Reviewer’s report

Title: Knowledge, Attitudes, and Practices Related to Breast Cancer Screening Among Female Health Care Professionals: A Cross-sectional survey

Version: 2 Date: 23 May 2019

Reviewer: Nanon Labrie

Reviewer's report:

I have read and reviewed the manuscript entitled "Knowledge, Attitudes, and Practices Related to Breast Cancer Screening Among Female Health Care Professionals: A Cross-sectional survey" with interest. I believe that the manuscript and study address an important topic, which could be of interest to the readership of BMC Women's Health. However, I would recommend the authors to critically revise the manuscript even further, before it can be considered for publication. There are a number of conceptual and methodological issues that need to be addressed. I will provide my main critical points (per section) below:

ABSTRACT

"A total of 395 participants were included in the final analysis." This sounds like many participants dropped out or had to be excluded, which I do not think was the case. Mention the total N: N=395 participated in this study. If a significant number of people dropped out or had to be excluded, mention this.

BACKGROUND

KSA: introduce acronym the first time it's used in the running text (besides the abstract)
It should also be: the KSA

Increasing numbers (incidence rates): These are only interesting if reported per 100.000 inhabitants or something alike. Otherwise the relative increase cannot be interpreted

"Although in recent international guidelines, which focus on developed countries, the timeframes for screening have been questioned, this may not apply to the developing countries including Saudi Arabia where the awareness is very low and patients routinely present at advanced stage of breast cancer (8,9)."

I am not sure whether I understand this remark. The international debate concerning the age thresholds for mammography screening concerns the question from what age onward screening is efficacious - from a medical perspective. I do not believe a distinction should be made here between developing and developed countries. After all, low awareness of screening among the target population does not imply that the thresholds for inclusion in screening programs should be widened.

How do you determine what is "good" vs. "fair" vs. "poor" knowledge? (links to conceptual/theoretical frame as well as to the instrument development)

The debate about the screening age thresholds should be mentioned.
Line 58: This is certainly not in line with all international guidelines, as many countries/recommendations actually start from the age of 50.

There is some debate about the efficacy of breast self-examination as an appropriate method for early breast cancer detection. This should be noted. E.g., WHO states that there is no evidence of the effect of screening through BSE, although BSE can empower women and it can be used to create awareness. Some organizations/countries recommend against BSE altogether (e.g. Dutch guidelines), while others still promote it (see ACS, Medscape). This deserves much more attention, as it influences the interpretation of your results considerably.

METHODS

The description of the questionnaire development is very meager. Measurements should be reported in a separate section. Procedures are to be reported separately. It is unclear on what questions/instruments the authors performed Cronbach's alpha? On each of the measures (they state on "the questionnaire")? How many questions/instruments were included in the questionnaire? If they are based on "previous studies and a literature review", then is the questionnaire an adaptation of an earlier survey (instrument) or did the authors design questions themselves? In case of the latter: why? Given that validated measures exist? This section should be revised quite extensively to provide greater clarity.

Sample size: provide more explanation/arguments, for example for the proportions as well as for the power calculations used.

Participants worked at different departments across the hospital (Table 1). How relevant is breast cancer (screening) knowledge of e.g. pediatricians? Many of these healthcare workers are not involved in healthcare practices that are concerned with maternal health/breast cancer and they may never discuss screening practices with their patients. Please argue.

RESULTS

The response rate is very high. This is great! Was participation voluntary? Did participants receive some form of compensation or credit for participation?

"Nine (2.3%) participants reported having history of breast cancer and 40 (10.1%) participants reported having a first-degree relative with history of breast cancer" Did you control for this in your analyses concerning knowledge? Or were participants with a history of breast cancer excluded?

"Moreover, 73.2% of the women felt that there was no need for them to examine their breasts". See my earlier comment about BSE.

"Under reasons for not undergoing mammography, 104 (33.2%) participants responded that they were not old enough and 75 (24.0%) didn't believe there was any reason to undergo mammography." Needless to say, these can be valid reasons.
DISCUSSION

"Our results for attitudes of participants towards breast cancer screening were also discouraging, which could be due to lack of knowledge in this study population. With regard to BSE, the results appeared positive with most participants being aware of the importance of BSE. Their knowledge related to BSE was also satisfactory. Also, almost 75% of the participants reported practicing BSE. This is much higher than the rate for BSE seen in some other studies 19,24,25). This is very encouraging indeed and also a little surprising considering the low level of knowledge and attitude in this cohort."

Related to several of my comments above about the desirability of BSE and the age thresholds for screening, and I think this is really important: The fact that participants do not engage in BSE or screening might for valid/good reasons and not be due to a lack of knowledge, but in fact based on proper considerations. How do you account for this? How do you establish the "norm" for what is the correct behavior and what is not? (see also the Tables with survey questions: what are the 'correct' answers?). You should argue for this much more clearly. The main point of this article is that health workers' attitudes and knowledge could potentially influence patients' breast cancer screening behaviors and that it is therefore important that they have 'correct' attitudes/knowledge. However, it is unclear what you deem 'correct' in light of international screening guidelines and the debates about BSE and screening programs.

TABLES

What is the relevance of data on abortions and stillbirths?

ENGLISH

There are some minor English language issues throughout the paper. E.g. in the Tables: "Widows" should be "widowed".
"Women prefer female doctor for breast examination" should be either "a female doctor" OR "female doctors"

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.

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

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