nursing programs and entry venues in Burkina Faso » of the original text: "Contrary to industrialized world, in Burkina Faso, resources wising, beside competence valuation is the main reason that has led to the inception of the fast track SDN program. An ephemeral one had exited and trained only two cohorts from 1988 to 1991," replaced in the current manuscript by "Burkina Faso has experienced running SDN fast-track program (not nested), especially designed for post-registered associate degree nurses. For unknown reasons –probably political– only two cohorts were trained from 1988 to 1991."

Please see on p.5, lines 14-16.

*(3) was merely removed from the first paragraph:"The ever-increasing demand pressuring health system is recurrently pointed out as a major reason of health personnel shortage in industrialized countries. As the deepening of nurses dearth continued to threaten healthcare provision"

*(4) The following has also been cut and rephrased to clarify the idea driven: "It was seen as a success story and replicated in the UK, New Zealand, Australia and Ireland
That enterprise might have to a certain extent maintained bedside nurses’ shortage, though nursing accelerated program considered as a thoughtful proactive endeavor. RN to BSN accelerated program is the extensively replicated approach in industrialized countries with several variants developed at different periods. In 1971, Saint Louis University pioneered the second degree; BSN program for applicants holding a non-nursing Baccalaureate or higher degree [23]. The RN refresher program fast track back was implemented in 2004 in the US [12]." It becomes :"Internationally, fast track strategy in nursing education was later implemented for costs containment purpose [22]. Nevertheless, the experience was a success which led to its replication in the UK, New Zealand, Australia, in Ireland [21, 23, 24], and in Canada [8]."
Please see on p.5, lines 12-14.

**Paragraphs 5: from p.5, line 17 to p.6, line 2**

That paragraph has been streamlined to keep the essence of the subject discussed in line with our study aims. For instance, the following was merely removed for redundancy.

"Nevertheless, the approach of accelerated nursing program into the formal nursing education system as a solution to address nurses shortage, raised hot debates over the late past century in industrialized world [6]. Studies conducted to track the contemporary issue look at varied features to generate and better evidence."

We amended and reshaped the paragraph for better understanding. Thus:

- The introductive sentences below were removed to fit with the subject:

"Because of difference in nomenclature, care is taken that nursing education programs are designed to fit with domestic context. Currently, nursing education is on diploma-based-run. At conceptual perspective, the program is designed in such that students
are competent to practice with minimal supervision, even soon after graduation.

However, classroom: clinical courses ratio of 1:1.3 is at deviance of 1:4 recommended by World Health Organization as requested in Africa [29]. In Burkina Faso, because of physician shortage, the role of RN includes medico-surgical diagnosis, case management, and prescriptive authority¹."

Please see the current introductive sentence on p.5, line 17.

- We reframed and moved to actual paragraph 7 the following sentence to strengthen the consistency:

"The National School of Public Health (École Nationale de Santé Publique [NSPH]), the greatest manpower provider of health system, graduates yearly, about 350 State Diploma Nurses (SDNs) (herein French denomination, Infirmier Diplomé d’État)." Is now read as: "The NSPH graduates approximately 350 state diploma nurses, annually. Before the market liberalization (1991), government was the only employer and NSPH was the only trainer."

It is Now located in paragraph 7, p.6, lines 16-17.

**Paragraphs 6: (p.6, lines.2-11)**

We kept the essential of the paragraph.

- We first apologize that we incorrectly mentioned the education level required.

Please consider "10 years" instead of "9 years" for ADN and "13 years" instead of "12 years" for SDN.

Please see on p.6, line 11.

**Paragraph 7: (from p.6, line.16 to p.7, line 9)**

- We improved the first paragraph and tightened it. It is now read as:
"The NSPH graduates approximately 350 state diploma nurses, annually. Before the market liberalization (1991), government was the only employer and NSPH was the only trainer. With free market policy, the private sector has since become involved in training and in healthcare and services provision [33]. Therefore, in addition to the aforementioned status, the NSPH enlists private pre-registered and post-registered students according to a quota."

Please see on p.6, lines 16-19.

- The last sentences of former paragraph 7 were aggregated to paragraph 8 to form the following:

"Students sit for a summative examination at the end of both year one and year two. In the third year, the summative examination serves as a graduation examination. This arrangement is similar to what is done in Norway and in Australia [6, 34] and in some SSA countries like Botswana, Swaziland, Zimbabwe [31] unlike in the US where they have the NCLEX."

Please see on p.7, lines 6-9.

**Paragraphs 8-9: (from p.7, line 10 to p.8, line 6)**

In the line with your recommendation, we improved the clarity of the text in reframing, reducing the length, or simply deleting. The last paragraph was merged to penultimate one. All the paragraphs have been streamlined.

Please see on p.7 lines 17-22 and p.8, lines 1-6.

- The paragraph « **Terminology used** » initially located immediately before the « Methods » is relocated after the main text, preceding the « References ». We deemed that more coherent with the structure.

Please see on p.15.
Methods

- We reshaped the first three initial paragraphs into two, moved out the ethical statement sentence (3rd sentence), and streamlined the content.

Please see on p.8, lines 9-22 and p.9, lines 1-2.

- We removed the « Students’ score structure »: 1) to focus on our study aims, 2) to avoid redundancy since some information such as "clinics’ examinations" or "success requirement" appeared in the part devoted to « survey instrument ».

Please see on p.9, lines 4-17.

- We inserted a new paragraph on ethical statement, one that was cut from the first paragraph of the «Methods».

It is now entitled: «Ethical considerations » and read thus:

"The study was first authorized by the National Taipei University of Nursing and Health Sciences Institutional Review Board (IRB#: 98A214 of June 25, 2009). We furthermore obtained an authorization from the NSPH headquarters and the campuses’principal, so that the academic affairs department from campuses could allow data access to the PI for on-site use. The participation was completely voluntary, anonymous, and freedom to withdraw in the process was guaranteed. Before the survey questionnaire was administrated, every participant provided signed written informed consent."

Please see on p.10, lines 7-13.

#2) We are sorry for the misunderstanding. Our original tool was a scale-based self-report questionnaire. We adapted it to fitting Burkina Faso education system, especially the students’ academic progress within State Diploma Nursing program.
Because of year to year students' score structure differences between the theory examinations and clinics', we added sub-items.

- As suggested in relation to how analyses were conducted, we proceeded as follow:

Our analysis plan has been modified to fit the field contingencies, namely data structure. Slight differences were observed among campuses in the number of classroom paper-pencil examinations and practicum sessions. Therefore, we used excel® to compute separately students’ scores. This aimed at figuring out the weight of practicum score (aggregated score) over each academic year. Upon, data of each year and campus were aggregated and exported to SPSS for further analyses.

As you can see in Table 2, we run descriptive statistics (e.g. means, percentages) for all the survey questions. Further analyses were implemented and reported in Tables 3, and following (please see on pp. 20-25).

- We revised the paragraph “Survey instrument and Variables” to render the content of the questionnaire more explicit. The paragraph now reads as:

"It is a structured self-administered questionnaire with three parts: The first section of the questionnaire consisted of socio-demographic variables (birth date, gender, marital status, number of children). The second section included academic information: campus, registration status, and track. Finally, the last section sought detailed information on grades by module and academic year: 1) paper-pencil score, 2) clinical practicum score, 3) summative school scores (paper-pencil and clinical practicum, on 50% basis) plus year-end examination scores (for both year 1and 2, weighing equally), and, 4) third year's (graduation) scores. The latter consisted of the summative school and graduation examination scores. Corresponding weight was applied to each module. For instance, in third year, each of the summative school and graduation
examination score counted for 50%. In breaking down the latter, nursing clinics examination accounted for 30% of the score. It is approximately 20% for year-end examinations and varies for practicum depending on the number achieved over the academic year. For each academic year, we created sub-items summing up the theoretical examinations and practicum sessions (simulation and bedside practicum). To that, the internship in a rural setting was added into the third year. All scores were computed and reported to 100 point-scale, the success rate being 60%.

Please see the revision from p.9, line 4-17.

#3) We apologize for grammatical errors. As suggested, we seriously addressed them. Thus, in addition to English speaking co-authors, we solicited independent proofreading. We also tried our best to revise the presentation format.

**Result and discussion**

#4) As advised, we extensively amended our discussion. All paragraphs have been streamlined.

Please see on p.11, line 1 to p.13, line 5.

**Conclusion and recommendations**

- As suggested, we provided specific recommendations on research, education, and practice respectively.
- Regarding the integration of education and practice, the revised paragraph is now presented as:

1) "A significant difference between tracks and the similarities among post-registered and pre-registered students confirmed that fast-trackers’ academic performance was considerably better, [...] This unique, but progressive example may inspire other
nursing schools, especially from SSA to reform their programs to suit their contextual needs and resources."

Please see on p.13, lines 11-14.

2) "[...] we suggest that an entry examination is essential to ensure that nurses are competent on registration [46, 47]. Further, applying a State licensing system would push schools to pro-action, better achievement, and shore up employers’ confidence since they want graduates who are ready [48]."

Please see on p.13, lines 20-22.

- The revision on potential **implication on research** tract is addressed. It is presented as:

"Large scale studies, involving varied designs, including several nursing schools and other stakeholders (clinical institutions, employers, etc.), are necessary to ascertain present conclusions."

Please see the revision in p. 14, lines 6-8.

- In addition, to focus readers’ attention, we removed the “strengths and limitations” and merged its essence in “**Conclusion and recommendations**”.

The exert is read as:

"This study had some strengths and limitations. First, study participants shared the same learning environment, which allowed controlling for most external factors that could have influenced their performance. Second, the sample size was large enough and included all registration statuses codified in the country. Though our study used grades –that include clinics– some criticized their reductionism when approaching clinical nursing competence [34]. Finally, participants in this study consisted of one cohort (2006-2009) and were from one institution (three campuses), underpinning
difficulties to generalize findings."

Please see the revisions, inserted in p.14, lines 1-8.