

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

## ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Gendered lived experiences of marriage and family following exposure to chemical warfare agents: Content analysis of qualitative interviews with survivors in Halabja, Kurdistan-Iraq
<b>AUTHORS</b>	Moradi, Faraidoun; Moradi, Fazil; Söderberg, Mia; Olin, Anna-Carin; Lärstad, Mona

## VERSION 1 – REVIEW

<b>REVIEWER</b>	Mousavi, Batool Janbazan Medical and engineering research center. (JMERC) - Tehran - IRAN
<b>REVIEW RETURNED</b>	01-Oct-2019

<b>GENERAL COMMENTS</b>	<p>The topic is interesting.</p> <p>The authors need to more clarify some parts of the study.</p> <p>Methods:</p> <ol style="list-style-type: none"> <li>1. The questions related to the each aim of the study "family, marriage, state of health, work and financial situations, hopes, and fears" were not clear. how many questions? what were the questions? which questions came first?</li> <li>2. Female and of course Kurdish female would not completely and freely talk about their problems specially when it come to marriage and sexual relationship even if the interviewer is female. hoe the male interviewer over come to it. The study might has the bias on getting information by male interviewer.</li> </ol> <p>Results:</p> <ol style="list-style-type: none"> <li>3. The results has more focused on marriage, fears and sexual findings, the other subjects should be address.</li> <li>4. How about marital life, intimacy, satisfaction in marriage and whether there was a questions on abuse.</li> <li>6. The social life which is more related to "interpersonal relationships with people within their surroundings or general public, integration and participation" has not been provided</li> </ol> <p>Discussion:</p> <ol style="list-style-type: none"> <li>6. When a female has a chronic condition and she is single the chance of getting married is very less then normal ones and usually the husband' families do not accept the marriage, or it may end with the same story mentioned in the paper. Whether authors have any explanation for it.</li> </ol> <p>References:</p> <p>Half of the references are more than 10 years</p>
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<b>REVIEWER</b>	Gemma van der Haar
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	Wageningen University, Department of Social Sciences, The Netherlands
<b>REVIEW RETURNED</b>	26-Nov-2019

<b>GENERAL COMMENTS</b>	<p>I have read this paper with great interest. It addresses an issue that certainly deserves more attention and provides compelling data to start to unravel the complex social, emotional and physical effects of exposure to chemical weapons over the longer term. The focus on the lived experiences of both men and women has clear added value and I highly appreciate the inclusion of quotes from the interviews. The methodological choices are (mostly) well-accounted for. Overall I am very positive about publication of the paper. However, there are a few areas of improvement that I see.</p> <ol style="list-style-type: none"> <li>1. line 95 mentions the term teratogenic and the subsequent lines connect it to the issue of stigma. To me (anthropologist with knowledge on gender in the context of war but not on chemical weapons) this term is unfamiliar and this might hold for part of the intended readership, too. I suggest explaining the term and clarifying how/why it connects to stigmatisation.</li> <li>2. In connection to this, the issue of stigmatisation and social isolation comes back throughout the paper, but it remains unclear (to me) what exactly is the source of that stigma. Is this about visible effects of the exposure, or is it about suspected effects and the sense of 'contamination' that respondents also mention? I suggest to get this clarified in the appropriate sections.</li> <li>3. A methodological point: the Halabja attack happened in 1988. In the methodological section the authors do not account for how they deal conceptually and analytically with the time span between the attack and the interviews and how the effects of the exposure have unfolded over that time span. Were interviewees asked to reflect on their current challenges or were they asked to reflect on major life choices they have faced over these almost 30 years? Both would be valid but now seem to be intertwined. In addition, I felt that the time spent per interview was rather short given the sensitivity and complexity of the topic.</li> <li>4. The paper makes interesting points about uncertainty and how this affects interviewees. To understand this well, I would have appreciated some more explanation about what kinds of health effects interviewees were suffering from. Were they mostly impacted by the fear for what might still happen to them (and their children), or were they already suffering considerable impairments or loss of physical functions? Fear and uncertainty can be impairing in and of themselves, but there might have been physical issues at play as well (that could for example explain the unemployment of several of the interviewees).</li> <li>5. Finally, line 414 talks about women 'contributing to society' as mothers. I was wondering about the choice of wording. Is this how women spoke about this themselves? Would they not connect motherhood (and the pain of failed motherhood) to issues as self-realisation or a dignified life? Or does this view explain the rejection they experienced?</li> </ol>
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# **VERSION 1 – AUTHOR RESPONSE**

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name

batool mousavi

Institution and Country

Janbazan Medical and engineering research center. (JMERC) - Tehran - IRAN

Please state any competing interests or state 'None declared':  
None declared

Please leave your comments for the authors below  
The topic is interesting.

The authors need to more clarify some parts of the study.

Methods:

1. REVIEWER COMMENT: The questions related to the each aim of the study "family, marriage, state of health, work and financial situations, hopes, and fears" were not clear.  
how many questions? what were the questions? which questions came first?

AUTHOR RESPONSE: Thanks for this point. It is now clarified. Ref nr.17  
MANUSCRIPT EDIT: Page 5, line 112

2. REVIEWER COMMENT: Female and of course Kurdish female would not completely and freely talk about their problems specially when it come to marriage and sexual relationship even if the interviewer is female. hoe the male interviewer over come to it.  
The study might has the bias on getting information by male interviewer.

AUTHOR RESPONSE: Our study is restricted to an unprecedented examination of the long-term and gendered effects of CWAs. It, therefore, treats sexual relationship as only a part of the post-CWAs lived experiences and living conditions. In the revised version, we have made sure that the study neither claims total knowledge about "female" nor "Kurdish female". The experiences of marriage and sexual life are rendered in direct quotations of the female and male participants, i.e. in their own terms/words. In addition, the second author of the study, is an anthropologist with long-term ethnographic expertise about gender formation in Kurdistan at large and sexual violence during and after al-Anfal genocide in particular. We have now clarified this point in the main text. Finally, like others societies, in the Kurdish society the physician is trusted by the patients to share intimate information. This might have helped to overcome the mentioned hinder.  
MANUSCRIPT EDIT: Page 19, line 395

Results:

3. REVIEWER COMMENT: The results has more focused on marriage, fears and sexual findings, the other subjects should be address.

AUTHOR RESPONSE: You are right that the focus is mainly family and marriage . However, others issues are discussed too.  
MANUSCRIPT EDIT. Figure 1

4. REVIEWER COMMENT: How about marital life, intimacy, satisfaction in marriage and whether there was a questions on abuse.

AUTHOR RESPONSE: These themes are mentioned with quotations. There was no question regarding abuse.

MANUSCRIPT EDIT: Page 15, line 306

6. REVIEWER COMMENT: The social life which is more related to "interpersonal relationships with people within their surroundings or general public, integration and participation" has not been provided.

AUTHOR RESPONSE: We agree with you that interpersonal relationship is the core of social life, that is why, how survivor's social life is affected post exposure is discussed throughout the paper.

MANUSCRIPT EDIT: See line, 190, 193, 196, 203, 230, 341, 347, 377

Discussion:

6. REVIEWER COMMENT: When a female has a chronic condition and she is single the chance of getting married is very less than normal ones and usually the husband' families do not accept the marriage, or it may end with the same story mentioned in the paper.

Whether authors have any explanation for it.

AUTHOR RESPONSE: Thanks a lot for this suggestion. We have now added an explanation.

MANUSCRIPT EDIT: Page 16, line 345

References:

REVIEWER COMMENT: Half of the references are more than 10 years .

AUTHOR RESPONSE: In our study, we want to recognize the importance of the research done in this field and mark our contribution. We have not chosen the references in term of time or old/new, and rather attended to key studies. In addition, the CWAs impacts on gendered life is not extensively studied and remains underresearched. Nonetheless, we appreciate your concern as it also forced us to inquire further.

MANUSCRIPT EDIT: Page 21, line 473

Reviewer: 2

Reviewer Name

Gemma van der Haar

Institution and Country

Wageningen University, Department of Social Sciences, The Netherlands

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

I have read this paper with great interest. It addresses an issue that certainly deserves more attention and provides compelling data to start to unravel the complex social, emotional and physical effects of exposure to chemical weapons over the longer term. The focus on the lived experiences of both men and women has clear added value and I highly appreciate the inclusion of quotes from the interviews. The methodological choices are (mostly) well-accounted for. Overall, I am very positive about publication of the paper. However, there are a few areas of improvement that I see.

AUTHOR RESPONSE: Thank you for your review and overall positive advice  
MANUSCRIPT EDIT: None

1. REVIEWER COMMENT: line 95 mentions the term teratogenic and the subsequent lines connect it to the issue of stigma. To me (anthropologist with knowledge on gender in the context of war but not on chemical weapons) this term is unfamiliar and this might hold for part of the intended readership, too. I suggest explaining the term and clarifying how/why it connects to stigmatisation.

AUTHOR RESPONSE: Very helpful suggestion. The term is now defined.

MANUSCRIPT EDIT: Page 4, line 93; page 13, line 251

2. REVIEWER COMMENT: In connection to this, the issue of stigmatisation and social isolation comes back throughout the paper, but it remains unclear (to me) what exactly is the source of that stigma. Is this about visible effects of the exposure, or is it about suspected effects and the sense of 'contamination' that respondents also mention? I suggest to get this clarified in the appropriate sections.

AUTHOR RESPONSE: A theme is added in the results section, regarding social stigma with quotation and discussed in the discussion.

MANUSCRIPT EDIT: Figure 1 and page 11, line 212

3. REVIEWER COMMENT: A methodological point: the Halabja attack happened in 1988. In the methodological section the authors do not account for how they deal conceptually and analytically with the time span between the attack and the interviews and how the effects of the exposure have unfolded over that time span. Were interviewees asked to reflect on their current challenges or were they asked to reflect on major life choices they have faced over these almost 30 years? Both would be valid but now seem to be intertwined. In addition, I felt that the time spent per interview was rather short given the sensitivity and complexity of the topic.

AUTHOR RESPONSE: We have expanded the methods section of our paper for better clarity

MANUSCRIPT EDIT: Page 7, line 163, and 168

4. REVIEWER COMMENT: The paper makes interesting points about uncertainty and how this affects interviewees. To understand this well, I would have appreciated some more explanation about what kinds of health effects interviewees were suffering from. Were they mostly impacted by the fear for what might still happen to them (and their children), or were they already suffering considerable impairments or loss of physical functions? Fear and uncertainty can be impairing in and of themselves, but there might have been physical issues at play as well (that could for example explain the unemployment of several of the interviewees).

AUTHOR RESPONSE: This is a very important point. We have now rephrased some part. However, these symptoms are previously published see page 22, line 482.

MANUSCRIPT EDIT: Page 17, line 353

5. REVIEWER COMMENT: Finally, line 414 talks about women 'contributing to society' as mothers. I was wondering about the choice of wording. Is this how women spoke about this themselves? Would they not connect motherhood (and the pain of failed motherhood) to issues as self-realisation or a dignified life? Or does this view explain the rejection they experienced?

AUTHOR RESPONSE: The dehumanization of the female survivors' of CWAs is made explicit in the text and we have also clarified our response to this important point. Also, the quotations from the

female participants clearly show how they are reduced to motherhood or “biological bodies” in the service of the family and society in which they live.

MANUSCRIPT EDIT: Pages 18, line 390

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Batool Mousavi JMERC
<b>REVIEW RETURNED</b>	04-Aug-2020

<b>GENERAL COMMENTS</b>	<p>Line: 337-338  Knowledge about SM's adverse reproductive effects is still fuzzy, thus more studies are needed.  The paper referred for this mentioned that the previous studies did not confirmed the infertility : " there is no evidence of clinical life-time infertility among survivors with high dose mustard exposure".  Line 385 : ..... SM-exposed females face divorce, experience cancelled  386 engagements, and live with several related uncertainties.....  How the authors are sure that these findings are due to CWAs exposure?  Female with having any physical or mental disability might face the same scenarios and this might not related only to the SM exposure. How the authors consider it in their survey.  Needed to explain for better understanding</p>
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<b>REVIEWER</b>	Gemma van der Haar Wageningen University, Department of Social Sciences The Netherlands
<b>REVIEW RETURNED</b>	21-Aug-2020

<b>GENERAL COMMENTS</b>	<p>I appreciate the care taken by the authors to review the paper based on earlier review comments. I feel my comments have been addressed in a satisfactory manner and the paper is now almost ready for acceptance.  I detected one phrase (1658-60) that reads oddly. It was added with the intention to clarify that the contribution of female survivors to society is not called into question by the authors, yet in the way it is put now it raises confusion. As authors revise some typos here and there, they might also revise this sentence.  Other than that, I would not require any further changes.</p>
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## VERSION 2 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Batool Mousavi

Institution and Country: JMERC

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

Line: 337-338

Knowledge about SM's adverse reproductive effects is still fuzzy, thus more studies are needed.

The paper referred for this mentioned that the previous studies did not confirmed the infertility : " there is no evidence of clinical life-time infertility among survivors with high dose mustard exposure".

Line 385 : ..... SM-exposed females face divorce, experience cancelled  
386 engagements, and live with several related uncertainties.....

How the authors are sure that these findings are due to CWAs exposure?

Female with having any physical or mental disability might face the same scenarios and this might not related only to the SM exposure. How the authors consider it in their survey.

Needed to explain for better understanding

Answer: We agree with you that female with any physical or mental disability might face social difficulties. For better understanding of the female survivors' problems we have added and rephrased in the manuscript: page 18, line 390-91, These conditions could be related to the diagnostic stamp of CWA exposure and not even necessarily the post exposure symptoms and are clearly gendered.

Reviewer: 2

Reviewer Name: Gemma van der Haar

Institution and Country: Wageningen University, Department of Social Sciences  
The Netherlands

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

I appreciate the care taken by the authors to review the paper based on earlier review comments. I feel my comments have been addressed in a satisfactory manner and the paper is now almost ready for acceptance.

I detected one phrase (1658-60) that reads oddly. It was added with the intention to clarify that the contribution of female survivors to society is not called into question by the authors, yet in the way it is

put now it raises confusion. As authors revise some typos here and there, they might also revise this sentence.

Other than that, I would not require any further changes.

Answer. Once again highly appreciate your point of view. We have now rephrased it: Page 18, line 395-97, Therefore, it does not deny women's contributions to the social and political formation of Halabja which dates back to Adela Khanem who ruled as the mayor between 1909-192439. The current mayor of Halabja is also a woman.