Author's response to reviews

Title: Job satisfaction and turnover intention among Iraqi doctors - a descriptive cross-sectional multi-center study

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Author's response to reviews: see over
Cover letter

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Addressed to: Editor, Human Resources for Health

We are pleased to resubmit our revised manuscript entitled: “Job satisfaction and turnover intention among Iraqi doctors – a descriptive cross-sectional multi-center study” authored by “Saad Ahmed Ali Jadoo, Syed Mohamed Aljunid, Ilker Dastan, Ruqiya Subhi Tawfeeq, Mustafa Ali Mustafa, Kurubaran Ganasegeran and Sami Abdo Radman AlDubai” for consideration of publication in Human Resources for Health.

We revised our manuscript in light of the reviewers' comments and we made all possible required changes to format our paper. Please find below our responses listed one by one according to reviewers’ comments.

Thank you for your consideration.

Kind Regards

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Response to reviewer (1):

Dear respected reviewer, we highly appreciate your opinion and your comments to improve the quality of this paper. We did our best to response to your comments.

Major Compulsory Revisions

1. I disagree with the definition of turnover intention of the authors, who assessed this intention by asking: “I’m actively seeking alternative employment abroad”. In my opinion actively seeking employment abroad is no longer an intention but already a decision to leave the country. The authors should, therefore, consider changing the term “turnover intention” with “active job search” and also indicating this in the title, or clarify their decision to use this definition of turnover intention.

Response:

Dear reviewer: your disagreement with our statement is fully considered. However we prefer to use the same terms because of the reasons mentioned below. If you still not agree, and our listed reasons are not satisfying then we can discuss this issue. Hopefully, you will consider our reasons.

Our decision was based on a considerable number of literatures defining and measuring the turnover intention as follows:

In methods section:

Physicians’ turnover intention was assessed by asking the doctors to score one statement "I'm actively seeking alternative employment abroad" adopted from Mobley, Horner and Hollingsworth [30].
In background section:

The concept of turnover intention was broadly studied in items of “conceptualizations, forms, antecedents, consequences, intermediate linkages, mediators, moderators, as well as applications” [24]. However, turnover intention is seldom precisely defined in most of the prominent research outputs [25]. This practice was justified by bothma [25] to the assumption that people had probably perceived the term to be self-explanatory. Turnover intention was conceptualized by Cotton and Turtle [26] as “an individual’s perceived probability of staying or leaving an employing organization”. Also Hom and Griffeth [27] defined turnover intention as” the relative strength of an individual’s intent toward voluntary permanent withdrawal from an organization”. Tett & Meyer [28] “argued that turnover intention can be used as a valid proxy for actual labor turnover”. Several authors viewed turnover intention as “the final step in the decision-making process before a person actually leaves a workplace, in which members actively consider quitting and searching for alternative jobs or professions [28,29].

Most of the instruments available to measure the turnover intention had used only a limited number of scale items such as the measure based on Mobley, Horner and Hollingsworth theory [30]; the scale items were: (1) I think a lot about leaving the organization, (2) I am actively searching for an alternative to the organization, and (3) As soon as it is possible, I will leave the organization. Some other measures are lacking information on the metric properties as in case of the turnover intention scale (TIS-6) [25]. Therefore, the common trend among various researchers was to use a single item scales [31-33]. The fact that turnover intention was shown to be the strongest predictor of actual leaving or actual turnover among healthcare personnel was documented [34]. Oluwafemi [24] indicated that “the early detection of employee’s job dissatisfaction through turnover intention measure would be
greatly helpful to resolve the problem of exodus before it exacerbates”. Therefore, turnover intention for the purpose of this study implies the Iraqi physicians’ intention to potentially quit their present jobs to pursue other alternative employment abroad.

2. The authors state in the background section that they also studied motivation and migration. However, although motivation and migration are related with job satisfaction and turnover intention, these factors were not studied by the authors.

**Response:**

The statement was refined as follows:

“Accordingly, our study is very important, relevant and timely to examine the perceived turnover intention of Iraqi doctors to leave their work or their country and the factors associated with turnover intention, particularly those related to job satisfaction”.

3. The authors claim that very few studies explore the relationships between job satisfaction, motivation, turnover intention, and migration in countries with healthcare worker shortages. However, several studies on this topic in low- and middle-income countries have been published in recent years. Therefore, this sentence should be modified.

**Response:**

The sentence was removed

4. Although it can be assumed from the text that the maximum of the total job satisfaction score is “70” this is nowhere stated explicitly in the text nor in Table 2 and should thus be included in both so to improve comprehension. The range of the item scores should also be indicated in Table 2.

**Response:**

The range was added in the text and in table 2 as well.
5. The results section tends to just repeat the results from the tables, especially the section on the predictors of turnover intention, which repeats all results from Table 4. Only the most important observations should be emphasized or summarized in the text.

**Response:**

All the results section was refined with focusing on the most important observation.

6. The authors state that: “This study established a significant and negative relationship between the turnover intention and job satisfaction, in terms of working conditions, interaction, recognition, responsibility and overall job satisfaction”. However, the job satisfaction sub-scores have not been shown in the results section. Therefore, this statement cannot be made.

**Response:**

The statement was removed from the text.

7. The authors also state that: “In previous studies, higher job satisfaction has frequently been associated with intention to leave the health care system or even the country”. The opposite is true: previous studies have shown that a lower job satisfaction is associated with turnover intention.

**Response:**

The statement was corrected: “In this study, job satisfaction was negatively associated with turnover intention. The findings are similar to other studies done in Saudi Arabia [21], Lebanon [22], Ghana [33], Palestine [63], Pakistan [64], and China [65].”

**Minor Essential Revisions**

8. The citation style of Human Resource for Health is not always followed by the authors in the discussion. This should be corrected.
Response:

The citation style of Human Resource for Health was tracked and corrected all over the articles including the discussion part.

9. In Table 2 the legend is missing, which explains the abbreviation (WCW for Warr-Cook-Wall job satisfaction scale).

Response:

Legend which explains the abbreviation (WCW for Warr-Cook-Wall job satisfaction scale) was added in table 2.

10. The text states that Table 2 is ranked by mean and SD. However, Table 2 is not ranked.

Response:

Yes, we agreed with reviewer’s comment. The statement was removed from the text. We prefer not to rank the items.

Discretionary Revisions

11. The manuscript would be improved when the results from the analysis of differences in overall job satisfaction between doctors with and without turnover intention are also shown in a table, either by including the results in Table 2 or in separate table.

Response:

Differences in overall job satisfaction between doctors with and without turnover intention were included in the results in Table 2.
Reviewer number (2)

Dear respected reviewer, we highly appreciate your opinion and your comments to improve the quality of this paper. We did our best to response to your comments.

Major revisions

Background/literature

1. The literature review needs to be better organized for readability and clarity

Response:

The reviewer’s comment was taken in consideration. Literature review was reorganized for better readability and clarity.

2. The introduction and overview could benefit from examining studies from the Middle East and Gulf Regions and not only Western studies.

Response:

Studies from Middle East were examined and added in background section.

3. Try to focus review on the determinants of physicians’ attrition and intention to quit in countries with conflict and civil unrests.

Response:

The following review was added:

Causes of labor shortage have been documented in literature. The main causes include prolonged conflicts, political and social instabilities, inadequate investment in healthcare sector, and migration of healthcare workers [6,7]. Civil and regional wars jointly with security disturbances in countries such as Lebanon, Somalia, Liberia, Iran, Afghanistan and other similar nations had resulted in a mass exodus and death of doctors and other health personnel accompanied with a serious health and economics consequences for the population[8-13].
4. Despite attrition of Iraqi physicians, the physician to population ration has been on the rise over the last few years. How would the author justify this? Is it that the supply side of physicians has been active or is it because the Iraqi population has been decreasing? A more rigorous understanding of the labor market dynamics would add to the value and credibility of this manuscript.

Response:

The following explanation was added in the background section (Overview of the Iraqi doctors’ situation):

Many references [44-48] estimated that around 20,000 Iraqi physicians had fled out since 2003 invasion. World Health Organization reported that Iraq is continuing to face a severe shortage of healthcare professionals, its ranked 95 globally and in bottom of the list of the regional countries [49]. In a thought to compensate for continuing brain drain process in Iraq, the Ministry of Health and Ministry of Higher Education have taken an immediate action after 2003 invasion to add more medical schools. The number of medical schools rose from just seven before 2003 invasion; to12 in 2004; and 20 in 2007 and peaked up to 23 by 2012 [42]. UNESCO’s report of 2004 indicated that the total number of medical students in the 12 medical schools was 18,018, this means roughly 2,000 to 3,000 graduated every year [42,50]. Consequently the physician to population ratio showed a slow and sometime fluctuated growth over the last decade. World Health Organization, Ministry of Health and World Bank estimated the ratio of 5.5 per 10,000 populations in 1990; 5.0 in 2002; 6.3 in 2004; 6.6 in 2005; 6.1 in 2006; and 6.9 in 2012 [49,51,52]. However, the national rate of physician per population in 2012 is much lower than the global (14.2 per 10,000) and regional rate (10.9 per 10,000) and far fewer than neighboring countries such as Iran (8.9), Kuwait (17.9), Turkey(15.4), Syria (15.0), Saudi Arabia (9.4), Jordan (24.5) respectively [49]. A
special report presented by Webster [48] in 2013 referred to about 24,745 physicians currently in practice (according to government figures), Iraq’s physician to population ratio is about 60% lower than the average for other 23 nations in WHO’s Eastern Mediterranean Region. Burnham et al.[8] in their findings of 12 tertiary care centers study in Iraq, “they considered the 61% of specialists who left their hospital posts a major loss of human capital from Iraq’s hospital sector, a loss that is likely to require some years to fully replace”.

5. Avoid the excessive use of superlatives

**Response:**

Yes, we agreed with reviewer’s comment. We did our best to reduce them. In the final revision, we will make an extensive English edition.

**Methods**

6. How were physicians randomly selected in hospitals?

**Response:**

We explained it in the manuscript as the following:

“A list of the doctors was obtained from each hospital. An average of 33 doctors per hospital was selected randomly from each hospital and they were contacted personally by the researcher team”.

7- Why would physicians be unwilling to participate? Which measure have you taken to ensure participants do not differ than non-participants?

**Response:**

Yes, the following statement was added in the limitation of study: “Response bias is a possible bias because we had no information about the non respondents and if they differed in some criteria from the respondents”
8- Have the questionnaire used in this study been pilot tested?

Response:

Yes, “the questionnaire has been pilot tested with 20 doctors”. We stated that in the manuscript.

9- From my experience in Iraq, I believe that not translating the questionnaires is a major shortcoming in this study as I believe that many health professionals possess poor English language skills despite the fact that they studied in English.

Absence of an Arabic version of the questionnaire undermines physicians’ proper understanding of questions. This should be highlighted in the shortcomings.

Response:

Yes, we agree with this point. So, the following statement was added in the limitation section: “Although, we have test piloted the English version of the questionnaire, the language barrier could be a limitation because the native language of the respondent is the Arabic”.

10- Have physicians been provided with a number they can call if they have questions about the questionnaire?

Response:

Yes, “physicians were provided with a mobile number and email contact if they have questions about the questionnaire”.

Results

11- In the bivariate reporting the authors did not explain how did physicians vary by turnover intentions across the significant variables. For example, when you mention that gender was significantly associated with intention to quit you should have explained whether males or females had a higher intention to quit, etc.

Response

We have explained that in details in the results.
Discussion

12- Need to explain how your findings agree or vary with other findings not only in the West but also with studies carried out in other countries in the Middle East Region and specifically in contexts with war and civil unrests?

Response:

More studies from Middle East Region and specifically in contexts with war and civil unrests were considered in discussion part: we cited few studies from Saudi Arabia Lebanon Ghana Palestine Pakistan and China.

13- Perhaps is the weakest section of the manuscript as the authors would need to explain the policy and practice recommendations that are aligned with their findings. For example, what need to be done to protect workers from violence?

Which measure could policy makers and managers take in order to improve the situation? What could we learn from other contexts?

Response:

We explained this issue in the discussion part. We made a new subtitle.

14- Turnover intentions vary by gender, age, etc. What can we learn from this? What concrete measure could be taken? What could be learned from other contexts?

Response:

The reviewer’s comments were taken in consideration as follows:

Older doctors may have stronger personal ties and may be more satisfied with their work and, therefore, less likely to contemplate leaving [13,21,68]…..

This study showed that males had higher levels of turnover intention compared to females. This finding could be due to cultural issues such as the traditional gender roles, which attribute achievement and adventurousness of males [65].
Unmarried doctors were more likely to indicate turnover intention... El-Jardali et al. [22]. This finding could be explained by the fact that single health care professionals generally have fewer family responsibilities, thus making them more mobile.

15- Check the third paragraph – second sentence – as there seems to be an error with the statement.

Response:

The statement was corrected as follows: “In this study, job satisfaction was negatively associated with turnover intention”

Response to reviewer (3):

Dear respected reviewer, we highly appreciate your opinion and your comments to improve the quality of this paper. We did our best to response to your comments.

- Major Compulsory Revisions

Abstract

1. Under Results, second sentence, the OR for low job satisfaction is different than what is listed in Table 4: 1.0 vs. .967.

Response:

The OR value has been corrected to be 0.97 in both table 4 and abstract as well.

- Minor Essential Revisions

1. Overall: There are some very minor copy edits that are required, for example missing articles or articles when none are needed, some words capitalized that shouldn’t be. None changes the reader’s ability to understand (except as noted below) but should be addressed before publication.

Response:
All the points were taken in consideration and edited accordingly.

- **Background**

2. First paragraph, 4th to final sentence. “Existing studies confirm a relationship between low job satisfaction, low motivation, turnover intention of physicians to leave…” is the relationship between low job satisfaction and both low motivation and intention to leave?

**Response:**

The statement was corrected as follow: “Existing studies confirm a relationship between low job satisfaction, low motivation and turnover intention, and a relationship between low job satisfaction and actual physician migration [20-23].”

-**Methods**

3. Second paragraph, second sentence, authors use the word “drop outs” to refer to those who do not return the questionnaire. Given this is a cross-sectional study I would suggest calling them “non-responders”

**Response:**

The statement has been corrected as follows “So, \( n_0 = (1.96)^2 \times (0.50) \times (0.50) / (0.04)^2 = 600 \). Non response correction = 10%. Thus, the total sample size was 660. The total number of doctors who answered the self-administered questionnaire was 576 (response rate= 87.3%)”

4. Data analysis section (SPSS Inc., Chicago IL, USA). I believe this should be just another numbered citation like the rest

**Response:**

“SPSS Inc., Chicago IL, USA” has been added as another numbered citation, “[60]”.

5. Data analysis section, third to last sentence. Authors describe they use the “Multiple logistic regression analysis (Enter technique)”. For those who are not familiar with the specific SPSS command, please describe what that technique does (forces all listed variables into the model together) or delete “enter technique”.
Response:

“Enter technique” has been described as follows: In “Enter technique” the variables in the models which are not significant are removed one by one until a satisfactory model is obtained.

-Results

6. In the Multivariate Logistic Regression section, there are formatting errors in the PDF file where underlines are supposed to be I believe. I’m not sure if this is something that is taken care of by the authors or by the editors.

Response:

It’s noted and was taken in consideration.

7. Please add space between rows of factors/variables/respondent characteristics in Tables 1, 3 and 4. They are difficult to read because there are no spaces to differentiate the rows.

Response:

It’s noted and spaces between rows were added in tables 1, 3 and 4.

8. Table 4: Please add a note at the bottom of the table defining “I” which is in the 95% CI column.

Response:

Yes, we agreed with reviewer’s comment. The (1) was replaced by word reference in the 95% CI column (table 4).

Discussion

9. Third paragraph, fourth sentence: “For dropping out of medical school and for Doctors working abroad in Germany [38], and various job satisfaction subscales have shown a similar pattern in other countries.” I don’t understand this sentence.

Response:

This statement was removed and paragraph was edited.
-Conclusion

10. Fourth sentence. “Although they were consecutive periods but the motives to leave were almost distinct.” It’s not clear to me what “they” refers to. What consecutive periods? (The two decades?) What were the distinct motives? For whom and when?

Response:

This statement was removed and paragraph was edited

- Discretionary Revisions

Abstract

1. In the conclusion, the last sentence, rather than “anticipated” I suggest something like “required”

Response:

Yes, reviewer’s suggestion was taken in consideration, “anticipated” changed to “required”

Background

2. Second paragraph, 4th sentence. “…reflected negatively on the health system.” I suggest a different word, such as “affected the health system negatively.”

Response:

Yes, reviewer’s suggestion was taken in consideration:

“Throughout the 1990s, a strict ban imposed on the Iraqi regime after invasion of Kuwait affected the health system in Iraq negatively”.

Results:

3. First paragraph, fourth sentence. Delete (51.2%) at end of sentence. Redundant.

Response:

This statement was removed and paragraph was edited.