

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	A Qualitative Cancer Screening Study with Childhood Sexual Abuse Survivors: Experiences, Perspectives and Compassionate Care.
AUTHORS	Gesink, Dionne; Nattel, Lilian

VERSION 1 - REVIEW

REVIEWER	Monique J. Brown, PhD, MPH University of South Florida USA
REVIEW RETURNED	20-Mar-2015

GENERAL COMMENTS	<p>Thank you for the opportunity to review this manuscript. The manuscript is very well-written on a topic that is very important to advance qualitative knowledge of the relationship between childhood sexual abuse and cancer screening behaviors, and to suggest recommendations.</p> <p>Just a few comments below:</p> <p>Overall</p> <p>Minor</p> <p>1) Please change “ones” to “one’s” on page 2, line 32 and page 5, line 55.</p> <p>2) Delete additional appendix.</p> <p>Methodology</p> <p>3) One strength of the study was that the interviewer was also a survivor of childhood sexual abuse so this person could provide support to interviewees based on personal experience. Nevertheless, were the questions pilot-tested before being asked to the study population? If not, please list this as an additional study limitation as pilot testing of the interview questions help to better determine wording, order, scope, etc.</p> <p>4) The explanation of the absence of audio-recording is given and understood for the context of the study. However, the absence of audio recording and entering data in real time is still a limitation for the methodological rigor of the study. Please explain the absence of audio recording as a strength based on consideration of the study population but a limitation based on methodological rigor.</p> <p>5) Were there any procedures done to minimize consequent potential identification of study participants? If so, please list in Methods section. If not, please address.</p> <p>Results</p> <p>6) The second paragraph of the results, beginning on line 46, page 8, states that “Survivors lived in rural (n=4), small town (n=5) and urban (n=2) communities in Canada (n=9) and the United States (n=3).” The numbers stratified by rural/small town/urban status add</p>
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	<p>up to 11. Please adjust accordingly so it is clear where the 12 participants were residing, if possible.</p> <p>7) Page 8, line 54. Is there a specific reason for the focus on dissociative identity disorder, and not also on other mental health disorders such as depression, anxiety, posttraumatic disorder, etc.? If so, please include in Introduction the rationale for focusing on dissociative identity disorder so the link is clear to readers. Also, if data were collected on other mental health disorders, please include in results.</p> <p>8) Page 9, line 39. Since there is a focus in the manuscript on “compassionate care”, please define “compassionate care” so this concept is clear to readers. “The core concept that emerged was that Survivor participation in cancer screening is supported most by compassionate care, which may be defined as...” or a similar statement.</p> <p>9) It is also recommended to <i>italicize</i> quotes.</p> <p>Discussion</p> <p>10) The first line of the last paragraph on page 15, line 20 state that survivors under the age of 40 or male survivors were not interviewed. Please state the reason for this exclusion.</p> <p>11) Gaps in the literature are mentioned. However, please state explicitly recommendations for future research based on the findings in this study and the exclusion of other affected populations in the current study.</p>
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REVIEWER	<p>Julie C. Weitlauf, Ph.D. VA Palo Alto Health Care System Stanford University School of Medicine</p> <p>Erika Kelley, M.S. Ohio University</p>
REVIEW RETURNED	31-Mar-2015

GENERAL COMMENTS	<p>1) It was our great pleasure to review this work. Obviously the topic is of significant interest, and the manuscript is interesting, informative, and insightful. The authors tackle a very worthy women’s health issue, focusing upon an important question: “<i>What factors may contribute to (or detract from) participation in preventive health screening for cervical, breast, and colorectal cancer among female Survivors of childhood sexual abuse?</i>” The authors’ compassion for the community of female Survivors of sexual abuse is thoroughly evident in their work. We especially admire their use of a research methodology that seeks to validate and dignify the perspectives of the participants. Further, the qualitative methodology employed in this study yielded very rich data that provides unique insight into the perspectives of this vulnerable population of women about intimate aspects of their experience with women’s health care.</p>
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	<p>2) In our perspective, however, the manuscript, in its present form, does not do justice to this topic. It likely does not convey the full complexity of the data yielded by the study interviews. Moreover, it does not contextualize the findings well within the broader extant literature on this topic - a literature that includes several prior studies featuring qualitative interviews with Survivors. This leaves the reader without a clear impression of the novel contribution of the present study's findings to the broader literature on this topic, and provides no context in which the reader can better understand the authors' vision for how this information can and should be used to guide women's health care policy and practice. More attention to the complexity of the existing literature on women's perceptions of preventive cancer screenings is needed. In particular, the authors should contend with recent findings regarding the relative contribution of symptoms of posttraumatic stress disorder to women's perceptions of these screening examinations and include some acknowledgement of the significant body of literature suggesting that a subgroup of non-Survivors (i.e., women with no prior history of abuse) also are greatly distressed by these examinations, and seek to avoid them, is warranted. Inclusion of this latter work would build upon the authors' currently stated assertion that their recommendations would likely be important regardless of patients' disclosure of trauma.</p> <p>3) Further, a general limitation to the manuscript, in its present form, is the misalignment of the stated aims (i.e., "Our objective was to learn what helps Survivors get screened for breast, cervical and colon cancer.") with the study methodology. Specifically, the study did not characterize women who pursued vs. refused screening, and we are not informed as to what factors led to screening and which led to refusal, avoidance, or delay. Rather, the study very aptly characterizes 12 Survivors' perspectives on what health care practitioners "should do" and "should know" about how Survivors feel during invasive screening examinations. Though this is very important, it is not the stated purpose of the study. In fact, the study is introduced in a manner that leads the author to expect a different methodology (comparison of those who pursue vs. avoid) screening and a re-framing of the objectives with more precise language might be useful. The manuscript would be greatly strengthened by reframing the stated goals and title of the paper to better reflect the methodology.</p> <p>4) In addition, this study would be bolstered by more in depth articulation of the methodology (see our</p>
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comments about the contextual details of the interview development below) as well as greater integration of the previous empirical research in this area. As outlined below in additional recommendations, it may be helpful to organize results into a table. This would likely increase available space in the body of the paper to incorporate information about the methodology and existing research.

Abstract

- 1) A general point relates to the fact that some language seems imprecise, particularly for a medical audience, such as that targeted by BMJ Open. In particular, the phrase “low” screening rates has a fairly specific public health definition. It is unclear whether the authors are suggesting that there is an empirical link between prior abuse exposure and diminished rates of screening that are consistently below what would be expected within population based averages or simply that abuse has been consistently conceptualized as a source of variability in receipt of screening. (The latter point has mixed empirical support in the literature.)
- 2) In order to facilitate a stronger connection between the goals of the paper and the methodology, it may be helpful to change the wording of line 13 (abstract) to clarify the descriptive nature of this study (i.e., there was no comparison group or testing of the effectiveness of these variables in helping women--although they were reported by women as helpful).

Strengths and Limitations in Bullet Points:

- 1) Additional potential limitations warrant consideration/discussion. Specifically, the authors may wish to discuss: a) the potential for recall bias due to the nature of the use of self-report methodology; b) methodological factors that may limit the generalizability of study findings; and c) limitations associated with lack of a control condition or group in which perspectives of Survivors who did not engage in screening or women without a history of victimization share their perspectives on screening.
- 2) The interviewer, who is a member of the Survivor community, brings a nuanced perspective to the study. The authors discuss how this may strengthen the study methodology and authenticity of results. It seems appropriate to provide more support for this perspective, both in terms of concrete information about her training and experience with qualitative interviews, but also in the form of citations that suggest that this improves the

quality of information yielded (compared to a naïve interviewer). The authors should consider incorporating any existing research regarding the validity of this interview methodology. This may be addressed in the Methods or Discussion sections.

- 3) In addition, it seems important to discuss how this stated strength of the study methodology might actually lead to bias or loss of objectivity during the data collection process and what steps were taken to ensure (and what metric was used to measure this) that this possibility was managed.

Introduction

1. The opening sentence, which relates to the association of sexual abuse to cancer, is very broad. It is also potentially misleading to the readers - - as it would seem to indicate that the study is focused on this association.

In addition, it is a very broad statement that is supported by a single citation. The potential association between prior abuse exposure and cancer is complex (c.f.: Reynolds MW, Peipert JF, Collins B. Epidemiologic issues of sexually transmitted diseases in sexual assault victims. *Obstet Gynecol Surv* 2000; 55:51–7). The current understanding of this association is far from complete. This statement, if made at all, requires much greater caution and precision. It certainly warrants more than a single citation. Please consider revising.

2. Overall, the introduction would be strengthened by incorporating more current research on women's experiences during intimate cancer screening exams. This, rather than barriers presenting to exams/screening, is the focus of the study. To this end, more literature should be incorporated into the paper to assist the reader with understanding potential mechanisms explaining *why* women with a history of childhood sexual abuse would experience more difficulties during screening exams. Perhaps a theoretical framework would help set the stage. In addition, there is considerable existing research examining women's experiences with cancer screening that should be incorporated (e.g., Bergmark, Avall-Lundqvist, Dickman, Henningsohn, & Steineck, 2005; Farley, Golding, & Minkoff, 2002; Farley, Minkoff, & Barkan, 2001; Pederson & Cohen, 2010; Hilden Sidenius, Langhoff-Roos, Wijma, & Schei, 2003; Weitlauf et al, 2008; 2010; and Khan et al., 2014). This prior work identifies important variables (e.g., mental health risk factors, demographic variables, and cognitive variables) that should be addressed in the introduction. B Wijma's research perceptions of abuse in health care among adult survivors of abuse may be particularly helpful

	<p>here.</p> <ol style="list-style-type: none"><li data-bbox="635 264 1390 434">3. As noted earlier, the authors should clarify in the Introduction that the objective was to examine perspectives from women Survivors. Discussion and evaluation of the current state of the literature should help the reader to understand the particular contributions of this paper.<li data-bbox="635 477 1369 607">4. It is striking that there is no discussion of high risk co-factors, such as substance use disorders or SUD, that are both highly prevalent among Survivors of abuse and have been linked to non-adherence to preventive health care.<li data-bbox="635 649 1401 1137">5. Also absent from the discussion here are socio-political factors (e.g., those that relate to the accessibility of health care), that strongly influence women's timely receipt of preventive health care. Several studies from countries with socialized medical systems have found that health care environments that are accessible and appropriate (e.g., that offer both medical and mental health care or offer preventive health care in tandem with treatment for substance use) to high risk populations are associated with higher screening rates among Survivor populations. It is important that the authors convey their awareness of the multiplicity of factors that contribute to women's timely receipt of screening, their perceptions of the utility and necessity of screening, and factors that are associated with barriers to screening.<li data-bbox="635 1180 1401 1839">6. Similarly, contextual coverage is needed of the controversies (e.g., risks of screening) inherent in preventive cancer screening that have been brought to light over the past decade, or any coverage of the recent assertions (for example, see recent work by G. Sawaya) about the overuse of the pelvic examination and the need for "right sizing" cervical cancer screening for women. This may be useful to incorporate into an introductory frame work as it may relate to some of the changing perspectives of women about these examinations over time. (e.g., How necessary are they?, Why are they a barrier to accessing other elements of reproductive health care, such as birth control?). If nothing else, the changing medical perspective on the necessity of these examinations (and the frequency with which they should be performed) seems like an added layer of complexity here. The authors may wish to address this as the paper reads as if there is an implicit assumption that the Survivor population is under-screened - - when the evidence for that may not actually bear out.<li data-bbox="635 1881 1401 2018">7. A more rigorous characterization of the broader literature on this topic is needed within the introduction. The introduction should lead the reader to correctly appreciate the unique contributions of the present study to the broader literature as
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well as a correct understanding regarding the 'level of evidence' or conclusiveness of findings that may be yielded from a study of this nature. It is clear that the study is conceptualized as descriptive; however, it is not necessarily clear why the authors do not put forward hypotheses, research questions, or any other clues about how they approached this work so that the reader may understand better why the interviews were developed as they were, and why some topics were emphasized while others not.

Methods and Study Design

1. The methods section could be strengthened by providing a bit more detail about how the study was designed and how the data were gathered. Specifically, the reader has no idea how many people were approached for participation, how many refused, and what proportion consented but did not complete the study. A flow diagram that reveals the number of individuals who were approached, consented, and who completed the study would be very useful. The authors should also comment on whether or not all 12 participants presented to the follow-up interview. This information would provide the reader a greater understanding of the sample included. In addition, a potential additional inclusionary criterion of the study appears to be access to phones and/or internet. Please discuss.
2. Saturation (and the criteria for establishing saturation) in the context of the present study is not well defined. A revision should include a precise operational definition of this concept as applicable to the present work.
3. The authors may want to consider providing more information regarding the development of the interview, and greater detail about the content of the semi-structured interview. This information would provide greater context to the reader in understanding how responses were elicited. For example, did all interviews include the questions outlined on page 6? In addition, were participants prompted to discuss screening specific to breast, cervical, and rectal cancer or just general cancer screening as indicated on the list of questions on page 6? Were these questions asked in the same order? Was any information gathered regarding the completion of the screening process (e.g., did any women stop or withdraw from the screening process)?
4. Additionally, readers may wonder whether the interviewer used any prompting to assist the participants with recall of previous health care visits. For example, it may be helpful for women to identify a single previous visit to discuss, similar to critical incident studies to reduce potential confounds that may vary across patient visits and/or recall

	<p>bias. Could the authors include additional information about the interview prompts regarding previous screening visits.</p> <ol style="list-style-type: none"> 5. Page 5: the authors note that participants were able to give free and informed consent. Additional information regarding the consenting process and debriefing process of this study is needed. Were women provided written consent forms? Furthermore, it appears that the follow-up interviews included debriefing information about the study, but this should be clarified. Similarly, were women provided with referral information during the interviews? 6. The authors should inform the reader regarding the guidance provided to participants regarding their location during the study interview. Were participants provided with any guidance regarding finding a location to complete the interview to ensure confidentiality of their responses? If there was no guidance in this domain, please characterize how might this limit the study findings, e.g., were participants who were unable to find a secure location in which to complete the interview more likely to decline? 7. The authors' sensitivity to the Survivor community is commendable and would be strengthened by incorporation of additional existing literature and references. For example, the addition of references to the first paragraph of the Methods section would help to bolster these statements regarding the vulnerability of Survivors and reduction of such vulnerability, as these are certainly variables to consider. Similarly, the statement regarding audio/video recording on Page 6 would be bolstered by a reference. 8. Inclusion criteria are very loosely defined. Greater detail about the precise standards of each criterion would be helpful. For example, does being part of the Survivor community mean simply endorsing a history of abuse--and if so, how was this question asked? Or does membership refer to active participation in a "community" that is defined by common practices, beliefs, and activities? In other words, are there individuals with a prior history of abuse who might not consider themselves members of this community? Financial and psychological stability are not well defined, and it is not clear who determined whether each participant was "stable" or not. Please characterize the standards set for these determinations and discuss whether consensus among the authors (others) was required. How was "ability to maintain supportive relationships" measured, and what exactly constituted a safe environment (e.g., absence of current abuse)? What empirical guidance was used to inform these determinations? And, how consistent are these standards with those set forth in prior work?
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	<p>9. Were the participants clinically evaluated for mental health (e.g., trauma) symptoms associated with prior abuse? If so, how and by whom? If not, why was this not considered important?</p> <p>10. What safety precautions were put into place to address upset or concerns expressed during the course of the research?</p> <p>11. The statement about prior psychotherapy is quite vague and not supported with a citation. Furthermore, engagement in psychotherapy can be a productive means of healing for many Survivors of abuse. However, we do know that quality and appropriateness of the therapy and therapist skill can also play a critical role in treatment outcomes. This criteria for inclusion is written in a manner that suggests an ever/never approach to psychotherapy and recovery from abuse. Perhaps this statement is a bit black and white?</p> <p>12. There is very limited description of the participants. The reader is not informed as to the uniformity of childhood abuse experiences (e.g., are all Survivors reporting penetrative assaults, are some reporting one but others reporting multiple instances), which may be an important factor in predicting later psychosocial adjustment, self-care practices and participation in preventive health care. Given the location of data collection, it might be assumed that the study population is both Canadian citizens and international (foreign nationals or immigrants) participants. If so, we might expect some variability in both type abuse exposure (e.g., were any of the Survivors victims of trafficking?) and prior receipt of preventive health care (e.g., accessibility to preventive cancer screening varies widely by country) based upon the country of origin for each participant. Further, we do know that knowledge, attitudes and beliefs about preventive health screenings vary by country, with lowered rates of compliance among some populations of immigrants. Was this taken into account? Perhaps the authors could help to inform the reader more directly about the sample.</p> <p>13. Prior cancer history, family cancer history, hysterectomy status, prior pregnancy and number of live births seem like important variables that may influence perceptions (and receipt of) preventive women's health care. How were these factors considered?</p> <p>14. Were participants consistent in recalling/characterizing their experiences with preventive cancer screenings? How were women who were at the very beginning of eligibility for mammography (e.g., age 40) conceptualized as distinct from those who have many years of mammography screening? Not all participants would have been eligible for</p>
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	<p>colonoscopy screening based upon age. How was this managed?</p> <ol style="list-style-type: none">15. What steps were taken to ensure uniformity of interview over different modalities?16. It is unclear why the catchment area for participants is so large—Ontario, elsewhere in Canada, or in the U.S. Please offer more detail about sampling.17. What is the rationale behind the age range of 40-70 years? Was participation open to younger participants?18. Was there anyone in the sample who had never been screened?19. The discussion of the analytic strategy is thin, more context and detail would be helpful. “Thematic analysis” could mean a great many things. <p><u>Results</u></p> <ol style="list-style-type: none">1. On page 7, line 44, please clarify the statement: “preliminary results were tested at this time.” We do not know what this is referencing. The statement implies inferential analyses, but the reader is not clearly informed about the nature of this analysis or what it yielded.2. Regarding the sample, additional descriptive information about the demographics of the sample should be provided to assist readers in drawing conclusions about the generalization of the findings. For example, the authors refer to some demographic/psychosocial history information (e.g., dissociative identity disorder), but have not fully described how this information was assessed. Additional information regarding participants’ trauma history, if available, may also be beneficial given that many women with a history of childhood sexual abuse also experience other forms of trauma. Similarly, was any information gathered about the characteristics of abuse? Severity of abuse has also been associated with long term trauma symptomatology and may play a role in the present findings. Such information about the sample would provide greater contextual information to the reader.3. In terms of the thematic analysis results, information regarding the agreement rate between raters should be added. Furthermore, results would likely be strengthened by including information about the total number of themes and the number of women who endorsed each theme. This would highlight the prevalence of certain themes across women. In general, the results would likely be strengthened
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and streamlined by utilization of a table to help the reader identify all of the themes. This could also save some space in the body of the text to address other comments and to incorporate existing literature into the discussion.

4. Descriptive information about the participant's experience of number and type of screening visits would help place the themes and qualitative information in context for the reader.
5. The results (quotes) are compelling. As noted above, organizing the results into a table or figure might provide a more impactful take home message to the reader.

Discussion

1. The Discussion section would be strengthened by further contextualization of the results with previous research. In particular, the authors should describe how these results are or are not consistent with previous research.
2. It is interesting to note that no specific theme was identified regarding gender of the practitioner, which is notable considering previous research indicating that women describe this as an important variable in screening (e.g., *Cadman et al., 2012*) and that gender is associated with examination anxiety (e.g., *Lee, Westrup, Ruzel, Keller, & Weitlauf, 2007*). Additionally, previous quantitative research in this area has identified the role of psychological/cognitive variables in women's experiences with pelvic screening; this research should be incorporated in the broader discussion of findings.
3. The authors could suggest new avenues for future research. For example, the authors might acknowledge other potential variables that could influence how women experience and access cancer screening appointments (e.g., socioeconomic status, psychopathology). In addition, the current stated goal of the paper should be incorporated as a direction for future research, such that additional research is needed to empirically examine variables that predict women's presentation, or failure to utilize, cancer screening. Future research should also consider the use of critical incident studies to examine women's experiences with screening appointments.
4. Additional attention should be given to the limitations of this study, especially regarding the generalization of findings. For example, given that this sample was identified as having had therapy to recover from abuse, results may not be as generalizable to other women who have not received such services. An additional limitation is the use of a relatively small sample, which restricted the ability to detect variables that determine or predict women's reactions to participating

	<p>in screening.</p> <ol style="list-style-type: none"> 5. Selection bias of the sample should also be considered as a potential limitation to this study. Perhaps variables that are barriers to cancer screening are also barriers to research participation regarding a history of trauma. 6. The authors imply that participation in the present research could contribute to greater utilization of preventive cancer screening. This could be examined empirically; the authors should take care not to overstate this possibility, which remains purely speculative at present. <p>On this note, the sensitivity of the authors to the difficulties that women may experience when participating in research and/or health care and when participating in discussions related to trauma is a strength of this paper. For example, the authors commented on participant's perceptions of participating in this research (e.g., asking for email rather than an online chat). The authors may find that greater discussion of their precise interviewing technique could enhance readers' understanding (and subsequent incorporation of this strategy into future research). The authors may wish to acknowledge that other studies of women has empirically examined women's perceptions of participating in research related to interpersonal violence and trauma (e.g., see Edwards, Kearns, Gidycz, & Calhoun, 2009; Weitlauf et al., 2007; any work by Elana Newman).</p> <p><u>Concluding Comments:</u></p> <p>The Reviewers wish to thank BMJ-Open for the opportunity to review this manuscript. It is our hope that our comments are helpful to the authors in their efforts to revise this manuscript. Further, we wish to convey that the perhaps unusually detailed review reflects our interest and efforts support work that illuminates the perspectives of women who are victims of interpersonal violence. All comments were meant to be constructive and support productive work on this most worthy topic of study.</p>
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REVIEWER	<p>Louise Cadman Centre for Cancer Prevention, Wolfson Institute of Preventive Medicine, Queen Mary University of London, Bart's and the London School of Medicine and Dentistry, Charterhouse Square, United Kingdom</p>
REVIEW RETURNED	04-Apr-2015

<p>GENERAL COMMENTS</p>	<p>Thank you very much for your paper. There is some limited research on this topic. Your paper reinforces other work and interviewing is a useful methodology. I have asked for minor revisions as I think there are a couple of areas that would benefit from more information.</p> <p>1) Your reference number 11 looking at the estimated rate of childhood sexual abuse is over 30 years old. Would you be able to provide a more up to date reference and possible statistic?</p> <p>2) Intuitively it seems absolutely reasonable, practical and appropriate that your interviewer was a fellow member of the Survivor community. However, from a research perspective this may introduce a bias and I think this should be acknowledged and justified. The fact that she also identified your contributors through her contacts may also introduce questions around objectivity. If you could provide any reference to support your claims for using a fellow Survivor it would also be better.</p> <p>3) On page 6, line 46: you indicate that participants are compensated. In what way?</p> <p>4) Page 8: regarding age, would you be able to add a median or mean age here please with an indicator of the sample distribution?</p> <p>5) The limited age range is, as you have recognised, a significant limitation. I think that you could reinforce your statement that compassionate care would also resonate with women under 40 by using reference 8 which identifies similar barriers and strategies to improve the cervical screening experience but 72% of the cohort were under 40 years.</p> <p>6) Page 8, line 48: your numbers for where survivors live totals 11 and so one person is missing.</p> <p>7) Would you be able to add more about the framework analysis? For example the number of themes identified and what they were. Perhaps this could be included as a table.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer Name Louise Cadman
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 Charterhouse Square,
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 United Kingdom
 Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

Thank you very much for your paper. There is some limited research on this topic. Your paper reinforces other work and interviewing is a useful methodology. I have asked for minor revisions as I think there are a couple of areas that would benefit from more information.

1) Your reference number 11 looking at the estimated rate of childhood sexual abuse is over 30 years old. Would you be able to provide a more up to date reference and possible statistic?

We updated the statistics with more recent publication estimates. This section now reads (lines 79-86):

“It is very challenging to accurately estimate the CSA population given variability in definitions of CSA and difficulties measuring CSA[15 16]. Currently, the best estimates of CSA are that between 12 and

18% of girls and between 5 and 8% of boys aged 2–17 years have experienced higher-impact CSA[16]. The evidence also indicates that CSA cases are significantly unreported suggesting that the CSA survivor population is substantial[17]. Add individuals who have survived other forms of sexual abuse, such as forced sex or sexual violence as youth or adults, and the sexual abuse survivor population grows rapidly.”

2) Intuitively it seems absolutely reasonable, practical and appropriate that your interviewer was a fellow member of the Survivor community. However, from a research perspective this may introduce a bias and I think this should be acknowledged and justified. The fact that she also identified your contributors through her contacts may also introduce questions around objectivity. If you could provide any reference to support your claims for using a fellow Survivor it would also be better.

We used a community based participatory research (CBPR) approach to this study, and not mentioning this explicitly in the methods was an oversight on our part. CBPR methods have proven to be the most effective method of conducting ethical and useful research with marginalized and hard to reach populations. The ubiquitous involvement of community members is a criteria of conducting CBPR and has proven to strengthen the research. Additionally, marginalized and hard-to-reach communities usually have gate keepers who act as Ambassadors to bridge the ‘worlds’. It is established that researchers will routinely work with these gate-keepers to gain access to these hard-to-reach population. Our community partner served this role. We added to the methods (lines 99-109): “We used a community based participatory research (CBPR) approach[19-22] to conduct cancer screening research with CSA survivors. CSA survivors are a hidden, hard-to-reach population because of shame, guilt, stigma and many have not disclosed their prior abuse openly. CSA survivors are also a vulnerable population because of their history of abuse, trauma and exploitation. We chose to take a CBPR approach and worked closely with a community ‘gate-keeper’ to: increase research safety and relevance; maintain rigor in the development of sensitive and supportive interview methods; increase access, uptake, recruitment and participation in interviews; strengthen the accuracy, rigor, and reliability of our data analysis and interpretation; aide knowledge translation; and maximize participant support and community benefit[22-25].”

3) On page 6, line 46: you indicate that participants are compensated. In what way?

Interviewees were paid \$75 for their time and knowledge. This section now reads (lines 167-168): “Participants were compensated for their time and knowledge with a monetary honorarium.”

4) Page 8: regarding age, would you be able to add a median or mean age here please with an indicator of the sample distribution?

We updated this section to read (lines 232-233): “All participants were female. Their ages ranged from early 40’s to mid 70’s: three in their 40’s, six in their 50’s, two in their 60’s and one in her 70’s.”

5) The limited age range is, as you have recognised, a significant limitation. I think that you could reinforce your statement that compassionate care would also resonate with women under 40 by using reference 8 which identifies similar barriers and strategies to improve the cervical screening experience but 72% of the cohort were under 40 years.

We added our reason for focusing on women 50 years old and older to the methods (lines 140-145): “We focused on women 50 years old and older because of the standard screening age requirements for breast and colon cancer are 50 years old and older. However, we also interviewed CSA survivors in their 40’s to capture the perspectives of women with a long history of cervical cancer screening eligibility and approaching the age of eligibility for breast and colon cancer screening.”

We also added to the discussion (lines 561-566):

“We did not interview female CSA survivors under the age of 40 or male CSA survivors. We hypothesize that the recommendation of compassionate care will still resonate with women under 40 since similar barriers and strategies to improve the cervical screening experience have been identified for this age group[12]. Male CSA survivors may have a different suite of barriers and facilitators to cancer screening but there is evidence that they will also benefit from compassionate care [14 36 37].”

6) Page 8, line 48: your numbers for where survivors live totals 11 and so one person is missing.

The numbers have been corrected.

7) Would you be able to add more about the framework analysis? For example the number of themes identified and what they were. Perhaps this could be included as a table.

We added to the methods (lines 205-220):

“Thematic analysis[30 31] was used to identify and describe CSA survivor perspectives on cancer screening and potential facilitators for screening. We increased rigor, validity and the fullness of the analysis and interpretation by having two separate researchers with different perspectives conduct the analysis – one, a CSA survivor, and one with no history of sexual abuse. Transcripts were read and coded simultaneously. Codes were grouped around similar ideas into categories. Codes and categories were constantly compared across cases for corroboration and consistency. Categories were organized into themes and subthemes describing aspects of the data using an inductive approach. The two researchers identified themes, then came together to share and discuss results so one perspective did not dominate interpretation of the results and to ensure saturation had been reached. Themes were framed in the context of recommendations for improving cancer screening participation. Discrepancies were discussed until reconciled and interpretation and recommendations were agreed upon. Descriptive saturation was confirmed during thematic analysis when no new codes, categories or themes emerged from the data. Fieldnotes were used to aid interpretation of themes. Illustrative quotes are used to support themes, interpretations, and recommendations.”

Each of the headings in the results is a theme or subtheme and more minor themes were grouped together under other observations. We clarified in the results (lines 251-259):

“The core concept that emerged was that CSA survivor participation in cancer screening is supported most by compassionate care. Compassionate care means providers relating to CSA survivor, and really all patients, on a human level, in understanding, empathizing and mitigating potential sources of suffering. Compassionate care is the overarching term we use to summarize the themes and subthemes from our analysis, including: the desire for holistic care; the unique needs of CSA survivors with dissociative identity disorder; the patient - health care provider relationship; appointment interactions; the cancer screening environment; and provider assumptions about patients. Each theme is described in detail below.”

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Please state any competing interests or state ‘None declared’: None Declared (both reviewers)

Please leave your comments for the authors below
Please see attached review document

General Comments

1) It was our great pleasure to review this work. Obviously the topic is of significant interest, and the manuscript is interesting, informative, and insightful. The authors tackle a very worthy women's health issue, focusing upon an important question: "What factors may contribute to (or detract from) participation in preventive health screening for cervical, breast, and colorectal cancer among female Survivors of childhood sexual abuse?" The authors' compassion for the community of female Survivors of sexual abuse is thoroughly evident in their work. We especially admire their use of a research methodology that seeks to validate and dignify the perspectives of the participants. Further, the qualitative methodology employed in this study yielded very rich data that provides unique insight into the perspectives of this vulnerable population of women about intimate aspects of their experience with women's health care.

Thank you.

2) In our perspective, however, the manuscript, in its present form, does not do justice to this topic. It likely does not convey the full complexity of the data yielded by the study interviews. Moreover, it does not contextualize the findings well within the broader extant literature on this topic - a literature that includes several prior studies featuring qualitative interviews with Survivors. This leaves the reader without a clear impression of the novel contribution of the present study's findings to the broader literature on this topic, and provides no context in which the reader can better understand the authors' vision for how this information can and should be used to guide women's health care policy and practice.

More attention to the complexity of the existing literature on women's perceptions of preventive cancer screenings is needed. In particular, the authors should contend with recent findings regarding the relative contribution of symptoms of posttraumatic stress disorder to women's perceptions of these screening examinations and include some acknowledgement of the significant body of literature suggesting that a subgroup of non- Survivors (i.e., women with no prior history of abuse) also are greatly distressed by these examinations, and seek to avoid them, is warranted. Inclusion of this latter work would build upon the authors' currently stated assertion that their recommendations would likely be important regardless of patients' disclosure of trauma.

We would very much like to delve further into the literature beyond what we have already; however, we have far exceeded the acceptable word count and so limited our literature to that directly in the overlapping areas of CSA and cancer screening.

3) Further, a general limitation to the manuscript, in its present form, is the misalignment of the stated aims (i.e., "Our objective was to learn what helps Survivors get screened for breast, cervical and colon cancer.") with the study methodology. Specifically, the study did not characterize women who pursued vs. refused screening, and we are not informed as to what factors led to screening and which led to refusal, avoidance, or delay. Rather, the study very aptly characterizes 12 Survivors' perspectives on what health care practitioners "should do" and "should know" about how Survivors feel during invasive screening examinations. Though this is very important, it is not the stated purpose of the study. In fact, the study is introduced in a manner that leads the author to expect a different methodology (comparison of those who pursue vs. avoid) screening and a re-framing of the objectives with more precise language might be useful. The manuscript would be greatly strengthened by reframing the stated goals and title of the paper to better reflect the methodology.

We reframed the purpose in the abstract (lines 25-28) and the introduction (lines 93-95):

“Our objective was to learn CSA survivor perspectives on, and experiences with, breast, cervical and colon cancer screening with the intention of generating recommendations to help health care providers improve cancer screening participation.”

4) In addition, this study would be bolstered by more in depth articulation of the methodology (see our comments about the contextual details of the interview development below) as well as greater integration of the previous empirical research in this area. As outlined below in additional recommendations, it may be helpful to organize results into a table. This would likely increase available space in the body of the paper to incorporate information about the methodology and existing research.

The methods have been revised substantially to provide greater detail and incorporate more of the literature.

Abstract

1) A general point relates to the fact that some language seems imprecise, particularly for a medical audience, such as that targeted by BMJ Open. In particular, the phrase “low” screening rates has a fairly specific public health definition. It is unclear whether the authors are suggesting that there is an empirical link between prior abuse exposure and diminished rates of screening that are consistently below what would be expected within population based averages or simply that abuse has been consistently conceptualized as a source of variability in receipt of screening. (The latter point has mixed empirical support in the literature.)

This research is an extension of our previous published research where health care providers and community members identified sexual abuse survivors as part of the under and never screened population (Gesink et al 2014). However, this is the abstract and we are limited on words so we have revised the abstract to (lines 23-25):

“The childhood sexual abuse (CSA) survivor population is substantial and survivors have been identified as part of the population under or never screened for breast, cervical and colon cancer.”

2) In order to facilitate a stronger connection between the goals of the paper and the methodology, it may be helpful to change the wording of line 13 (abstract) to clarify the descriptive nature of this study (i.e., there was no comparison group or testing of the effectiveness of these variables in helping women--although they were reported by women as helpful).

We rephrased part of the design section to read (lines 30-31):

“Thematic analysis was used to describe CSA survivor perspectives on cancer screening and identify potential facilitators for screening.”

Strengths and Limitations in Bullet Points:

1) Additional potential limitations warrant consideration/discussion. Specifically, the authors may wish to discuss: a) the potential for recall bias due to the nature of the use of self report methodology; b) methodological factors that may limit the generalizability of study findings; and c) limitations associated with lack of a control condition or group in which perspectives of Survivors who did not engage in screening or women without a history of victimization share their perspectives on screening.

The limitations identified above are very important for quantitative studies; however, especially with the revised purpose/objective, not limitations relevant to this qualitative study. Recall bias is a quantitative measurement issue that will affect the accuracy and validity of whatever is being measured. Current perspectives may be influenced, even biased by recall, but perspectives are just that, perspectives, which can be biased/distorted and that distortion can be informative.

Generalizability is a big concern for quantitative studies; however, qualitative studies are not intended to have generalizable findings. Generalizability is only indirectly addressed through theory generation. Finally, having a control condition or built in study comparison group is a quantitative expectation. We did interview a diversity of survivors who participated anywhere from one of the cancer screening programs to all three cancer screening programs and added this to the results (lines 242-245): “All participants had been screened at least once for at least one type of breast, cervical or colon cancer in the past. However, some participants had never been screened for all three cancers, despite being eligible. Most participants were under-screened for all three cancers. Few were up to date for all eligible cancer screening tests.”

The revised objective being focused on CSA survivor perspectives on cancer screening, means that women without a history of victimization are not appropriate to include in this study explicitly. Those perspectives can be compared in the context of the existing literature.

2) The interviewer, who is a member of the Survivor community, brings a nuanced perspective to the study. The authors discuss how this may strengthen the study methodology and authenticity of results. It seems appropriate to provide more support for this perspective, both in terms of concrete information about her training and experience with qualitative interviews, but also in the form of citations that suggest that this improves the quality of information yielded (compared to a naïve interviewer). The authors should consider incorporating any existing research regarding the validity of this interview methodology. This may be addressed in the Methods or Discussion sections.

We added a section about community based participatory research and the strengthening role of community partner participation, including citations, to the methods (lines 99-109): “We used a community based participatory research (CBPR) approach[19-22] to conduct cancer screening research with CSA survivors. CSA survivors are a hidden, hard-to-reach population because of shame, guilt, stigma and many have not disclosed their prior abuse openly. CSA survivors are also a vulnerable population because of their history of abuse, trauma and exploitation. We chose to take a CBPR approach and worked closely with a community ‘gate-keeper’ to: increase research safety and relevance; maintain rigor in the development of sensitive and supportive interview methods; increase access, uptake, recruitment and participation in interviews; strengthen the accuracy, rigor, and reliability of our data analysis and interpretation; aide knowledge translation; and maximize participant support and community benefit[22-25].”

We also added more information about the prior experience of our community partner to the methods (lines 118-122):

“Our CSA survivor community partner (LN) is an internationally recognized author and advocate who writes, speaks and educates about sexual abuse. She has extensive experience researching sexual abuse and interviewing CSA survivors, including CSA survivors with dissociative identity disorder (DID) - a “complex and valid disorder that is not uncommon”[26] and is often associated with CSA[26 27].”

We also added to the discussion (lines 523-545):

“A major strength of our study was having a CSA survivor conduct the interviews and participate in the analysis. First, our community partner knew how to approach participants to ensure their safety and she was able to recognize from experience that we would need to remain flexible about how information was shared, gathered and recorded. As it turned out, it was very important to let participants decide how they would communicate and this was reinforced when one of the participants requested an alternative form of communication:

“I think that I’m having anxiety around our Skype date, even as chat.... Would it be o.k. if we follow up via e-mail, at least around this project, for now? I’m very comfortable with that option. And I apologize if this interferes with the research in any way, because I think that the project is really worthwhile.” (Int

8)

Remaining flexible ensured all CSA survivor voices had a chance to be heard. Having our community partner participate in the analysis helped identify and prioritize themes and recommendations that may have otherwise been disregarded or taken for granted.

“Our community partner has had many years of interactions with people with DID, which enabled her to interact with DID participants in a way that obtained different points of view from those parts (identities) who presented. Her experience and sensitivity towards DID helped DID participants, who would normally pose as a singleton with a different interviewer, be themselves and present different parts over the course of a single interview. Only one subject overtly presented different parts. Others who self-identified switched without overtly presenting, and although she changed her interview style according to the presentation, she did not comment on the change in those cases.”

3) In addition, it seems important to discuss how this stated strength of the study methodology might actually lead to bias or loss of objectivity during the data collection process and what steps were taken to ensure (and what metric was used to measure this) that this possibility was managed.

The Post-positivist research paradigm underpinning qualitative research methods recognizes that pure objectivity is not possible in research, especially qualitative research, and that all research is biased by subjective experience and position in relationship to the research. There are qualitative methods for improving rigor and validity in qualitative research that we added to the methods (lines 103-109):

“We chose to take a CBPR approach and worked closely with a community ‘gate-keeper’ to: increase research safety and relevance; maintain rigor in the development of sensitive and supportive interview methods; increase access, uptake, recruitment and participation in interviews; strengthen the accuracy, rigor, and reliability of our data analysis and interpretation; aide knowledge translation; and maximize participant support and community benefit[22-25].”

And (lines 199-200):

“Preliminary data analysis results were also reviewed at this time (member checking). This follow-up conversation contributed to the rigor of our data collection and analysis.”

And (lines 206-209):

“We increased rigor, validity and the fullness of the analysis and interpretation by having two separate researchers with different perspectives conduct the analysis – one, a CSA survivor, and one with no history of sexual abuse.”

Introduction

1. The opening sentence, which relates to the association of sexual abuse to cancer, is very broad. It is also potentially misleading to the readers - - as it would seem to indicate that the study is focused on this association.

In addition, it is a very broad statement that is supported by a single citation. The potential association between prior abuse exposure and cancer is complex (c.f.: Reynolds MW, Peipert JF, Collins B. Epidemiologic issues of sexually transmitted diseases in sexual assault victims. *Obstet Gynecol Surv* 2000; 55:51–7). The current understanding of this association is far from complete. This statement, if made at all, requires much greater caution and precision. It certainly warrants more than a single citation. Please consider revising.

The opening sentence is intentionally broad as we introduce the broad areas of investigation (adverse childhood experiences, sexual abuse, physical and mental health, and adult cancer diagnosis)

relevant to the ultimate research question (childhood sexual abuse and cancer screening). The opening paragraph needs to be read in its entirety since we continue narrowing down what we know and do not know to rationalize the final research question. There are in fact 11 citations to support the rationalization. The Reynolds paper, while very interesting, is dated and does not support our logic since it is about STI prevalence among all sexual assault victims; our paper is focused on childhood sexual abuse survivors and cancer screening. We added more supporting references and this section now reads (lines 68-77):

“Adverse childhood experiences, especially around sexual abuse, have been associated with significantly increased risk for a wide range of physical and mental health problems[1], as well as significantly increased odds of adult cancer diagnosis[2-4]. The reasons for this latter association are complex and not fully understood[5]; however, one possibility is that survivors of childhood sexual abuse (CSA) are less likely to access preventative health care or participate in routine cancer screening programs[6-8]. CSA survivors have been identified as a population with low rates of breast[9 10], cervical[7-9 11-13] and colon[14] cancer screening participation[6]. This is understandable since these screening tests involve squeezing and penetrating the body’s most intimate sexual sites; those same sites that were physically traumatized for CSA survivors.”

2. Overall, the introduction would be strengthened by incorporating more current research on women’s experiences during intimate cancer screening exams. This, rather than barriers presenting to exams/screening, is the focus of the study. To this end, more literature should be incorporated into the paper to assist the reader with understanding potential mechanisms explaining why women with a history of childhood sexual abuse would experience more difficulties during screening exams. Perhaps a theoretical framework would help set the stage.

In addition, there is considerable existing research examining women’s experiences with cancer screening that should be incorporated (e.g., Bergmark, Avall-Lundqvist, Dickman, Henningsohn, & Steineck, 2005; Farley, Golding, & Minkoff, 2002; Farley, Minkoff, & Barkan, 2001; Pederson & Cohen, 2010; Hilden Sidenius, Langhoff-Roos, Wijma, & Schei, 2003; Weitlauf et al, 2008; 2010; and Khan et al., 2014). This prior work identifies important variables (e.g., mental health risk factors, demographic variables, and cognitive variables) that should be addressed in the introduction. B Wijma’s research perceptions of abuse in health care among adult survivors of abuse may be particularly helpful here.

See response to comment 2 above.

3. As noted earlier, the authors should clarify in the Introduction that the objective was to examine perspectives from women Survivors. Discussion and evaluation of the current state of the literature should help the reader to understand the particular contributions of this paper.

The objective has been revised.

4. It is striking that there is no discussion of high risk co-factors, such as substance use disorders or SUD, that are both highly prevalent among Survivors of abuse and have been linked to nonadherence to preventive health care.

This is an excellent point; however, substance abuse and other high risk co-factors were not the focus of this research and did not emerge as a theme during our analysis so we will not address this point at this time because of word limitations.

5. Also absent from the discussion here are socio-political factors (e.g., those that relate to the accessibility of health care), that strongly influence women’s timely receipt of preventive health care. Several studies from countries with socialized medical systems have found that health care

environments that are accessible and appropriate (e.g., that offer both medical and mental health care or offer preventive health care in tandem with treatment for substance use) to high risk populations are associated with higher screening rates among Survivor populations. It is important that the authors convey their awareness of the multiplicity of factors that contribute to women's timely receipt of screening, their perceptions of the utility and necessity of screening, and factors that are associated with barriers to screening.

Again, this is an excellent point; however, the intention of this manuscript was to provide recommendations for front-line health care providers on how to help their CSA clients get screened for cancer. Socio-political factors are a low priority given word limits. We did add to the results (lines 491-496):

"Finally, structural barriers were identified by women living in isolated areas:

"I do regular cancer screening, I'm overdue. I have a stool test that I'm supposed to have done, and haven't done it yet because we have to bring it in on a Monday. Otherwise it can't get done and be valid. Because we live isolated there are extra hoops so I'm overdue on a mammogram. And I have a pap test that's supposed to be done this spring."

And included socio-political factors as a direction for future research in the discussion (lines 568-570):

"The role of socio-demographic, socio-political, cultural, substance use, mental health and post-traumatic stress disorder are important directions for future research not captured effectively during our investigation."

6. Similarly, contextual coverage is needed of the controversies (e.g., risks of screening) inherent in preventive cancer screening that have been brought to light over the past decade, or any coverage of the recent assertions (for example, see recent work by G. Sawaya) about the overuse of the pelvic examination and the need for "right sizing" cervical cancer screening for women. This may be useful to incorporate into an introductory frame work as it may relate to some of the changing perspectives of women about these examinations over time. (e.g., How necessary are they?, Why are they a barrier to accessing other elements of reproductive health care, such as birth control?). If nothing else, the changing medical perspective on the necessity of these examinations (and the frequency with which they should be performed) seems like an added layer of complexity here. The authors may wish to address this as the paper reads as if there is an implicit assumption that the Survivor population is under-screened - - when the evidence for that may not actually bear out.

All great points but low priority with respect to our research question and exceeding word limits.

7. A more rigorous characterization of the broader literature on this topic is needed within the introduction. The introduction should lead the reader to correctly appreciate the unique contributions of the present study to the broader literature as well as a correct understanding regarding the 'level of evidence' or conclusiveness of findings that may be yielded from a study of this nature. It is clear that the study is conceptualized as descriptive; however, it is not necessarily clear why the authors do not put forward hypotheses, research questions, or any other clues about how they approached this work so that the reader may understand better why the interviews were developed as they were, and why some topics were emphasized while others not.

With limited space, we clarified (lines 73-75):

"CSA survivors have been identified as a population with low rates of breast[9 10], cervical[7-9 11-13] and colon[14] cancer screening participation[6]."

And (lines 88-95):

"A few studies have identified barriers to cervical cancer screening for Survivors, including not wanting to be touched in the pelvic area and dissociating areas of the body[6 12]. Fewer studies have

identified facilitators to cervical cancer screening, such as improving communication, safety, trust and sharing control[18]. There is a dearth of studies identifying barriers and facilitators to breast[9] or colon[14] cancer screening. Our objective was to learn CSA survivor perspectives on, and experiences with, breast, cervical and colon cancer screening with the intention of generating recommendations to help health care providers improve cancer screening participation.”

Methods and Study Design

1. The methods section could be strengthened by providing a bit more detail about how the study was designed and how the data were gathered. Specifically, the reader has no idea how many people were approached for participation, how many refused, and what proportion consented but did not complete the study. A flow diagram that reveals the number of individuals who were approached, consented, and who completed the study would be very useful. The authors should also comment on whether or not all 12 participants presented to the follow-up interview. This information would provide the reader a greater understanding of the sample included. In addition, a potential additional inclusionary criterion of the study appears to be access to phones and/or internet. Please discuss.

The methods have been revised significantly.

Participants are described in the results section (lines 226-230):

“Initially, thirteen CSA survivors were informed about the study. Twelve CSA survivors agreed to participate in an interview after seed and snowball sampling. All twelve CSA survivors were interviewed in January 2014. None dropped out. All agreed to follow up. Descriptive saturation was reached after ten interviews; however, two additional participants were interviewed to honor snowball referral and confirm saturation.”

2. Saturation (and the criteria for establishing saturation) in the context of the present study is not well defined. A revision should include a precise operational definition of this concept as applicable to the present work.

We added to the methods (lines 166-167):

“Descriptive saturation was reached once our community interviewer noticed no new information arising during interviews.”

And (lines 213-219):

“The two researchers identified themes, then came together to share and discuss results so one perspective did not dominate interpretation of the results and to ensure saturation had been reached. Themes were framed in the context of recommendations for improving cancer screening participation. Discrepancies were discussed until reconciled and interpretation and recommendations were agreed upon. Descriptive saturation was confirmed during thematic analysis when no new codes, categories or themes emerged from the data.”

And to the results (229-230):

“Descriptive saturation was reached after ten interviews; however, two additional participants were interviewed to honor snowball referral and confirm saturation.”

3. The authors may want to consider providing more information regarding the development of the interview, and greater detail about the content of the semi-structured interview. This information would provide greater context to the reader in understanding how responses were elicited. For example, did all interviews include the questions outlined on page 6? In addition, were participants prompted to discuss screening specific to breast, cervical, and rectal cancer or just general cancer screening as indicated on the list of questions on page 6? Were these questions asked in the same order? Was

any information gathered regarding the completion of the screening process (e.g., did any women stop or withdraw from the screening process)?

We included the interview guide as an appendix and clarified (lines 148-168):

“Individual, semi-structured, in-depth interviews (Appendix I) were conducted with CSA survivors in January 2014. Participants were guided to be in a comfortable, secure location of their choosing for their interview. All interviews were anonymous. Only the community interviewer knew the identity of participants. All interviews were initiated with a review of the purpose of the research and sustained in a natural conversational style[28]. Participants were asked to talk about their experience seeking medical care in general and then specifically about breast, cervical and colon cancer screening as relevant to them. Participants were also asked what health care providers can do to make it easier to get screened and if there was anything else they wanted to say or thought we should know. Outsider researchers reviewed interview questions, probes and flow before the interview guide was finalized.

“Interviews took 45 minutes to a little over one hour to complete. Participants were given the option of having their interview over the phone or via on-line chat. One participant requested completing the interview by email. Our community interviewer helped develop the research question and interview guide, and so was trained in the spirit and intention of the research [29] so she could ensure consistency of the information collected across all interviews, regardless of the manifestation of conversation or interview modality. Descriptive saturation was reached once our community interviewer noticed no new information arising during interviews. Participants were compensated for their time and knowledge with a monetary honorarium.”

4. Additionally, readers may wonder whether the interviewer used any prompting to assist the participants with recall of previous health care visits. For example, it may be helpful for women to identify a single previous visit to discuss, similar to critical incident studies to reduce potential confounds that may vary across patient visits and/or recall bias. Could the authors include additional information about the interview prompts regarding previous screening visits.

The Interview Guide has been added as an appendix.

5. Page 5: the authors note that participants were able to give free and informed consent. Additional information regarding the consenting process and debriefing process of this study is needed. Were women provided written consent forms? Furthermore, it appears that the followup interviews included debriefing information about the study, but this should be clarified. Similarly, were women provided with referral information during the interviews?

The consent form has been included in the Interview Guide in appendix I. Our participants were stable and had done extensive healing regarding their CSA. This was a low risk study focused on cancer screening and referral information was not necessary. We added (lines 184-194):

“The interview focused on experiences with the medical system and cancer screening; however, the conversation had the potential to touch on past memories of abuse, which could have brought up old feelings, which may or may not be distressing to participants who had benefited from therapy. If a participant had expressed sadness or sorrow, they would have been asked how they wanted to proceed (e.g. sit quietly while they work through the emotion, take a break, continue, or finish up early) and that request would have been honoured. One participant felt sad, but was okay to continue and felt positive about completing the interview. If a participant had felt they needed additional support, we would have covered the cost of one session with their therapist. None of the participants requested therapy session support.”

6. The authors should inform the reader regarding the guidance provided to participants regarding their location during the study interview. Were participants provided with any guidance regarding

finding a location to complete the interview to ensure confidentiality of their responses? If there was no guidance in this domain, please characterize how might this limit the study findings, e.g., were participants who were unable to find a secure location in which to complete the interview more likely to decline?

We added (lines 149-150):

“Participants were guided to be in a comfortable, secure location of their choosing for their interview.”

7. The authors’ sensitivity to the Survivor community is commendable and would be strengthened by incorporation of additional existing literature and references. For example, the addition of references to the first paragraph of the Methods section would help to bolster these statements regarding the vulnerability of Survivors and reduction of such vulnerability, as these are certainly variables to consider. Similarly, the statement regarding audio/video recording on Page 6 would be bolstered by a reference.

We added a discussion of CBPR methods and more references to the methods (lines 99-109):

“We used a community based participatory research (CBPR) approach[19-22] to conduct cancer screening research with CSA survivors. CSA survivors are a hidden, hard-to-reach population because of shame, guilt, stigma and many have not disclosed their prior abuse openly. CSA survivors are also a vulnerable population because of their history of abuse, trauma and exploitation. We chose to take a CBPR approach and worked closely with a community ‘gate-keeper’ to: increase research safety and relevance; maintain rigor in the development of sensitive and supportive interview methods; increase access, uptake, recruitment and participation in interviews; strengthen the accuracy, rigor, and reliability of our data analysis and interpretation; aide knowledge translation; and maximize participant support and community benefit[22-25].”

We developed our process through community based participatory research principles and the recommendations of our community partner, a survivor herself. We have not found supporting references in the published literature on the impact of recording given history of exploitation.

8. Inclusion criteria are very loosely defined. Greater detail about the precise standards of each criterion would be helpful. For example, does being part of the Survivor community mean simply endorsing a history of abuse--and if so, how was this question asked? Or does membership refer to active participation in a “community” that is defined by common practices, beliefs, and activities? In other words, are there individuals with a prior history of abuse who might not consider themselves members of this community? Financial and psychological stability are not well defined, and it is not clear who determined whether each participant was “stable” or not. Please characterize the standards set for these determinations and discuss whether consensus among the authors (others) was required. How was “ability to maintain supportive relationships” measured, and what exactly constituted a safe environment (e.g., absence of current abuse)? What empirical guidance was used to inform these determinations?

And, how consistent are these standards with those set forth in prior work?

We added some additional information to the inclusion criteria, however, are space limited to how much detail we provide (lines 137-146):

“The inclusion criteria were: being part of the CSA survivor community and being in a stable situation, where stable meant able to meet one’s financial needs independently, able to maintain supportive relationships, having had therapy/psychotherapy to recover from past abuse, and currently living in a safe environment. We focused on women 50 years old and older because of the standard screening age requirements for breast and colon cancer are 50 years old and older. However, we also interviewed CSA survivors in their 40’s to capture the perspectives of women with a long history of cervical cancer screening eligibility and approaching the age of eligibility for breast and colon cancer

screening. Participants needed to have access to the Internet or a phone for the interview.”

9. Were the participants clinically evaluated for mental health (e.g., trauma) symptoms associated with prior abuse? If so, how and by whom? If not, why was this not considered important?

Participants were not clinically evaluated for mental health symptoms – this was beyond the scope of the research.

10. What safety precautions were put into place to address upset or concerns expressed during the course of the research?

We clarified and expanded (lines 179-194):

“Throughout the interview, the community interviewer: empowered participants by expressing the value of their participation; used personal sharing (as helpful) to build rapport, safety and trust; provided support and validation to help participants through emotions that arose during the interview; paid attention throughout the interview to how the participant was feeling; and checked in at the end of each interview to make sure the participant was emotionally stable and supported. The interview focused on experiences with the medical system and cancer screening; however, the conversation had the potential to touch on past memories of abuse, which could have brought up old feelings, which may or may not be distressing to participants who had benefited from therapy. If a participant had expressed sadness or sorrow, they would have been asked how they wanted to proceed (e.g. sit quietly while they work through the emotion, take a break, continue, or finish up early) and that request would have been honoured. One participant felt sad, but was okay to continue and felt positive about completing the interview. If a participant had felt they needed additional support, we would have covered the cost of one session with their therapist. None of the participants requested therapy session support.”

11. The statement about prior psychotherapy is quite vague and not supported with a citation. Furthermore, engagement in psychotherapy can be a productive means of healing for many Survivors of abuse. However, we do know that quality and appropriateness of the therapy and therapist skill can also play a critical role in treatment outcomes. This criteria for inclusion is written in a manner that suggests an ever/never approach to psychotherapy and recovery from abuse. Perhaps this statement is a bit black and white?

There is nothing specific to address with this comment.

12. There is very limited description of the participants. The reader is not informed as to the uniformity of childhood abuse experiences (e.g., are all Survivors reporting penetrative assaults, are some reporting one but others reporting multiple instances), which may be an important factor in predicting later psychosocial adjustment, self-care practices and participation in preventive health care. Given the location of data collection, it might be assumed that the study population is both Canadian citizens and international (foreign nationals or immigrants) participants. If so, we might expect some variability in both type abuse exposure (e.g., were any of the Survivors victims of trafficking?) and prior receipt of preventive health care (e.g., accessibility to preventive cancer screening varies widely by country) based upon the country of origin for each participant. Further, we do know that knowledge, attitudes and beliefs about preventive health screenings vary by country, with lowered rates of compliance among some populations of immigrants. Was this taken into account? Perhaps the authors could help to inform the reader more directly about the sample.

Our purpose was to focus on Survivors cancer screening experience, not their CSA experience so we did not ask questions about their CSA.

13. Prior cancer history, family cancer history, hysterectomy status, prior pregnancy and number of live births seem like important variables that may influence perceptions (and receipt of) preventive women's health care. How were these factors considered?

These factors were not considered; they are beyond the scope of this manuscript.

14. Were participants consistent in recalling/characterizing their experiences with preventive cancer screenings? How were women who were at the very beginning of eligibility for mammography (e.g., age 40) conceptualized as distinct from those who have many years of mammography screening? Not all participants would have been eligible for colonoscopy screening based upon age. How was this managed?

This level of detail was not included in our research. We added (lines 153-155): "Participants were asked to talk about their experience seeking medical care in general and then specifically about breast, cervical and colon cancer screening as relevant to them."

15. What steps were taken to ensure uniformity of interview over different modalities?

We added (lines 162-166):

"Our community interviewer helped develop the research question and interview guide, and so was trained in the spirit and intention of the research [29] so she could ensure consistency of the information collected across all interviews, regardless of the manifestation of conversation or interview modality."

16. It is unclear why the catchment area for participants is so large—Ontario, elsewhere in Canada, or in the U.S. Please offer more detail about sampling.

The sampling section has been expanded, however this particular comment is not addressed because it is a low priority and we have already exceeded the word limit addressing the rest of the comments.

17. What is the rationale behind the age range of 40-70 years? Was participation open to younger participants?

We clarified (lines 140-145):

"We focused on women 50 years old and older because of the standard screening age requirements for breast and colon cancer are 50 years old and older. However, we also interviewed CSA survivors in their 40's to capture the perspectives of women with a long history of cervical cancer screening eligibility and approaching the age of eligibility for breast and colon cancer screening."

18. Was there anyone in the sample who had never been screened?

We added to the results (lines 242-245):

"All participants had been screened at least once for at least one type of breast, cervical or colon cancer in the past. However, some participants had never been screened for all three cancers, despite being eligible. Most participants were under-screened for all three cancers. Few were up to date for all eligible cancer screening tests."

19. The discussion of the analytic strategy is thin, more context and detail would be helpful. "Thematic analysis" could mean a great many things.

See response to Reviewer 1, comment 7.

Results

1. On page 7, line 44, please clarify the statement: “preliminary results were tested at this time.” We do not know what this is referencing. The statement implies inferential analyses, but the reader is not clearly informed about the nature of this analysis or what it yielded.

We revised this sentence to (line 199):

“Preliminary data analysis results were also reviewed at this time (member checking).”

2. Regarding the sample, additional descriptive information about the demographics of the sample should be provided to assist readers in drawing conclusions about the generalization of the findings. For example, the authors refer to some demographic/psychosocial history information (e.g., dissociative identity disorder), but have not fully described how this information was assessed. Additional information regarding participants’ trauma history, if available, may also be beneficial given that many women with a history of childhood sexual abuse also experience other forms of trauma. Similarly, was any information gathered about the characteristics of abuse? Severity of abuse has also been associated with long term trauma symptomatology and may play a role in the present findings. Such information about the sample would provide greater contextual information to the reader.

The description of participants has been revised to (lines 232-245):

“All participants were female. Their ages ranged from early 40’s to mid 70’s: three in their 40’s, six in their 50’s, two in their 60’s and one in her 70’s. Education ranged from limited formal education to post-graduate degrees. CSA survivors lived in rural (n=4), small town (n=5), and urban (n=3) communities in Canada (n=9) and the United States (n=3). Nine CSA survivors were mothers and two were First Nations. Two participants disclosed having dissociative identity disorder (DID) and had more than one personality participate in the interview, though it is likely that more than two participants were DID since is highly stigmatized and even debated in the psychiatric world[26] making it a condition most multiples will not readily disclose.

“All participants had been screened at least once for at least one type of breast, cervical or colon cancer in the past. However, some participants had never been screened for all three cancers, despite being eligible. Most participants were under-screened for all three cancers. Few were up to date for all eligible cancer screening tests.”

3. In terms of the thematic analysis results, information regarding the agreement rate between raters should be added. Furthermore, results would likely be strengthened by including information about the total number of themes and the number of women who endorsed each theme. This would highlight the prevalence of certain themes across women. In general, the results would likely be strengthened and streamlined by utilization of a table to help the reader identify all of the themes. This could also save some space in the body of the text to address other comments and to incorporate existing literature into the discussion.

These suggestions are important for content analysis, however we did not conduct a content analysis.

4. Descriptive information about the participant’s experience of number and type of screening visits would help place the themes and qualitative information in context for the reader.

This information was not collected.

5. The results (quotes) are compelling. As noted above, organizing the results into a table or figure

might provide a more impactful take home message to the reader.

This is a good suggestion, however, the results do not fit well into a figure and a table will just repeat what is already presented in the text.

Discussion

1. The Discussion section would be strengthened by further contextualization of the results with previous research. In particular, the authors should describe how these results are or are not consistent with previous research.

We agree a more thorough comparison is in order, however we are limited on space. We included (lines 515-521):

“Our findings reinforce and add to those of other sexual abuse and cancer screening studies that have proposed focusing on “communication, safety, trust and sharing control”[12] and developing interventions that reduce distress[14 35].

“Our findings also highlight the unique needs of CSA survivors with DID who may have to balance internal competing perspectives on screening and may arrive to an appointment in a dissociated or younger state.”

2. It is interesting to note that no specific theme was identified regarding gender of the practitioner, which is notable considering previous research indicating that women describe this as an important variable in screening (e.g., Cadman et al., 2012) and that gender is associated with examination anxiety (e.g., Lee, Westrup, Ruzel. Keller, & Weitlauf, 2007). Additionally, previous quantitative research in this area has identified the role of psychological/cognitive variables in women’s experiences with pelvic screening; this research should be incorporated in the broader discussion of findings.

Female provider preference was common among participants, however, this finding seemed thin as a theme so we left it out, especially since so many others have already reported it. We added to the results (line 447): “Finally, female provider preference was common among participants.”

3. The authors could suggest new avenues for future research. For example, the authors might acknowledge other potential variables that could influence how women experience and access cancer screening appointments (e.g., socioeconomic status, psychopathology). In addition, the current stated goal of the paper should be incorporated as a direction for future research, such that additional research is needed to empirically examine variables that predict women’s presentation, or failure to utilize, cancer screening. Future research should also consider the use of critical incident studies to examine women’s experiences with screening appointments.

We added to the discussion (lines 568-572):

“The role of socio-demographic, socio-political, cultural, substance use, mental health and post-traumatic stress disorder are important directions for future research not captured effectively during our investigation. Future research is also needed on quantifying how prevalent the perceptions presented here are among all CSA survivors and survivors of youth or adult sexual abuse and violence.”

4. Additional attention should be given to the limitations of this study, especially regarding the generalization of findings. For example, given that this sample was identified as having had therapy to recover from abuse, results may not be as generalizable to other women who have not received such services. An additional limitation is the use of a relatively small sample, which restricted the ability to detect variables that determine or predict women’s reactions to participating in screening.

Generalizability has been discussed earlier. Our sample size is sufficiently large for a qualitative study, especially since we achieved descriptive saturation.

5. Selection bias of the sample should also be considered as a potential limitation to this study. Perhaps variables that are barriers to cancer screening are also barriers to research participation regarding a history of trauma.

While this may be true, it is a low priority and so is not addressed given space limitations.

6. The authors imply that participation in the present research could contribute to greater utilization of preventive cancer screening. This could be examined empirically; the authors should take care not to overstate this possibility, which remains purely speculative at present. On this note, the sensitivity of the authors to the difficulties that women may experience when participating in research and/or health care and when participating in discussions related to trauma is a strength of this paper. For example, the authors commented on participant's perceptions of participating in this research (e.g., asking for email rather than an online chat). The authors may find that greater discussion of their precise interviewing technique could enhance readers' understanding (and subsequent incorporation of this strategy into future research). The authors may wish to acknowledge that other studies of women has empirically examined women's perceptions of participating in research related to interpersonal violence and trauma (e.g., see Edwards, Kearns, Gidycz, & Calhoun, 2009; Weitlauf et al., 2007; any work by Elana Newman).

We devote three paragraphs to the aspects of the interview process that we believe strengthened our interviews (lines 523-553):

"A major strength of our study was having a CSA survivor conduct the interviews and participate in the analysis. First, our community partner knew how to approach participants to ensure their safety and she was able to recognize from experience that we would need to remain flexible about how information was shared, gathered and recorded. As it turned out, it was very important to let participants decide how they would communicate and this was reinforced when one of the participants requested an alternative form of communication:

"I think that I'm having anxiety around our Skype date, even as chat.... Would it be o.k. if we follow up via e-mail, at least around this project, for now? I'm very comfortable with that option. And I apologize if this interferes with the research in any way, because I think that the project is really worthwhile." (Int 8)

Remaining flexible ensured all CSA survivor voices had a chance to be heard. Having our community partner participate in the analysis helped identify and prioritize themes and recommendations that may have otherwise been disregarded or taken for granted.

"Our community partner has had many years of interactions with people with DID, which enabled her to interact with DID participants in a way that obtained different points of view from those parts (identities) who presented. Her experience and sensitivity towards DID helped DID participants, who would normally pose as a singleton with a different interviewer, be themselves and present different parts over the course of a single interview. Only one subject overtly presented different parts. Others who self-identified switched without overtly presenting, and although she changed her interview style according to the presentation, she did not comment on the change in those cases.

"The interview process itself turned out to be an example of what participants recommended; that is, using humor, paying attention, and sharing. A number of participants spoke about feeling very positive about the interview and their contribution. Specifically, one interviewee went to her doctor to discuss the human papilloma virus (HPV) vaccine because of what she learned during and following her interview. Another interviewee said the experience gave her the confidence to enter into her first

sexual relationship in many years, a positive one in the context of a romantic relationship.”

Concluding Comments:

The Reviewers wish to thank BMJ-Open for the opportunity to review this manuscript. It is our hope that our comments are helpful to the authors in their efforts to revise this manuscript. Further, we wish to convey that the perhaps unusually detailed review reflects our interest and efforts support work that illuminates the perspectives of women who are victims of interpersonal violence. All comments were meant to be constructive and support productive work on this most worthy topic of study.

Thank you for the opportunity to review this manuscript. The manuscript is very well-written on a topic that is very important to advance qualitative knowledge of the relationship between childhood sexual abuse and cancer screening behaviors, and to suggest recommendations. Just a few comments below:

Overall

Minor

- 1) Please change “ones” to “one’s” on page 2, line 32 and page 5, line 55.

Corrected

- 2) Delete additional appendix.

Appendix II is “Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist” required by journal.

Methodology

- 3) One strength of the study was that the interviewer was also a survivor of childhood sexual abuse so this person could provide support to interviewees based on personal experience. Nevertheless, were the questions pilot-tested before being asked to the study population? If not, please list this as an additional study limitation as pilot testing of the interview questions help to better determine wording, order, scope, etc.

We added (lines 157-158):

“Outsider researchers reviewed interview questions, probes and flow before the interview guide was finalized.”

- 4) The explanation of the absence of audio-recording is given and understood for the context of the study. However, the absence of audio recording and entering data in real time is still a limitation for the methodological rigor of the study. Please explain the absence of audio recording as a strength based on consideration of the study population but a limitation based on methodological rigor.

We added to the discussion (lines 555-559):

“The absence of audio recording was a consideration of the study population and facilitated CSA survivor participation and safety; however, it is still a methodological limitation of our study. This limitation primarily affected Survivors who participated orally in their interview. Participants who participated through online chat were recorded verbatim through the written record.”

- 5) Were there any procedures done to minimize consequent potential identification of study participants? If so, please list in Methods section. If not, please address.

We added (lines 150-151):

“All interviews were anonymous. Only the interviewer knew the identity of participants.”

Results

6) The second paragraph of the results, beginning on line 46, page 8, states that “Survivors lived in rural (n=4), small town (n=5) and urban (n=2) communities in Canada (n=9) and the United States (n=3).” The numbers stratified by rural/small town/urban status add up to 11. Please adjust accordingly so it is clear where the 12 participants were residing, if possible.

Numbers have been corrected.

7) Page 8, line 54. Is there a specific reason for the focus on dissociative identity disorder, and not also on other mental health disorders such as depression, anxiety, posttraumatic disorder, etc.? If so, please include in Introduction the rationale for focusing on dissociative identity disorder so the link is clear to readers. Also, if data were collected on other mental health disorders, please include in results.

We added to the results (lines 236-240):

“Three participants disclosed having dissociative identity disorder (DID) and had more than one personality participate in the interview, though it is likely that more than two participants were DID since is highly stigmatized and even debated in the psychiatric world[26] making it a condition most multiples will not readily disclose.”

And (lines 271-297):

“The Unique Needs of CSA Survivors with Dissociative Identity Disorder

We found DID could affect cancer screening both in terms of accessing and participating in screening programs. One participant shared: “We have to take responsibility for our health. I can tell the younger ones too. Some things aren’t comfortable but it’s for making us healthy.” (Int 6). This statement provides a glimpse into the complexity of decision making for someone with DID. Balancing the potentially competing thoughts, opinions, concerns and anxieties of multiple personalities can impact the decision to access cancer screening.

“Conflict around the ‘legitimacy’ of DID in the psychiatric world[30] is not helping people with multiple personalities (multiples) access health care services or get the care they need. The debate can impact the way some doctors interact with DID patients and thus undermining the DID experience and trust. As one DID participant described: “I think mostly my psychiatrist, they don’t really take it seriously, the mental illness. I would like to be treated like a person and when I tell them I was diseased with something to take them seriously and when I need care, give me the care that I need.” (int 7)

“Furthermore, health care providers should be aware that a patient with DID may either show up to an appointment in a younger state or have a younger personality come forward during an appointment:

“For me, I’m fortunate in having a wonderful [doctor] who knows my [disorder] and in fact on one occasion going back quite a number of years, I made an appointment in a young state. He treated me as usual, his tone changed in a gentle way.” (Int 6)

Doctor awareness of the mental and emotional state of his patient, changes in state, and providing compassionate care facilitated not only this cancer screening appointment but future screening appointments as well.”

8) Page 9, line 39. Since there is a focus in the manuscript on “compassionate care”, please define “compassionate care” so this concept is clear to readers. “The core concept that emerged was that

Survivor participation in cancer screening is supported most by compassionate care, which may be defined as..." or a similar statement.

We clarified (lines 251-259):

"The core concept that emerged was that CSA survivor participation in cancer screening is supported most by compassionate care. Compassionate care means providers relating to CSA survivor, and really all patients, on a human level, in understanding, empathizing and mitigating potential sources of suffering. Compassionate care is the overarching term we use to summarize the themes and sub-themes from our analysis, including: the desire for holistic care; the unique needs of CSA survivors with dissociative identity disorder; the patient - health care provider relationship; appointment interactions; the cancer screening environment; and provider assumptions about patients. Each theme is described in detail below."

9) It is also recommended to italicize quotes.

We indented quotes

Discussion

10) The first line of the last paragraph on page 15, line 20 state that survivors under the age of 40 or male survivors were not interviewed. Please state the reason for this exclusion.

We did not have access to men who survived CSA and we focused on women eligible for all three cancer screening tests, which is predominantly over 40.

11) Gaps in the literature are mentioned. However, please state explicitly recommendations for future research based on the findings in this study and the exclusion of other affected populations in the current study.

Future research directions have been added.

VERSION 2 – REVIEW

REVIEWER	Monique J. Brown, PhD, MPH University of South Florida, USA
REVIEW RETURNED	26-May-2015

GENERAL COMMENTS	Authors have addressed my comments.
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REVIEWER	Julie C. Weitlauf VA Palo Alto Health Care System/Stanford University School of Medicine Erika Kelley, M.S. Ohio University
REVIEW RETURNED	17-May-2015

GENERAL COMMENTS	The revision of this manuscript is commendable. The authors have addressed many of the earlier reviewer comments, and these efforts have contributed to the clarification of the procedures and aims of this study. More specifically, the modification of the stated aims of the paper and the addition of detail regarding the methodology and analytic plan inform the readers'
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conceptualization of this paper. Furthermore, the authors' inclusion and integration of empirical support and references into the methods also helps to clarify, clearly define, and support the utilized methodology (i.e., CBPR approach and thematic analysis) as well as to clarify the match between the stated aims of the paper and the methodology. Some additional references, e.g., regarding the post-positive approach, are still needed.

Major comments

- a) Greater care to ensure that the authors do not communicate that their study promotes knowledge of things that have improved screening rates is needed. For example, the phrasing of the title, and many sentences in the intro and discussion section, are suggestive that the authors believe these factors contribute to increased screening rates when they have no conclusive evidence of that.
 - 1. Please consider re-wording the title of the study given that the study did not evaluate attendance to cancer screening, but rather their perspectives on, and experiences with, screening, which is a valuable construct.
 - 2. Results are clearly a depiction of participants' perceptions of things that made cancer screening more pleasant or tolerable. There is no evidence of what factors increase likelihood of first time or on time screening. Minor revisions throughout the paper should be made to clarify this point.
- b) In the first paragraph of the introduction, and throughout the abstract be careful with wording related to lack of screening contributing to elevated rates of cancer. Lack of preventive health care may promote increased risk for cancer, but lack of screening will only delay detection. Some acknowledgement that risk for the various cancers (cervical, breast, colon) are variable is needed, as is some awareness of the specific role that sexual abuse would be expected to play in that risk (e.g., cervical cancer is associated with HPV infection) would be expected here.
- c) The omission of all prior literature related to the potentially moderating role of PTSD in women's perceptions of these examinations is problematic.

Minor Comments and Suggestions

- a) Regarding managing the length (word count), the authors may find that moving participant quotations into a Table (which does not count against the word length) may solve this problem.
- b) There was significant addition of discussion regarding the diagnosis of dissociative identity. This is helpful in illustrating the relevance of this diagnosis in this study, however it is unclear how the prevalence of this disorder among women in the sample is reconciled with the

	<p>statement that participants were “stable.”</p> <p>c) The authors have added significantly to their references, which lends support to their statements and procedures. Perhaps discussion of additional clinical and research implications of the findings would provide greater support for the contribution of this work to the existing literature (with the understanding that there are space/word limitations).</p> <ol style="list-style-type: none"> 1) For example, would the information gleaned from this study help to recruit women to initially attend screenings or to remain in/complete screenings? Given the theme “being mentally present and respectful” (i.e., participants’ appreciation for providers who talked them through the procedure), a potential implication that could increase attendance to cervical cancer screening would include implementation of outreach efforts that provide psychoeducation about screening procedures. 2) This is also likely supported by the authors’ findings that some women appeared to have limited knowledge/understanding of cervical cancer. 3) Perhaps this would also implicate the need for optional consultation meetings prior to screenings. In addition, the authors could make more specific recommendations on where/when to implement their informational video. As another example, the authors describe in the Discussion how a participant reported that she entered into a sexual relationship following the interview. Thus, perhaps an avenue for future research would be to examine whether compassionate care has an impact on not only completion of cancer screening, but other psychosocial variables (e.g., interpersonal functioning). 4) As a further example, the authors comment on how their stated recommendations for cancer screening would likely be applicable to all women regardless of CSA history. Thus, a potential area of future research would be to conduct a similar qualitative study examining women with and without a history of CSA to indeed examine whether or not these are unique needs or concerns with this population. <p>d) There are a few minor typographical errors that could also be addressed:</p> <ol style="list-style-type: none"> 1) On p.11 line239, it appears that some words are missing in this line. “...were DID since is highly
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	stigmatized...” perhaps should read “reported a diagnosis of DID since DID is highly stigmatized...”
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REVIEWER	Louise Cadman Centre for Cancer Prevention, Wolfson Institute of Preventive Medicine, Queen Mary University of London, United Kingdom
REVIEW RETURNED	26-May-2015

GENERAL COMMENTS	Thank you for this revised version of your paper. It has certainly benefitted from the changes you have made. I wish you luck with your future research.
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VERSION 2 – AUTHOR RESPONSE

Second Review: Weitlauf & Kelley

Manuscript Title: Compassionate Care Can Help Childhood Sexual Abuse Survivors

Attend Cancer Screening. A Qualitative Interview Study.

Manuscript: #bmjopen-2015-007628.R1

Comment: Some additional references, e.g., regarding the post-positive approach, are still needed.

Response: We clarified in the methods (lines 114-116): “We approached this research from a pragmatic constructivist perspective[1] and used a community based participatory research (CBPR) approach[2-5] to conduct cancer screening research with CSA survivors.” And added reference 1.

Major comments

a) Greater care to ensure that the authors do not communicate that their study promotes knowledge of things that have improved screening rates is needed. For example, the phrasing of the title, and many sentences in the intro and discussion section, are suggestive that the authors believe these factors contribute to increased screening rates when they have no conclusive evidence of that.

1. Please consider re-wording the title of the study given that the study did not evaluate attendance to cancer screening, but rather their perspectives on, and experiences with, screening, which is a valuable construct.

Response: We retitled the manuscript, “A Qualitative Cancer Screening Study with Childhood Sexual Abuse Survivors: Experiences, Perspectives and Compassionate Care.”

2. Results are clearly a depiction of participants’ perceptions of things that made cancer screening more pleasant or tolerable. There is no evidence of what factors increase likelihood of first time or on time screening. Minor revisions throughout the paper should be made to clarify this point.

Response: We have made revisions throughout the results and discussion to emphasize that the

results are based on participant perceptions and recommendations.

b) In the first paragraph of the introduction, and throughout the abstract be careful with wording related to lack of screening contributing to elevated rates of cancer. Lack of preventive health care may promote increased risk for cancer, but lack of screening will only delay detection. Some acknowledgement that risk for the various cancers (cervical, breast, colon) are variable is needed, as is some awareness of the specific role that sexual abuse would be expected to play in that risk (e.g., cervical cancer is associated with HPV infection) would be expected here.

Response: Technically, some cancer screening tests (e.g. cervical) detect pre-cancerous as well as cancerous conditions so lack of screening can do more than delay detection. We softened the introduction to read (lines 79-84): “The reasons for this latter association are complex and not fully understood[6]; however, some possibilities include that childhood sexual abuse (CSA) survivors may be: exposed to the human papilloma virus responsible for cervical cancer[7] earlier in life and more often, less likely to access preventative health care, or less likely to participate in routine cancer screening programs that can change the natural history of disease [8-12].”

c) The omission of all prior literature related to the potentially moderating role of PTSD in women’s perceptions of these examinations is problematic.

We added more discussion of PTSD. We revised the opening statement in the introduction to read (lines 76-78): “Adverse childhood experiences, especially around sexual abuse, have been associated with significantly increased risk for a wide range of physical and mental health problems[13], including post-traumatic stress disorder and dissociation[14-20].”

We added references 14-20.

We added reference 11 and 12 to support the statement (lines 531-533): “The choppy disconnected sentences used to communicate this recommendation lends additional para-verbal insight into how post-traumatic stress and the trauma of CSA can impact health care seeking and experiences in adulthood[11 12].”

And added to the discussion (lines 675-677): “Our findings also reveal that CSA survivors with or without DID may dissociate during medical procedures as a way of coping with stress and anxiety, providing contextual evidence of the long-term impact of post-traumatic stress disorder from CSA[14-22].”

Minor Comments and Suggestions

a) Regarding managing the length (word count), the authors may find that moving participant quotations into a Table (which does not count against the word length) may solve this problem.

Response: We moved many quotes into Table 1 to accommodate the remaining additions necessary to address these final comments, which has resulted in a net reduction in the body of the manuscript by about 150 words.

b) There was significant addition of discussion regarding the diagnosis of dissociative identity. This is helpful in illustrating the relevance of this diagnosis in this study, however it is unclear how the prevalence of this disorder among women in the sample is reconciled with the statement that participants were “stable.”

Response: Having DID does not make a person unstable. In the DSM-V, DID is only a problem if, “The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.” All of our participants were functioning normally and none were distressed.

b) The authors have added significantly to their references, which lends support to their statements and procedures. Perhaps discussion of additional clinical and research implications of the findings would provide greater support for the contribution of this work to the existing literature (with the understanding that there are space/word limitations).

- 1) For example, would the information gleaned from this study help to recruit women to initially attend screenings or to remain in/complete screenings? Given the theme “being mentally present and respectful” (i.e., participants’ appreciation for providers who talked them through the procedure), a potential implication that could increase attendance to cervical cancer screening would include implementation of outreach efforts that provide psychoeducation about screening procedures.
- 2) This is also likely supported by the authors’ findings that some women appeared to have limited knowledge/understanding of cervical cancer.

Response: We added to the discussion (lines 666-685): “Our finding that several CSA survivors appreciate when providers talked them through procedures suggests cancer screening participation could be improved with interventions and outreach efforts that provide psycho-education about screening procedures, such as optional consultation meetings prior to screening or community health information evenings targeting larger groups. This type of intervention is further supported by our findings that some women have limited knowledge or understanding of cervical cancer.

“Our findings also reveal that CSA survivors with or without DID may dissociate during medical procedures as a way of coping with stress and anxiety, providing contextual evidence of the long-term impact of post-traumatic stress disorder from CSA[14-22]. This finding highlights the unique needs of CSA survivors, especially those with DID who may also have to balance internal competing perspectives on screening and may arrive to an appointment in a younger state. DID CSA survivors indicated that providers who adjusted their interaction-style to meet the needs of their presenting identity felt supported through the screening process, which facilitated their participation through to completion. These positive experiences also helped reduce anxiety, maintained rapport and a positive patient-provider relationship, and encouraged CSA survivors to continue participating in screening programs.”

3) Perhaps this would also implicate the need for optional consultation meetings prior to screenings. In addition, the authors could make more specific recommendations on where/when to implement their informational video. As another example, the authors describe in the Discussion how a participant reported that she entered into a sexual relationship following the interview. Thus, perhaps an avenue for future research would be to examine whether compassionate care has an impact on not only completion of cancer screening, but other psychosocial variables (e.g., interpersonal functioning).

Response: We added to the discussion (lines 662-667): “The intention was for this video to be a resource for: educational institutions (medical training programs, nursing programs, allied health programs) to train new health care providers, health care facilities to train new or existing staff, continuing education credits for health care providers already delivering care to CSA survivors, or simply for health care providers searching the web to learn how to better support CSA survivor clients.”

We also added to the discussion (lines 728-731): “The role of video and audio recording is an important consideration that should be researched more intentionally and formally given its sensitive and potentially triggering impact on CSA survivors and methodologic impact on research.”

4) As a further example, the authors comment on how their stated recommendations for cancer screening would likely be applicable to all women regardless of CSA history. Thus, a potential area of future research would be to conduct a similar qualitative study examining women with and without a history of CSA to indeed examine whether or not these are unique needs or concerns with this population.

Response: We added to the discussion (lines 744-747): Finally, another potential area of future research would be to conduct a similar qualitative study among women with and without a history of CSA to determine whether or not these are unique needs or concerns with this population.”

d) There are a few minor typological errors that could also be addressed:

1) On p.11 line239, it appears that some words are missing in this line. “...were DID since is highly stigmatized...” perhaps should read “reported a diagnosis of DID since DID is highly stigmatized.”

Response: Recommended change has been made.

References in Responses:

1. Creswell JS. Research Design: Qualitative, Quantitative and Mixed Methods Approaches. 4rd Edition. Thousand Oaks, CA: Sage Publication, 2014.
2. Israel BA, Schulz AJ, Parker EA. Methods in Community-Based Participatory Research for Health. San Francisco, CA: Jossey-Bass, 2005.
3. Subrahmanian K, Petereit DG, Kanekar S, et al. Community-based participatory development, implementation, and evaluation of a cancer screening educational intervention among American Indians in the Northern Plains. *Journal of cancer education : the official journal of the American Association for Cancer Education* 2011;26(3):530-9 doi: 10.1007/s13187-011-0211-5[published Online First: Epub Date]].
4. Wallerstein N, Duran B. Community-based participatory research contributions to intervention research: the intersection of science and practice to improve health equity. *American Journal of Public Health* 2010;100 Suppl 1:S40-6 doi: 10.2105/AJPH.2009.184036[published Online First: Epub Date]].
5. Jagosh J, Macaulay AC, Pluye P, et al. Uncovering the benefits of participatory research: implications of a realist review for health research and practice. *Milbank Q* 2012;90(2):311-46 doi: 10.1111/j.1468-0009.2012.00665.x[published Online First: Epub Date]].
6. Kelly-Irving M, Mabile L, Grosclaude P, Lang T, Delpierre C. The embodiment of adverse childhood experiences and cancer development: potential biological mechanisms and pathways across the life course. *Int J Public Health* 2013;58(1):3-11 doi: 10.1007/s00038-012-0370-0[published Online First: Epub Date]].
7. Bosch FX, de Sanjose S. The epidemiology of human papillomavirus infection and cervical cancer. *Dis Markers* 2007;23(4):213-27
8. Gesink D, Mihic A, Antal J, et al. Who are the under- and never-screened for cancer in Ontario: a qualitative investigation. *BMC Public Health* 2014;14:495 doi: 10.1186/1471-2458-14-495[published Online First: Epub Date]].
9. Olesen SC, Butterworth P, Jacomb P, Tait RJ. Personal factors influence use of cervical cancer screening services: epidemiological survey and linked administrative data address the limitations of previous research. *BMC health services research* 2012;12:34 doi: 10.1186/1472-6963-12-34[published Online First: Epub Date]].

10. Farley M, Golding JM, Minkoff JR. Is a history of trauma associated with a reduced likelihood of cervical cancer screening? *The Journal of family practice* 2002;51(10):827-31
11. Weitlauf JC, Frayne SM, Finney JW, et al. Sexual violence, posttraumatic stress disorder, and the pelvic examination: how do beliefs about the safety, necessity, and utility of the examination influence patient experiences? *J Womens Health (Larchmt)* 2010;19(7):1271-80 doi: 10.1089/jwh.2009.1673[published Online First: Epub Date]].
12. Weitlauf JC, Jones S, Xu X, et al. Receipt of cervical cancer screening in female veterans: impact of posttraumatic stress disorder and depression. *Women's health issues : official publication of the Jacobs Institute of Women's Health* 2013;23(3):e153-9 doi: 10.1016/j.whi.2013.03.002[published Online First: Epub Date]].
13. Maniglio R. The impact of child sexual abuse on health: a systematic review of reviews. *Clinical psychology review* 2009;29(7):647-57 doi: 10.1016/j.cpr.2009.08.003[published Online First: Epub Date]].
14. Bernier MJ, Hebert M, Collin-Vezina D. Dissociative symptoms over a year in a sample of sexually abused children. *Journal of trauma & dissociation : the official journal of the International Society for the Study of Dissociation* 2013;14(4):455-72 doi: 10.1080/15299732.2013.769478[published Online First: Epub Date]].
15. Collin-Vezina D, Cyr M, Pauze R, McDuff P. The role of depression and dissociation in the link between childhood sexual abuse and later parental practices. *Journal of trauma & dissociation : the official journal of the International Society for the Study of Dissociation* 2005;6(1):71-97 doi: 10.1300/J229v06n01_05[published Online First: Epub Date]].
16. Collin-Vezina D, Hebert M. Comparing dissociation and PTSD in sexually abused school-aged girls. *The Journal of nervous and mental disease* 2005;193(1):47-52
17. Ginzburg K, Koopman C, Butler LD, et al. Evidence for a dissociative subtype of post-traumatic stress disorder among help-seeking childhood sexual abuse survivors. *Journal of trauma & dissociation : the official journal of the International Society for the Study of Dissociation* 2006;7(2):7-27 doi: 10.1300/J229v07n02_02[published Online First: Epub Date]].
18. Mueller-Pfeiffer C, Moergeli H, Schumacher S, et al. Characteristics of child maltreatment and their relation to dissociation, posttraumatic stress symptoms, and depression in adult psychiatric patients. *The Journal of nervous and mental disease* 2013;201(6):471-7 doi: 10.1097/NMD.0b013e3182948096[published Online First: Epub Date]].
19. Price C. Dissociation reduction in body therapy during sexual abuse recovery. *Complementary therapies in clinical practice* 2007;13(2):116-28 doi: 10.1016/j.ctcp.2006.08.004[published Online First: Epub Date]].
20. Rivera-Velez GM, Gonzalez-Viruet M, Martinez-Taboas A, Perez-Mojica D. Post-traumatic stress disorder, dissociation, and neuropsychological performance in Latina victims of childhood sexual abuse. *Journal of child sexual abuse* 2014;23(1):55-73 doi: 10.1080/10538712.2014.864746[published Online First: Epub Date]].
21. Dorahy MJ, Brand BL, Sar V, et al. Dissociative identity disorder: An empirical overview. *Aust N Z J Psychiatry* 2014;48(5):402-17 doi: 10.1177/0004867414527523[published Online First: Epub Date]].
22. Sar V. The many faces of dissociation: opportunities for innovative research in psychiatry. *Clin Psychopharmacol Neurosci* 2014;12(3):171-9 doi: 10.9758/cpn.2014.12.3.171[published Online First: Epub Date]].

VERSION 3 - REVIEW

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REVIEW RETURNED	01-Jul-2015
GENERAL COMMENTS	Excellent work. No further comments.