Author’s response to reviews

Title: Psychometric Properties of the Scale for Non-adherence to Antiretroviral Medication Among HIV-Infected Iranian Patients

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Version: 1 Date: 10 Nov 2019

Author’s response to reviews:

Dear Editor in Chief,

Journal of Archives of Public Health

Thank you for giving us this opportunity to revise the manuscript entitled: "Psychometric Properties of the Scale for Non-adherence to Antiretroviral Medication Among HIV-Infected Iranian Patients". The corrections have been made in the manuscript based on Comments.

I hope they would be satisfactory.

I wish all the best for you

Teamur Aghamolaei, Ph.D
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honorable reviewer 1:
1/ it is not clear how and where participants were recruited.
• Where the participants entered the study and how to enter the study have been described in method (Paragraph 3).
2. authors wrote that they selected participants with a first-hand experience regarding the study objectives. What does it mean?
• An explanations about the first-hand experience have been presented in the method (Paragraph 3 Line 3).
3. Authors developed a scale using only target population as data source to develop the items of the scale. They ensured content validity with this technique. However, it is highly recommended to broad the sources of data collection. For example, why authors did not investigated literature about items to be included in the questionnaire? Or experts in the field? This should be discussed as a limitation of this study.
• In addition of the interviews and group discussions, we also reviewed related studies , a number of themes were extracted and included in the initial draft of the questionnaire. But in the reduction phase, it was either merged into other items or eliminated for being duplicate. In the second phase of method it is presented (Paragraph 1, Line 2).
• Of the 32 people we interviewed two nurses were working in the infectious ward and one was a physician specializing in infectious diseases. An explanations have been written in the method (Paragraph 4, Line 8).

4. The paragraph about "face validity" is unclear. Is this step equal to a pre-test of the questionnaire and an item-reduction analysis? If not, did the authors performed a pre-test of their questionnaire?
• Face validity is part of the validity and reliability of the questionnaire. After designing the questionnaire and confirming its validity and reliability, as well as after construct validity , that the explanations of which are included in the Statistical analysis and sampling section. We used the questionnaire in a cross-sectional study. that the results of which are not presented in this manuscript.
• In this manuscript, we have presented only the results related to the design and psychometric evaluation of the questionnaire.
5. Some information about the final version of the questionnaire are missing. For example, is it a self-administrated questionnaire? What is the name of this questionnaire? Moreover, in results authors indicated the presence of 6 domains but they never presented them, except in tables and discussion section.
• The questionnaire name is: Non-adherence to Antiretroviral Medication (NAME). The six factors and their items are listed in the table in Table 3.
• this is a self-administrated questionnaire. This questionnaire can be used to investigate the causes of non-adherence to antiretroviral medication in HIV/AIDS patients by specialistes . If the patient is literate, it will be completed by the patient. Otherwise, experts or infectious diseases specialist will complete it by interviewing the patient.
6. Why did the authors not assess test-retest reliability of their new questionnaire? And floor and ceiling effects? These are very common psychometric properties to evaluate.
• We checked the Cronbach’s alpha for internal reliability and Intra class correlation coefficient (ICC) by test-retest for external reliability, that have been explained in results in Internal and External reliability section.
7. 61.98 percent of variance is not a very high result. Do authors have some hypotheses to explain their results?
• With respect to the comment of the honorable reviewer. This amount of variance is above
average and is relatively good compared to similar articles.

similar articles:
2. The Mother-Newborn Skin-to-Skin Contact Questionnaire (MSSCQ): development and psychometric evaluation among Iranian midwives.
8. Authors used ICC to assess external validity. It is not clear. What does they meant by external validity and how did they run their statistics?

• Intra class correlation coefficient to determine consistency in the repeatability dimension for the whole questionnaire and each one of its dimensions was calculated. Twenty AIDS patients who were taking antiretroviral medications completed the final questionnaire in two times, during a 14 days period.

Table: External validity of the Questionnaire of Non-adherence to Antiretroviral Medication in AIDS Patients by Intra class Correlation Method

<table>
<thead>
<tr>
<th>Domains</th>
<th>upper bound</th>
<th>lower bound</th>
<th>ICC</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal barriers</td>
<td>0.833</td>
<td>0.184</td>
<td>0.591</td>
<td>0.006</td>
</tr>
<tr>
<td>Medical challenges</td>
<td>0.899</td>
<td>0.440</td>
<td>0.747</td>
<td>0.000</td>
</tr>
<tr>
<td>Quality of services</td>
<td>0.869</td>
<td>0.130</td>
<td>0.657</td>
<td>0.002</td>
</tr>
<tr>
<td>Financial problem</td>
<td>0.906</td>
<td>0.560</td>
<td>0.759</td>
<td>0.000</td>
</tr>
<tr>
<td>Perceived support</td>
<td>0.845</td>
<td>0.288</td>
<td>0.579</td>
<td>0.007</td>
</tr>
<tr>
<td>Disclosure of the disease</td>
<td>0.916</td>
<td>0.262</td>
<td>0.642</td>
<td>0.002</td>
</tr>
<tr>
<td>Total</td>
<td>0.920</td>
<td>0.599</td>
<td>0.806</td>
<td>0.000</td>
</tr>
</tbody>
</table>

9. Authors indicated that one item was eliminated because it shows low correlation with the rest of the items. I do not think authors presented any correlation analysis in their method section. Please be more specific.

• In the factor analysis the factor load of each item must be greater than 0.3. Therefore the item of “Difficult access to medicines (due to being away from home or traveling)” removed because of low factor loading (less than 0.3). The factor loading of the other items is given in the table 3.

10. A point missing in the results section is the results of the questionnaire administration. Some information about this is presented in discussion section but should be moved to the results part.

• The validity and reliability of the designed questionnaire are described in the text in results section. The results of construct validity contains of extracting the categories (factors or domains) and their items are presented in Tables 2 and 3.

honorable reviewer 2:
1. It is important to state in the abstract that this study was performed in Iranian patients. However, this point must be deleted from the title.

• According to the honorable reviewer, the Iranian patients removed from the title.

2. In the introduction, more information must be provided regarding why, in Iran, the available questionnaires are not adapted.

• more explanations about the reasons for the absence of a valid questionnaire in Iran were presented in introduction as recommended.

3. In the discussion, some discussions regarding the differences between this questionnaire and all currently available must be presented.

• we did not find a similar questionnaire in the search. So we have compared our questionnaire with existing questionnaires such as (Morisky questionnaire, ....) and we presented some discussion.
about differences between our questionnaire and existing questionnaire in discussion.

4. It is not clear in which language this questionnaire was developed and if it is freely available for the scientific community?
   • The questionnaire is in Persian and is translated into English and can be used by the scientific community freely.