Author's response to reviews

Title: Workplace sexual harassment and depressive symptoms: a cross-sectional multilevel analysis comparing harassment from clients or customers to harassment from other employees amongst 7603 Danish employees from 1041 organizations

Authors:

Maria K Friborg (mkf@nrcwe.dk)
Jørgen V. Hansen (jvh@nrcwe.dk)
Per T. Aldrich (pea@cowi.com)
Anna P. Folker (anpf@si-folkesundhed.dk)
Susie Kjær (sukj@cowi.com)
Maj Britt Dahl Nielsen (mbdn@cowi.com)
Reiner Rugulies (rer@nrcwe.dk)
Ida Madsen (IHM@nrcwe.dk)

Version: 1 Date: 31 Mar 2017

Author’s response to reviews:

Reviewer reports:

Reviewer 1: The study of Friborg et al. explores in depth the consequences of sexual harassment on victims' health. The comparison between violence exerted by colleagues and customers is the most original part of this study. Previous studies, however, had already identified some difference in psychological consequences of colleague's harassing behaviour in comparison with harassment perpetrated by a patient.

In a retrospective survey conducted in three Italian university schools of nursing, nurses reported more sexual harassment (OR 2.3, 95% CI 1.15-5.54) during the previous 12 months than students. Students, however, often reported harassment from colleagues, staff, teachers, doctors, and supervisors. This form of non-physical violence was associated with high levels of psychological problems, as measured by the 12-item version of the General Health Questionnaire, in both students and nurses [Magnavita N, Heponiemi T. Workplace violence against nursing students and nurses: an Italian experience. J Nurs Scholarsh. 2011 Jun;43(2):203-10.].

Response:
We thank the reviewer for pointing our attention to this paper regarding the association between sexual harassment and mental health in Italian nursing students. We have now included a reference to this paper in the introduction on p. 3.

Among the hypotheses that explain the increased harmfulness Authors must also discuss the duration of the behaviour. Prolonged sexual harassment may become stalking. When the harasser is a colleague or a superior he/she has a lot of time, while clients/patients/customers have a generally brief affair with the victim.

Response:

We thank the reviewer for pointing out the issue of the duration of the behaviour. This has now been included on page 15:

“It is also possible that harassment from colleagues, supervisors or subordinates may have had a longer duration compared to harassment from clients. We could not include information on duration in the present study, but it is certainly plausible that longer exposure to harassment has more detrimental mental health effects compared to more brief exposure, all else being equal.”

Very minor observation. Line 277 "limited to to care", please correct

Response:

Thank you, this has now been corrected.

Reviewer 2: This is a large-scale examination of workplace sexual harassment and its impact on depression. The topic is extremely important and understudied.

The abstract could be clearer in conveying that the study examined sexual harassment committed by customers as well as by those within the organizational setting. As currently written, the first three sentences lead the reader to believe the study is about sexual harassment by customers. Then the next sentence mentions harassment by those within the organization but there is no link made that the study actually examined important differences between the two. Starting the abstract with the sentence currently on page 3 ("Sexual harassment conducted by clients or customers may differ from sexual harassment conducted by colleagues, supervisors or subordinates") would be more compelling and could garner more interest in the article.

Response:

Thank you for this suggestion. We have now rewritten the introduction of the abstract to more clearly convey that the article examines whether harassment conducted by clients or customers is differently associated with depressive symptoms compared to sexual harassment conducted by supervisors, colleagues or subordinates.
The strength of the literature review is that it nicely explains how and where sexual harassment by customers might occur and why it may be handled differently than harassment committed within the workplace. A significant weakness of the review is that it is gender-neutral, as though sexual harassment occurs just as frequently against men and women (and by men and women), with equal ramifications. There is a large body of evidence that sexual harassment is a gendered phenomenon, with very different consequences for male vs female victims, and this needs to be addressed in the review as well as the analyses and results.

Response:

To accommodate this concern regarding the lack of gender perspective in the paper, we have now 1) added information regarding the higher prevalence amongst women compared to men to the introduction, 2) added a sensitivity analysis conducting separate analyses in men and women.

We have not stratified by gender in our main analyses due to power issues, with a low prevalence of sexual harassment particularly amongst men in the sample (n=42). Given that our data do not allow a detailed examination of any gender differences in the association, we have respectfully refrained from fully rewriting the introduction of the paper to focus on such differences.

In the introduction we now state:

P. 3: “Sexual harassment is a gendered phenomenon as women are more likely to be exposed compared to men. A survey among Danish employees shows that 5.1% of women aged 18-64 years have been exposed to sexual harassment compared to 1.2% of men [2]. The same survey also showed that the prevalence was higher among employees working in health care: the prevalence of sexual harassment across all jobs was 3.1%, and for health care workers it was 16.4% [2]. Another study of 8064 Danish employees showed that in the health care sector, sexual offensive behaviors at work were 3.5 times more often reported than the national average of all other jobs [3,4]. Among health care workers, sexual harassment is most often conducted by clients or customers [3,5,6].”

We include the sensitivity analysis in the methods, results, and discussion of the paper as follows:

P. 11 “Third, we conducted a gender stratified analyses, because some previous analyses suggest that sexual harassment may have gender specific effects [56]. Gender stratification was not part of the main analyses of the article, because of the low number of men exposed to sexual harassment in the sample, yielding a high level of statistical uncertainty in this part of the analyses.”

P. 13: “When conducting the analyses separately for men and women, results were largely similar to those from the main analysis. The mean difference in depressive symptoms associated with harassment from clients/customers compared to non-exposed participants was 1.36 points (-2.56-5.28) for men and 2.17 (1.00-3.34) for women. The mean difference in depressive symptoms associated with harassment from supervisors/colleagues/subordinates compared to
participants harassed by clients/customers was 4.64 points (0.06-9.21) for men and 1.35 (-1.05-3.75) for women.”

P. 19: “Sixth, although we analyzed data from a large cross-occupational sample of Danish employees, the number of exposed individuals was relatively low, increasing the statistical uncertainty of the reported estimates. In particular, the sample included a low number of men exposed to sexual harassment. Whilst this likely reflects a lower prevalence of sexual harassment amongst men than amongst women, it should be noted that the reported main associations are largely driven by the association in women. Though we found no strong indications of different associations in men when separating men and women in a sensitivity analysis, there was a large statistical uncertainty of the estimate for men due to the low number of exposed men included.”

Analyzing data from two large datasets is another strength of the study, as it resulted in a very large sample size. A major weakness of the methodology, however, lies in how constructs were measured. Measuring sexual harassment with a single item (have you been sexually harassed?), and without providing a definition, is quite problematic and likely led to biased findings. This has been found in studies of sexual assault, where people (especially women) under-report if they are asked if they have been sexually assault, but more accurately report when asked about particular acts. Asking whether the sexual harassment was committed by a customer, in one question, and very directly, is even more problematic. As the authors themselves noted in the literature review, people are not likely to even identify particular behaviors by customers as being harassment. Yet the experience could still lead to depression or other symptomatology.

Response:

Unfortunately, our analyses were limited to the data collected in the WEHD study. As is often the case with large scale epidemiological studies covering a wide range of phenomena, the measurement of specific exposures was kept as brief as possible, and in this case limited to a single item question regarding sexual harassment. We acknowledge that this is a crude assessment of the exposure, and that this might have lead to differential reporting of the phenomenon of sexual harassment, compared to if we had been able to apply a more detailed measurement. We have now included a discussion of the problems relating to measuring sexual harassment using a single item on p. 18:

“Third, the exposure to sexual harassment was measured using a single item measurement and there is a possibility that participants may under- or over-report the occurrence of sexual harassment. Studies show that healthcare workers tend to under-report violent incidents at work because they interpret such incidents as a part of their job [5,13,76]. Single item measurements, on the other hand, have been argued to result in over-reporting compared to using specific questionnaires asking about a range of sexually harassing behaviours [77]. In any case, it is important to keep in mind, that the exposure in the present study was behaviors that were perceived and labelled by the respondents as sexual harassment, irrespective of the specific nature of this behavior.”

The measure of depression was adequate. It is not clear, however, why "psychosocial workplace initiatives" were measured, how they were expected to relate to sexual harassment or depression,
nor why those particular 3 items were used. The authors did note that they thought these 3 items might relate to depression but there was no evidence substantiating such a connection in the literature review, and I found this argument to be quite tenuous.

Response:

We have now elaborated on the rationale for including the organizational level workplace initiatives as potential effect modifiers on p. 9:

“We chose the above-mentioned psychosocial workplace initiatives as we expected them to potentially be able to buffer any negative mental health consequences of sexual harassment. Organizations which evaluate their psychosocial working conditions, for instance, might be more likely to uncover problems relating to sexual harassment and initiate interventions to prevent and manage this exposure. Access to treatment by a psychologist might also help employees cope with any harassment, thus ameliorating its possible negative mental health consequences. Furthermore, organizations that had implemented activities to prevent sickness absence might have implemented initiatives dealing with sexual harassment, if harassment was identified as a problem within the organization”.

The authors categorized workers into five categories but did not provide adequate explanation of how these were determined (an example within each would be helpful). They also again neglected gender, even though it is likely that there were gender differences within the categories. At one point the authors noted that health care workers underreport abuse and harassment. It is not a coincidence that these health care workers are also predominantly women.

Response:

The job groups included in each category are listed in appendix 1. We now also give examples of each category within the text on p. 11:

“We classified respondent’s occupation into five main groups: “Knowledge work”, (e.g. working in public administration or education), “Private service”, (e.g. working in supermarkets or restaurants), “Care work”, (e.g. working in hospitals or residential care), “Industrial work”, (e.g. working in manufacturing), or “Building and construction”. (e.g. working in bricklaying or civil engineering). The coding of subgroups is presented in appendix 1, and is based on the Danish version of EU’s nomenclature (NACE, Statistical classification of economic activities in the European Community), which is a statistical classification of economic activities [54].”

Regarding gender differences, please see response to point 2 above.

This is an extremely important topic and I was hoping to have a positive review of this manuscript. Unfortunately, the methodological flaws

the results from being trustworthy, and therefore the study does not advance our knowledge. The authors could rectify their lack of a gendered analysis of this problem, and the inability to establish causation might even be overlooked if other study aspects were especially compelling,
but I'm not sure how they can overcome the fact that they measured their dependent variables so ineffectually.

Reviewer 3: Thanks for submitting this manuscript. It was very interesting. I hope my comments below are helpful.

Response:

Thank you for this positive feedback and your very helpful comments.

* Introduction - The background section starts to discuss issues that belong under the heading below, pleased correct this mistake.

Response:

The introduction includes a review of previous literature on sexual harassment and its effects on mental health and a statement of our aims. We are not quite sure what the reviewer is referring to in this comment, would it be possible to be more specific?

* I think the authors need to more clearly define what they mean by person specific occupations, where sexual harassment from clients is likely to occur. I was thinking of only two, the medical profession and sex work. This created a problem for me throughout. I can see you have presented the occupations affected in an appendix. Please also discuss in text too. This needs to be mentioned in the abstract.

Response:

We have now given examples of the jobs we refer to as “person-related” in the abstract and at the first mention of the term in the article, on p. 3 of the introduction.

Abstract:

“Few studies have focused on sexual harassment conducted by clients or customers, which might occur in person-related occupations such as eldercare work, social work or customer service work. “

P. 4:

“Sexual harassment conducted by clients or customers may occur in person-related occupations, i.e. jobs that require interactions with clients or customers [23,24]. Examples of person-related work include care work - caring for individuals who are elderly, ill, or disabled - social work, and customer service work.”
Page 4, para 2- I find it hard to understand how there could be problems in distinguishing between inappropriate sexual behaviour from clients and work related responsibilities. Surely, if the behaviour corresponds to the definition on page 3 and the worker feels uncomfortable then it is clearly a problem. Please do provide me with some more information to convince me of your argument.

Response:

We have now clarified our logic in this section to reflect that the issues regarding the distinction between acceptable and unacceptable behavior may result from the impairment of the clients, and the issue regarding sexual harassment might be particularly salient in these professions due to work tasks that mean the employee may be confronted with the sexuality of the client. P. 4-5:

In person-related professions, it may be difficult to distinguish between inappropriate sexual behavior from clients and work-related responsibilities. With intimate care sometimes being part of work-related responsibilities, employees are more likely to be confronted with aspects related to sexuality and sexual needs of the patients, e.g. if the patient gets an erection during bathing. It may, in many situations, be challenging to distinguish if a client’s behavior is acceptable or not, for instance when patients are cognitively impaired and not able to understand the consequences of their actions.

* Also, page 8, there needs to be a justification of why these organisational level variables are relevant. E.g. How would sickness absence influence both exposure and outcome?

Response:

We have now elaborated on the rationale for including the organizational level workplace initiatives as potential effect modifiers on p. 9:

“We chose the above-mentioned psychosocial workplace initiatives as we expected them to potentially be able to buffer any negative mental health consequences of sexual harassment. Organizations which evaluate their psychosocial working conditions, for instance, might be more likely to uncover problems relating to sexual harassment and initiate interventions to prevent and manage this exposure. Access to treatment by a psychologist might also help employees cope with any harassment, thus ameliorating its possible negative mental health consequences. Furthermore, organizations that had implemented activities to prevent sickness absence might have implemented initiatives dealing with sexual harassment, if harassment was identified as a problem within the organization.”

* Figure 1 and page 6- there appears to be quit a lot of drop out in both data sources. I realise that the nature of the study topic means that it is not relevant to all people or workplaces in the sample. It would helpful if the authors would include an overall response rate and comment on the drop out and sample selection in the limitations of the paper. I think there is a need to comment on the fact that the exposure is not highly prevalent in all occupations.

Response:
We now include an overall response rate on p. 7:

“The present analyses were based on data from 2012, where the overall response rate was 50.8%, and there were 7603 respondents from WEHD who were employed within 1041 organizations participating in WEADW.”

We further note the drop out and sample selection, and its potential implications under the limitations of the paper on p. 19:

“Fifth, there was substantial non-response amongst both invited participants and workplaces. There is a possibility that this non-response might be selective. This may reduce the generalizability of our findings, in particular to groups less likely to respond, such as young men with shorter education [79,80], or workplaces with a poorer psychosocial work climate.”

We also comment on the correlation between occupation (job type) and exposure to sexual harassment on p. 17:

“It should be noted, that given the high correlation between job type and exposure from clients or customers versus colleagues, supervisors or subordinates, the results may reflect underlying differences in consequences of sexual harassment within job types, rather than difference associated with the source of harassment. This could not be separated in detail in the present study. Further research looking into the possible differential effects of sexual harassment depending on the source of exposure, seems warranted.”

* Methods- sensitivity analysis mentioned with care workers only. What is the motivation for this? Hypothesis needed for this

Response:

This article was written as part of a project that focuses especially on sexual harassment from clients amongst employees in care work. Thus we had no specific hypothesis regarding care workers, but simply wanted to test if the associations were similar when restricting our sample to include only care workers. We now include this reason on p. 11:

“We conducted three sets of sensitivity analyses: First, we tested the examined associations for care workers only. This analysis was conducted because this article was written as part of a project focusing especially on sexual harassment conducted by clients, amongst care workers.”

* More detail needed on interaction tests. E.g. Likelihood ratio and interaction term used to assess statistical significance?

Response:

We tested for interaction by including an interaction term in the statistical model. This information has now been included on p 9:
“We tested for statistical interaction (departure from additivity) between each workplace initiative and exposure (sexual harassment from clients or customers) in their association with depressive symptoms by including an interaction term between the exposure and the respective workplace initiative. This analysis was conducted separately for each psychosocial workplace initiative.”

Similar to all other statistical tests we used p-values for the interaction test which were generated using restricted maximum likelihood. This has now been specified on p 10:

“All analyses used a level of statistical significance of P<0.05 and P-values were calculated using Restricted Maximum Likelihood estimation”

* Results- pg 11-this is based on a very small number of people. It would be good to comment on this in the discussion. Again, please provide a greater explanation of what ‘care work’ is. Please comment on organisational level variables.

Response :

We now include the low number of exposed participants in the discussion on p. 19:

“Sixth, although we analyzed data from a large cross-occupational sample of Danish employees, the number of exposed individuals was relatively low, increasing the statistical uncertainty of the reported estimates. In particular, the sample included a low number of men exposed to sexual harassment. Whilst this likely reflects a lower prevalence of sexual harassment amongst men than amongst women, it should be noted that the reported main associations are largely driven by the association in women. Though we found no strong indications of different associations in men when separating men and women in a sensitivity analysis, there was a large statistical uncertainty of the estimate for men due to the low number of exposed men included.”

Regarding the elaboration of the term care work, please see response to comment 2.

We now include descriptions of both effect-modification analyses and main effects of the organizational variables on p. 13:

“Regarding the psychosocial workplace initiatives as potential modifiers of associations, we found no statistically significant interactions of harassment from clients/customers with any of the examined psychosocial workplace initiatives (all p > 0.05). There were also no statistically significant main effects of the examined psychosocial workplace initiatives on the level of depressive symptoms amongst employees (all p > 0.05, data available on request).”

* Results - page 22 and table 3 - interesting that the results for sexual harassment from colleagues is greater than that from clients. Although I acknowledge they are not likely to be significantly different from one another as the confident intervals cross over. Also it is perhaps unsurprising that the organisational level workplace characteristics is not significant. This is perhaps a reflection of the fact that they are maybe non-relevant to the key research exposures?
Yes, it is quite interesting that the effects of sexual harassment seem to depend on the perpetrator. Please note that we tested this directly, and did find a statistically significant difference, as the second estimate in table 2 compares participants exposed to sexual harassment from colleagues/supervisors to participants harassed by clients/customers.

It certainly is a limitation of the included organizational level factors that they were not initiatives directly related to sexual harassment, or aimed at preventing any negative consequences of such harassment. Unfortunately we were limited by the data available in this large cross-occupational sample, that was conducted at a National Danish level, which precludes asking very detailed questions about exposures that are not highly prevalent in the workplaces. We discuss this on p. 17 of the manuscript:

“Further, the potentially modifying psychosocial workplace initiatives examined in this study were relatively broad and non-specific, as we were limited to data collected in the WEADW. Thus our results do not preclude that more specific workplace initiatives targeted sexual harassment may be effective in preventing the occurrence and consequences of sexual harassment by clients or customers (an issue that we are investigating qualitatively as a separate element of a research project of which the present study is part [71]). Workplace initiatives targeted sexual harassment could for instance establish common guidelines and policies and thus provide employees with criteria for acceptable and non-acceptable behavior. In line with this notion, organizational procedures and climate is found to be the strongest predictor of sexual harassment [11]. Another initiative that can possibly prevent negative consequences following sexual harassment by clients or customers is to make social support from colleagues and supervisors, in cases of sexual harassment, a common and accepted practice [7,11,66]. Additionally, as sexual harassment from clients and customers can be a working condition [3,22], educating employees in avoiding and handling risk situations might be relevant. One study indicates that confidence in responding to sexual harassment can be considered as a resource that prevents development of negative mental health consequences [13].”

* Please also include the main effects for the workplace characteristics. Were any significant on their own?

Response:

None of the workplace initiatives showed statistically significant associations with our outcome. We now report this information on p. 13:

“There were also no statistically significant main effects of the examined psychosocial workplace initiatives on the level of depressive symptoms amongst employees (all p > 0.05, data available on request).”

As we aimed to examine if these workplace initiatives had any effect modifying capacity rather than their main effects, we would prefer, however, to refrain from reporting these estimates in this paper.
Please read the following information and revise your manuscript as necessary. If your manuscript does not adhere to our editorial requirements, this may cause a delay while this is addressed. Failure to adhere to our policies may result in rejection of your manuscript.

In accordance with BioMed Central editorial policies and formatting guidelines, all manuscript submissions to BMC Public Health must contain a Declarations section which includes the mandatory sub-sections listed below. Please refer to the journal's Submission Guidelines web page for information regarding the criteria for each sub-section (http://www.biomedcentral.com/bmcpublichealth).

Where a mandatory Declarations section is not relevant to your study design or article type, please write "Not applicable" in these sections.

For the 'Availability of data and materials' section, please provide information about where the data supporting your findings can be found. We encourage authors to deposit their datasets in publicly available repositories (where available and appropriate), or to be presented within the manuscript and/or additional supporting files. Please note that identifying/confidential patient data should not be shared. Authors who do not wish to share their data must confirm this under this sub-heading and also provide their reasons. For further guidance on how to format this section, please refer to BioMed Central's editorial policies page (see links below).

Declarations
- Ethics approval and consent to participate
- Consent to publish
- Availability of data and materials
- Competing interests
- Funding
- Authors' Contributions
- Acknowledgements

Further information about our editorial policies can be found at the following links:

Ethical approval and consent:

http://www.biomedcentral.com/about/editorialpolicies#Ethics
Availability of data and materials section:

http://www.biomedcentral.com/submissions/editorial-policies#availability+of+data+and+materials