Reviewer's report

Title: To predict factors associated with Breast Self-Examination behavior in a sample of Iranian women: An Application of Health Belief Model

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Reviewer: Nursen O Nahcivan

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Journal: BMC Women’s Health
Title: To predict factors associated with Breast Self-Examination behavior in a sample of Iranian women: An Application of Health Belief Model
(5348333262464961)

Major Compulsory Revisions

REVIEW NOTES:

This is an interesting paper; that appears to be the first study which examine factors predict BSE behavior through health belief model (HBM) constructs, amongst Iranian women. Understanding Iranian women’s beliefs related to breast self examination will help healthcare professionals implement health education programmes with the potential to increase BSE behavior. The manuscript would be strengthened if the authors would address the issues listed below:

1. Is the question posed by the authors well defined?

• This paper only discusses health belief model constructs that influence the practice of breast self-examination (BSE) among the Iranian women, not other factors. In the first sight, the title of the study imply to examine the associated factors with BSE behavior, not only the HBM constructs. So that, It is not clear why did the investigator not choose to study the other affected factors (e.g. sociodemographic variables, lack of knowledge and etc.) as well. This should be clarified. In addition, in the literature, the most common reason for not doing BSE was lack of knowledge and the belief that it was not necessary, so; why did the investigator not choose to learn such characteristics of Iranian women in the study? There is no mention of the effect of the such factors on BSE practice. Either the study needs revision and contribution in the introduction section. The manuscript’s introduction is not enough wide ranging for its intended purpose. The introduction should be re-written to consider what is already known about the associated factors and the predictors related with BSE in other cultures. Please specifically add some additional information to give the readers a little background on Iranian women and their culture and a little information that aimed the similar and different aspects of Iranian women, comparing with women in other cultures. No data were shown here to support this point.
• If the authors’ purpose was examine only the predictors of HBM constructs, the title is awkward. Thus, the title should be altered as “Health Belief Model constructs as factors associated with Breast Self-Examination behavior in a sample of Iranian women”.

• In “Introduction” section, be more specific than just saying advanced stages. Are you referred to regional and distant staged disease? Staged III and IV disease? (See Vahdaninia & Montazeri, 2004)

• Please give incidence rates for breast cancer in Iran.

• The first parts of the introduction should be re-written to consider what is already know about the Iranian women’ breast cancer screening behaviours. The Introduction does not summarise what is already known on the breast cancer statistics and the previous studies’ reports in Iran. The background section should be updated to include some relevant literature (a few examples are below):
  - Najafi et al, 2005 and etc.
  - Mousavi et al, 2007

• Some of the assertions in the introduction appeared to be in need of a citation. More than one reference should be given in the “Introduction “section before the sentence “Therefore, understanding women’s beliefs regarding BSE could be useful for designing suitable educational interventions to promote this healthy behavior.” The authors failed to cite many of the pertinent references in this field.

• There is a typographical error in the “Introduction” such as the use of “SBE” rather than “BSE”.

• In the last part of “Introduction” the authors have already defined the HBM, so leave off (Health Belief Model). And for the readers who are not familiar with the health belief model, this theroetical model should be detailed described, what it is used for in general, and identifying its components. Please provide more information.

2. Are the methods appropriate and well described?
• Please provide more information regarding the women who participated in the study. What were their characteristics that were selected from 8 health centers in Bandar Abbas? How can they represent the Iranian women at all? A brief explanation would suffice to give the readers a clearer understand of the sample.
• In “Methods” section, the authors state that the study sample was selected randomly. Which variables were included in the sampling algorithm? More information on the random sampling technique would be useful. There is no rationale offered for the sample size of 240 women. Also, the sampling procedures are not clear. The authors should clearly state how the study sample size was selected. Why did the authors choose 240 women? This should be clearly described.

• A little more information about how the data collection was accomplished would help readers who are contemplating how to achieve similar data collection. Please improve on the relevance and significance of your study.

• In the text, one of the construct of HBM “self efficacy” was explained in the “Method”. But later, the term “confidence” was used that come to same meaning. The authors should clarify why these two words were used for the same meaning in the manuscript.

• It was written that the last version of the scale was used for the study. This statement need citation. And please clarify the reason why the “health motivation” subscale was not used?

• It is important to add some information in the Methods section about the nature of the questions used for the survey - their source (either pre-existing measures or measures created for this study)

• Provide more information about the items on questionnaires (socio-demographic and BSE related questions).

• The authors stated that there are questions about “having a regular plan for BSE” and “how to perform BSE” in the questionnaire. But, there is not any report in the “Results” section about these data. The variables that were measured need more definition and description. How was BSE behavior assessed?

• In page 4, the statements “some BSE behaviors like performing BSE or not” and “how to perform BSE and having a regular plan for BSE” need clarification. What does it mean? How was the BSE frequency determined in the study?

• A clearer description of the instruments used and how they were developed, and their reliability would be very helpful. Were they conducted in private?

• A clearer description of the instruments, how they were developed, and their reliability would be very helpful for the readers. The authors should add the details on the differences of reliability and validity analyses between the original scale, the scales used in similar women groups in other countries and the scale used in the study. Was the factors analyses made? If yes, based on the data, how many factors were revealed? Which source was used for the reliabiity and validity criterias?

• More information on the data collection methods is needed. What was the period of data collection? How were the surveys administered?
3. Are the data sound?

• In “Result” Please include maximum and minimum value for the health belief model constructs.

• A new table should added that shows the descriptive characteristics (socio-demographic and BSE practice related) of the participants.

• In the paper all “P” should be written with small letter as “p”.

• In the statement “However, perceived BSE barriers among women with BSE were significantly lower than other group (P<0.05).” What does it meant by “ ……women with BSE..”? This sentence should be re-written.

• The name of the Tables may be more expressive. For example, Table 2 should be changed as “Multiple regression analysis of health beliefs constructs for performing BSE”.

• In Table 1, the number of the comparing groups should added. And, the columns should labeled as “performing BSE regularly (n=…….) ” and “not performing BSE regularly(n=…….)”.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

• In “Discussion” section, the low rate of BSE practicing was being related to only the reason that participants did not believe they were susceptible to breast cancer. However, lack of breast cancer knowledge, socio-economic status, level of education, a referral from a physician, knowledge of breast cancer, BSE, and mammography, health insurance coverage and family history of breast cancer also have been associated with BSE practice.

• On page 7, first paragraph, there was a statement as “Studied women in our research mentioned barriers like embarrassing, lack of time, lack of self examination skills and lack of enough private space to do BSE.” But there is no information regarding this in “Results “ section.

• Spelling mistakes and grammatical errors should be corrected. And typographical errors in the use of “lack” rather than “lack” in the words “lack of time, lack of self examination skills and lack of enough private space to do BSE”. Should be corrected too.

• There are several mistakes in both references and citations.
  - The references of 28 and 29 are same.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

• In “Discussion “ section, first paragraph, the words “screening behavior” should altered with “BSE behavior”.
• Results were not well justified or discussed. Especially with the similar study reports that were conducted in other cultures. The cited references should be reviewed deeply.
• It would be helpful if the conclusion statements altered both in the abstract and in the paper. As, the data was only showed the importance of HBM constructs in BSE practising. But there were not any data that shows “more educational interventions to promote women’s confidence through more training and skill building”
• In “Discussion”, paragraphs 3.ve 4., Are the cited studies’ samples similar with the Iranian women? And what are the similarities and differences between the women groups? Are the findings from these studies applicable to your study?
• The quotations should be checked carefully. As, Selda and Nursen’s study “higher susceptibility, higher confidence and lower barriers to BSE predict more BSE performing (28).” Not higher self-efficacy.

6. Are limitations of the work clearly stated?

• The limitations of the study are not included in the paper.

7. Do the title and abstract accurately convey what has been found?

• In the abstract, the conclusion statements are not well enough linked with the study results. This part should re-written as “The findings of this study indicated that perceived BSE barriers and perceived BSE self-efficacy were influencing factors which could predict BSE behavior among studied women. Therefore BSE training programs for improving self efficacy and encountering barriers to BSE are strongly recommended”.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests