Reviewer's report

Title: Perceived causes and consequences of sexual changes after cancer for women and men: A mixed method study

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Reviewer: Marieke van Leeuwen

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Discretionary revisions:
1. On line 141 is referred to one person being poly-sexual. Although maybe not exactly the same for this person, I would refer to this person as being bisexual.

Minor Essential Revisions:
2. Line 394 “carer” should be “cancer”
3. Page 43 in row “Feeling unattractive” “Hickmais” should be “Hickman”
4. Page 47 in row “Renegotiating or redefining sex” what is PWC? And: “though I’m 59” and “(W, 57, hetero, lymphoma)” The ages are not corresponding.

Major Essential Revisions:
5. Line 98 to 104 the researchers describe that a problem with previous research is the underrepresentation of LGB people and single people. Although the authors do include 33 LGB people and 106 single people (on a sample size of 757 people), these people are no subject of discussion in the result section. If the authors do want to continue to make this statement, they also should describe these populations in the result section. In the case of the LGB people they of course have to make a remark regarding the small group of LGB people included in their study and how this will influence the generalizability of their findings.
6. In line 110 to 120 the authors describe the MDI model. Especially from line 113 to 118 the description of the model is rather vague. I would like to see a more detailed explanation of the model. Maybe an example would make the model more clear to people not familiar with this model.
7. Line 127 Men are underrepresented in this study as well as patients with non-reproductive cancer. Further, breast cancer patients are overrepresented. As I understand that this problem is not easy to fix, I would like that the authors name this as a limitation of the study in the discussion section and speculate how these under-/ overrepresentations affect their results.
8. Participants Could the authors say something about the disease status of the patients, how many are disease free, with a recurrence etc.?
9. Line 248. 6.7% of women and 4.3% of men rated their sexual relationship before cancer as unsatisfying. I can imagine that in retrospect life before cancer seems way better than life after the diagnosis. This makes me wonder how many people in the general population rate their sex life as unsatisfying. Can the
authors discuss the issue retrospective data collection in their discussion, and to what extent they think this could have influenced their findings?

10. Figure 2 In this figure a distinction is made between surgery and medication. Whether sexuality is affected by surgery or medication is very cancer treatment dependent. E.g. In breast cancer patients tamoxifen treatment has a major impact, while in gynecological cancer patients surgery has a more profound impact. (Of course also breast cancer patients are affected by surgery as well and gynecological cancer patients by chemotherapy.) In prostate cancer patients not receiving hormonal therapy surgery has the strongest impact. Since the type of cancer influences in what way the treatment has an impact on sexuality and the cancers are not evenly represented in this study, I would not make a distinction between surgery and medication. I would simply say cancer treatment, because else it suggests that for men surgery is more important than for women in affecting sexuality, whilst this number says more about the type of cancers included in the study and the overrepresentation of for instance breast cancer.

11. Line 338 “Kissing and petting/caressing were reported to be the most common sexual activities after cancer for both women and men, suggesting that coital and genital sexual activities are being replaced by non-genital intimacy for some couples.” As all intimacy, except for sex toy use, is reduced after cancer, the quantitative findings do not support the hypothesis that “coital and genital sexual activities are being replaced by non-genital intimacy for some couples.” The qualitative data do support this hypothesis, so I would suggest the authors to change the argumentation they use in favor of this hypothesis.

12. Line 460 “Equally, whilst previous research has focused on the heterosexual population, the present study included individuals who identified as gay, lesbian and polysexual, confirming that sexual changes also affect this hitherto “hidden population”. First of all I would refer to the polysexual as bisexual. More importantly, the LGB people are not described in the result section. This paragraph suggests that the authors gave some attention to this group in their findings. Or the authors give some attention to this group in the result section or they do not make a statement regarding the inclusion of LGB people in their study.

13. Discussion Limitations The study depends heavily on memories of the patients regarding their sex life before cancer diagnosis, on average 5 years ago. I would like to see that the authors discuss how this might have affected their findings.

14. Table 3, 4 and 5 Could the authors add time since diagnosis and whether patients are disease free in the description of the patients.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
'I declare that I have no competing interests'