Author's response to reviews

Title: Prevalence, risk factors and characters of symptoms of pelvic organ prolapse among Emirati women

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Author's response to reviews: see over
We have read the Editor’s reply carefully and decided to resubmit the manuscript to be reconsidered for publication after addressing all the comments of the Reviewers. We have responded to the Reviewer’s comment as seen below. The changes refer to the highlighted revised version. In the highlighted version of the manuscript, the text in red indicates that it has been. A final neat version was also included.

The author would like to thank the Reviewers again for their positive critical comments which have strengthened the manuscript.

Response & Index of Changes:

Reviewer #1:

Q1. Line 80. 98% of women with POP, incredible! Where that number are coming from? 32% for Handa (1), 41% for Hendrix (2), and 3% for Nygaard (3). Please check and correct. It is obvious that the analysis about prevalence must take into account the effect of ageing.

Response: The authors would like to thank the Reviewer for picking this typo-error. This has now been corrected (Line: 80). Indeed, the effect of age was taken into account as shown in Table 1; however, in our study, it did not prove to be a significant risk factor.

Q2. For my point of view it isn't possible to perform a multivariate analysis about POP risk factors without taking into account age, parity, and mode of delivery.

Response: We agree with the Reviewer, that these factors are very important ones to be taken into account when determining risk factors. As mentioned in Line 125-130 and as per the statistical practice, we performed univariate analysis on all the potential risk factors including age, parity, and mode of delivery. This was followed by multivariate analysis on those factors
which proved to be significance on univariate analysis, to determine independent risk factors for POP. An extra text was added to clarify this point (Line: 126-127).

**Q3. Unfortunately it is not clear how questionnaires used in the study were validated.**

*Response:* We used a custom-designed questionnaire. The first part dealt with the basic demographic data. The second part explored the obstetrics, medical and surgical history followed by prolapse-related questions. The questionnaire was not formally validated but some of questions were used in other studies such as the WHO subgroup, reference 17 (Line 238). In addition, and as mentioned in Line: 107-112, the questionnaire was tested and re-tested on a pilot sample to suite our population’s attitudes to discuss issues related to POP symptoms. Furthermore, and as mentioned in Line: 238-241, the use of healthcare providers to question the participants and fill the questionnaire eliminated the potential misunderstanding of the questions by the participants, which may have been interpreted differently otherwise. Copy of questionnaire is attached as a supplementary.

**Q4. The authors need to discuss the pertinence of introducing constipation in the multivariate analysis while this factor may be a consequence of POP rather than a cause.**

*Response:* We agree with the reviewer and an extra text was added to the Discussion to address this point (Line 225-228).
Reviewer #2:

ABSTRACT:

Q1. From the methodology section it’s not quite clear whether nulliparous women younger than 30 years old were “excluded” or “not included”? The total of 482 “who approached” (from the results section) – was this the figure after excluding nulliparous and pregnant women or before exclusion? If after the exclusion –than the nulliparous women <30 y.o and pregnant “were not included”.
In other words, if 429 out of 482 women accepted the invitation to participate in study – it means nobody was excluded, all 482 met the inclusion criteria.
Response: The 482 women are those who met the inclusion criteria. So nulliparous and pregnant women were not part of the 482 women. An extra text was added to clarify this point both in the Abstract and Methods sections (Line: 40 and 144).

Q2. Also it’s not clear what the study population ethnicity is. Were these Emirati only, or Indians, Pakistani, Sudanese or whatever other different ethnicity attended as well?
Response: As mentioned in the Methods section (Line 99), only Emirati women were included in the study. Non-Emirati women were not included as also suggested by the Title. An extra text was added to clarify this point (Line: 38 and 102).

Q3. What questionnaire exactly was used? Was it validated or not, or maybe custom designed?
Response: We used a custom-designed questionnaire. The first part dealt with the basic demographic data. The second part explored the obstetrics, medical and surgical history followed by prolapse-related questions. The questionnaire was not formally validated but some of questions were used in other studies such as the WHO subgroup, reference 17 (Line 238). In addition, and as mentioned in Line: 107-112, the questionnaire was tested and re-tested on a pilot sample to suite our population’s attitudes to discuss issues related to POP symptoms. Furthermore, and as mentioned in Line: 238-241, the use of healthcare providers to question the participants and
fill the questionnaire eliminated the potential misunderstanding of the questions by the participants, which may have been interpreted differently otherwise. Copy of questionnaire is attached as a supplementary.

**Q4.** Additionally it’s probably worth mentioning that uni- and multivariate analysis was performed and a p<0.05 was considered significant.

*Response:* This was mentioned in the Methods Section. Please see Lines: 125-130 ‘Inter-group comparisons were performed initially using univariate analysis namely, Student t test for continuous variables and chi-square or Fisher exact tests for categorical variables. Multivariate direct binary logistic regression analysis was, then, performed on all variables which showed significance on univariate analysis, to determine independent risk factors for POP. A P value of <0.05 was considered statistically significant’.

**Results:**

**Q5.** The abstract were more informative if in multivariate results description the odds ratios and confidence intervals would be added.

*Response:* This has now been added to abstract (Line: 49-50).

**ARTICLE:**

**Introduction:**

**Q5.** Line 81: probably “have” rather than “has”

*Response:* This has now been changed (Line 81).

**Q6.** Line 82: Reference 7 is not appropriate, since this article didn’t find association with parity more than 2 and macrosomia was not discussed. There are many other articles reporting these associations. Additionally this sentence is logically connected to the 1st paragraph of introduction rather than to the second.

*Response:* We agree with the Reviewer. Reference 7 has now been removed and replaced by reference 2 and 3 (Line 82). An extra text has been added to the second sentence of this paragraph to connect it to the first sentence of the same paragraph (Line 84).
Q7. Line 88: The word study is very repetitive in this paragraph. It needs to be substituted with synonyms.

Response: This has now been corrected and the word of study was replaced by the word ‘investigate’ (Line: 88).

Q8. Line 90: Probably the word “types” or “severity” is more appropriate than “characters” (depending what authors meant by this). The same would be right for the title.

Response: This has now been corrected (Line 1 & 90).

Materials and methods:

Q9. The inclusion/exclusion criteria are not quite clear in this article. Whereas everything is obvious about pregnant women, the situation with nulliparous women less than 30 years old is not so evident and some justification or explanation would be very welcome. If nulliparity is not considered a risk factor –why those nulliparous older than 30 years were included? Or alternately if this study looked at all symptomatic women attending the health centres, why those nulliparous younger than 30 years old were not included?

Response: Based on previously published data, which showed a low incidence of POP in nulliparous women; we decided not to include young nulliparous women in the study. For instance, in reference 7, POP was found to be very low and was present in only 3.8% of the nulliparous women 45-84 years old. However, retrospectively, we think that studying the prevalence of POP in the young nulliparous women, albeit low, would have been a valuable data. An extra text was added to the Discussion to mention this point (Line 230-233).

Q10. Was in this study used a standardized or validated questionnaire or it was custom developed? The line 232 in the discussion section says that this questionnaire has been used in other studies previously. All those studies used various questionnaires: like urinary distress
inventory (UDI), defaecation distress inventory (DDI), Individual Incontinence Impact Questionnaire and others. Which exactly was used in this study?

Response: As discussed in Q3 above, we used a custom-designed questionnaire. The questionnaire was not formally validated but some of questions were used in other studies such as the WHO subgroup, reference 17 (Line 238). In addition, and as mentioned in Line: 107-112, the questionnaire was tested and re-tested on a pilot sample and modifications were done to suite our population’s attitudes to discuss issues related to POP symptoms.

Q11. As I literally understand from the methods section, there was used a custom developed questionnaire. In line 112 of the methods section it says that it was validated on 20 patients in a pilot study. Was there any formal statistical validation process? I think would be useful adding to the questionnaire validation description the “raw agreement” or “kappa value” or something else to demonstrate the test - retest agreement.

Response: As mentioned in Q3 and Q10, this is a custom-designed questionnaire which was not formally validated but some of questions were used in other study such as the WHO subgroup, reference 17 (Line 238). The word “validity” was changed to “suitability” (Line: 112).

Q12. Including a copy of the questionnaire to the supplementary materials, could help readers to have a better understanding of the study methodology, since the questions are not described in detail in the methodology section.

Response: A copy of the questionnaire has now been added as a supplementary document.

Results:

Q13. The long sentence in lines 173-180 is difficult to understand. It needs to be rewritten.
**Response:** The long sentence has now been modified to make it easy to understand (Line 174-180).

**Q14.** The words body mass index is used repeatedly after the introduction of the abbreviation BMI. Change all to BMI.

**Response:** This has now been changed throughout the text (Line: 151, 175, 180).

**Discussion:**

**Q15.** Line 192: The combination of words “this Gulf country” has been repeatedly used in this article. Probably this is a broadly used toponym locally, however for the large international audience Emirates or UAE would be more clear.

**Response:** Gulf country has now been changed to United Arab Emirates (UAE) in many locations as appropriate (Line: 83, 86, 91 and 192).

**Q16.** The fact that Al-Ain hosts 20% of UAE population is undoubtfully a strength, however would be useful to highlight if the study population was homogeneous or not, specifying the percentage of non Emirati ethnicity participants.

**Response:** As mentioned in the Methods section (Line 99), only Emirati women were included in the study. Non-Emirati women were not included as also suggested by the Title. An extra text was added to clarify this point (Line: 38 and 102).