**Reviewer’s report**

**Title:** A biostatistical support system in health sciences: Is this sustainable in a resource-restricted environment?

**Version:** 0  **Date:** 10 Mar 2019

**Reviewer:** Lucy Busija

**Reviewer's report:**

The manuscript reports the results of a descriptive study evaluating quality and cost of a biostatistical support services in a South African university. Biostatistical capacity building in Africa is an important topic and the results could potentially be used to inform similar programs in other developing countries. However, in its current state, the manuscript has a number of issues that need to be rectified before it's suitable for publication. My specific comments, queries and recommendations are summarised below.

**Introduction:**

Overall, I found the introduction to be clearly written but unhelpful in setting the scene for the study. From the introduction presented, it is not clear what the biostatistical support system in question entailed, what assessments of the system have already taken place, and what outcomes one would expect from the system.

On page 5, the authors state that "Expansion occurred in relation to the burgeoning needs of the Wits FHS from 2013 onwards". The nature and extent of this expansion are, however, not clear. Please provide details of what the expansion had entailed. This is important information, given that the outcome of the expansion is the central topic of this investigation. I note that the information about the parts of the program that were expanded appears at the start of the results section. If the aims of the study is to describe the kinds of things that happened within the program from 2013 onwards, this needs to be make clear.

Page 6: the authors state that the present study "extends the survey on the feedback and consultations of postgraduate students and staff on the support system [19]". The existence of this previous study needs to be made clear in the introduction and its main findings need to be summarised.

**Study aims:** the study aims to evaluate quality and financial sustainability of a biostatistical support program, however there is no information on how either quality of financial sustainability were operationalised in the context of this study.
Methods

Overall, I found the methods section badly structured and un-enlightening. Specifically, the subsections the methods mix together information about the program and information about methods used to collect data for the present evaluation. Please re-organise this section to clearly separate information about what the program is/does/looks like and exactly what was being assessed by the present study in relation to the program. Please also provide information on what were the outcomes of interest and how these outcomes were captured/measured.

Study design: it is not clear from this section exactly what the design of this study was. The authors make a reference to a past survey and, presumably, a survey was also carried out as part of this study, but this needs to be made explicit. Please also describe the survey instrument - what kinds of questions were asked, how many questions, how long the survey took to complete approximately, where and when the survey was completed, and how it was returned to the researchers. Additionally, need more information on individuals who provided survey responses: were all attendees asked to provide feedback? Do you have information on how many refused to provide feedback or did not return their surveys?

Statistical analyses are appropriate

Results

Characteristics of those attending one-on-one consultations 2013-2017: this subheading is misleading since the section only reports information in the types of consultations that occurred and there in no information on who the consultees were. Was there any information on demographic characteristics of individuals who provided evaluations of consultations? If so, please add this information in else amend the heading to reflect the section heading.

Evaluation of consultations 2013-2017 section: how many evaluations were there in total during the study periods, and the proportion of consultees who provided the evaluations?

Graduations and research publications section: Please add to this section information on the number of graduations as proportion of total enrolments in a given degree. Also, despite the subheading, this section does not report information on research publications during the study period. Please either include this information or amend the section heading to more accurately represent what is being reported (graduations and research units by publications). Lines 209-210, page 10. Sentence: "This follows a similar increase in the number of one-on-one consultations between 2013 and 2017 (Table 1)”. Information about the number of consultations is rather out of place in the section reporting on graduations and research by publication. The number of consultations over the study period is an important variable in this study. Please reported this
information in a separate section (or merge information with the number of consultants with the evaluation of consultations).

Financial aspects section: Overall, I found this section difficult to follow and it is not clear what information is being conveyed here. My suggestion is to present the information in such a way as to clearly delineate the following:

a) Overall financial cost of operating biostatistical support services provided;

b) Income generated through the provision of biostatistical support services; and

c) Sustainability of biostatistical support services given the gap between income generated and operational costs

Discussion
First paragraph should provide a succinct summary of the study's main findings.

Lines 309-311: Statement "In relation to keeping costs minimal in a resource-restricted environment, use of tutors for consultations seems a cost-effective alternative in providing a critical mass of assistance and mentors in the Faculty". This may well be so but from the data presented, it is not clear how the authors arrive at this conclusion.

Minor comments
Please spell out HSRO fully for the first use (start of Financial aspects section).

Footnote to table 1: please change "some data was not" to "some data were not".

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