Reviewer’s report

Title: Assessing factors militating against the acceptance and successful implementation of cloud based health center from healthcare professionals' perspective: A survey of hospitals in Benue state northcentral Nigeria

Version: 0 Date: 04 Jul 2018

Reviewer: Stefano Bonacina

Reviewer's report:

The subject of research, the use of cloud based systems in healthcare and their envisaged acceptance from the healthcare professionals, is interesting and has significant impact on the health system, including the ones in low- and middle-income countries, as the considered context of Benue State, Nigeria. However, the manuscript organisation/structure has to be improved. In addition, the authors should consider involving a professional editor to improve the language (as e.g. there are log sentences, mismatches between subject and verb, and typos).

At present, the manuscript is organised as follows, Background, Methods, Results, and Conclusions. Unfortunately, a Discussion section describing the implications of the findings is missing. In addition, some contents do not actually belong to the section where it is. For example, "Proposed model and research hypothesized model" and "Research model and hypothesis" sections appear to belong to "Methods" section. Then, it appears some results (including Figure 5) have been presented in the conclusions. They should be moved to the results section. However, if the Cloud-Based Health Center (CBHC) is a result of the research or an envisaged architecture has to be clarified. In addition, it appears the proposed CBHC requires users to have their own IT devices (e.g. laptop and tablets), including internet accessibility. Those aspects have to be clarified, adding more about the situation of IT in Nigeria (see next paragraph), including levels of computer literacy and heath literacy.

In the Background, Cloud based health platforms (CBHP), Cloud-based health knowledge (CBHK), and Cloud-Based Health Center (CBHC) should be described properly. In addition, a background on IT infrastructure in Nigeria (or at least in Benue state) and healthcare system in Nigeria (or at least in Benue State) should be added, to help the reader in better understand the context of the research. In addition, how those concepts have been explained to the survey participants should be described to the reader (in the Methods section).

Problems, aims and research questions should be at the end of the background. There, the reader is aware of the context.

As for the "Research contribution", I would have the following concerns. In the introduction you read that "..., developing countries such as Nigeria need to harness the potentials of cloud computing in their healthcare system by using cloud solutions". It appears that cloud solutions have not been implemented yet in healthcare organisations in Nigeria. Inspired by references #37 and #38, the authors based their research on "Unified Theory of Acceptance and use of Technology expanded (UTAUT2)". However, in the research described by references #37 and
#38, cloud based CPOE and computerised guidelines systems were available to the participants. In the presented research, it appears the final users did not use cloud systems. I was wondering if the authors considered the "Theory of Planned Behaviour (TPB)", by Ajzen 1991, as they would explain the "Intention to Use" cloud based solutions to deliver healthcare services. 


An example of research applying that theory is as follows:


Comments to METHODS. The theoretical framework should be explained in the Methods section, at the beginning (UTAUT?, TAM?, TPB?, other theories?). Then, the proposed model should be formulated, and the hypothesis explained. Please consider that figures and tables have to be explained into the text (e.g. "Figure 3: Hypothesized Research Model" has to be explained in the text).

Then, it appears there are some discrepancies between "Table 3: Characteristics of surveyed health institutions" and "Table 4: Demographic data of respondent". Numbers of doctors, nurses, and others are not matching; Doctors 87, Nurses 115, Others 98 in Table 3; Doctors 60, Nurses 65, Others 175 in Table 4. It appears that discrepancy could have affected the analyses and the results.

"Data analysis" has to be more elaborate. Which analyses have been carried out should be more explained (in the present version of the manuscript, software tools have been mentioned, but which algorithms and functionalities have been used and why is lacking).

In the Conclusions, some results have been reported (e.g. Figure 5). They should be moved to the Results section. Then, the other text appears to be a Discussion, so it has to be included in a Discussion section, now missing.

Other

A "consent statement" has been presented in the Declaration sections; however, no information is available whether an information sheet has been given to the participants and if the participants accepted to participate in the research. Please elaborate more on the consent to participate.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Unable to assess

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**

If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical reviews

**Quality of written English**

Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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