Author's response to reviews

Title: Knowledge of the abortion legislation among South African women: a cross-sectional study

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Author's response to reviews: see over
Dear Dr Kulier,

Please find our revised manuscript enclosed (Knowledge of the abortion legislation among South African women: a cross-sectional study), as well as a detailed response to the reviewer comments (Below). We have accepted all of the reviewers’ suggestions and have revised the manuscript accordingly. Thank you for your continued consideration of our manuscript.

We look forward to hearing from you.

Yours sincerely

Chelsea Morroni
Senior Researcher, Women’s Health Research Unit
Response to Reviewer's report
Reviewer: Kelly Blanchard
Reviewer's report: General
This paper presents results of an important investigation into what women in South Africa know about the (relatively) recent legalization of abortion. The study results are an important addition to the literature, and I believe will also be extremely useful to policy makers and advocates working to expand access to and quality of abortion services in South Africa. As a reader, I would like some additional information about the study, and more details about the results. I would also suggest broadening the conclusions and recommendations, as detailed below. I hope these comments are useful.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. I personally would like more information on the study. I will include some specific questions about methodology below, but it would also be helpful to know if this was a stand-alone survey addressing knowledge of the abortion law, or was it part of a bigger survey (some of the citations in the discussion about unintended pregnancy made me think it might be part of a larger survey)? I would also like more information on the types of questions asked and the wording of some of the key questions. We agree with the reviewer. We have included the following sentences in the methods section:

   “To assess women’s knowledge of key reproductive health services, namely abortion, emergency contraception and voluntary testing and counselling for HIV, we undertook a cross-sectional study in 26 community health clinics…”

   “To assess knowledge of abortion, we asked the following key questions: 1) Does the present law on abortion in South Africa allow for a woman to have an abortion? 2) Up to how many weeks of pregnancy is a woman allowed by this law to have a legal abortion? 3) Has a health care worker ever discussed abortion with you? A description of legal abortion was then read to all participants and they were asked open ended questions about perceived safety and their attitudes.”

2. I think it would be helpful to the reader to include at least two tables--one showing details of the survey results--including demographics, perhaps showing some additional information on variation by clinic. I also think a table showing what was included in the regression model would be useful. We agree with the reviewer. Three tables presenting requested data have been included.

3. Please provide additional information on the sampling strategy. The authors state that the number of women interviewed was proportional to clinic size--was clinic size determined by number of clinic visits? Was the same indicator used for the random selection of clinics? How much did clinic size vary? Did the interviewers interview consecutive women until the target sample size was reached? We agree with the reviewer. We have provided additional information on the sampling strategy, indicators used for clinic selection and procedures for achieving target sample size.

   “In each region, a random sample of primary health care clinics was selected with probability of selection weighted by patient load based on clinic usage statistics obtained...”
from the Provincial Department of Health. Over a two-day data collection period at each clinic, interviewers approached consecutive women to participate, as they signed into the clinic, regardless of their reason for attending the clinic.”

“...the number of women interviewed at each facility was proportional to clinic size (based on total patient load) and varied from 11 to 52. Consecutive women were interviewed until the target sample size was reached.”

4. The authors state that the study was approved by the participating institutions--can they please add more details (i.e. UCT? Provincial gov’t? District gov’t?) We agree. Additional information about ethical approvals has been added to the methods section.

” All participants provided written informed consent and ethical approval to conduct the survey was granted by the Provincial Department of Health, the City of Cape Town Health Department, each participating clinic and the University of Cape Town.”

5. As stated above, it would be very helpful to know how some of the questions about the main outcome measures were asked--for example what was the wording of the question that revealed that a third of women did not know abortion was legal? We agree and have added the key questions to the methods section. Please see response to Reviewer Comment #1 above.

6. It would be useful to me to see more details about the multivariate model the authors constructed. What method was used to derive the best model? What statistic was used to evaluate alternative models? What variable were included and what were the criteria for inclusion? We agree. We have provided more detail about the development of the multivariate model, with an appropriate citation, in the methods section:

“Variables that demonstrated significant bivariate associations with abortion knowledge (defined as p<0.05) were entered into model. Variables were retained in the final logistic regression models if they demonstrated a significant independent association with the outcome of interest, or if their removal altered the association between other covariates and the outcome of interest.” Hosmer DW, Lemeshow S. Applied logistic regression. New York: John Wiley and Sons, 1989.

7. In the discussion and conclusion the authors suggest that providers need to discuss abortion services more often with their clients, particularly conveying information on the law and the time restrictions it includes. I would suggest …

a. expanding the discussion to show how this data compares to similar data in other countries where abortion is legal (newly legal would be particularly interesting). After an extensive search it has been difficult to find data on knowledge of abortion legislation from settings where abortion is newly legal specifically, but we have expanded the discussion to include comparisons with other settings with appropriate citations:

“This is one of the few studies focusing on South African women’s knowledge of the abortion law. These findings show that one-third of women surveyed do not know that abortion is legal in South Africa. Knowledge of legality of abortion in other similar country settings where abortion is legal is similar and ranges from 45% in Mexico to 57% in Latvia to 78% in the Gauteng Province of South Africa. [7, 9-10] In one qualitative study of women South African who had induced abortions outside of the legal abortion services, 54% reported having done so because they did not know about the law. [7].”
b. and would also be interesting to hear whether the authors think other activities--information campaigns, for example, or school-based sex education or life skills programs could incorporate information on abortion services as well. Many women who might be at greatest need for abortion--women who cannot or do not access family planning services--may be unlikely to visit a provider who could discuss the law with her, and other potential ways of increasing knowledge about the law would be a useful addition to the paper. **We agree and have expanded the discussion to include other potential ways of increasing knowledge about the law.**

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**Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)**

8. I would suggest a more active voice throughout the paper. Changing, for instance, the first sentence in the abstract to something along the lines of, "In order to ensure that legalized abortion in South Africa improves reproductive health, women must know that abortion is a legal option....." Under Methods I would amend the first sentence to say, "We conducted a cross-sectional survey of 831 sexually active women.... I would also suggest changing "knew of legal abortion: to "knew abortion is legal" throughout the text. We agree and have expanded the discussion to include other potential ways of increasing knowledge about the law.

9. I would delete the first two commas in the final sentence of the Background section.

Deleted.

10. In the first paragraph under Methods I would start, "We conducted a cross-sectional survey at 26 community health clinics...." **We agree and have changed the wording per the reviewer’s suggestion.**

11. The third sentence under methods was not clear to me--did interviewers spend two days at each clinic approaching consecutive women? Where--as they signed in? **We agree. The sentence has been amended as follows:**

   "**Over a two-day data collection period at each clinic**, interviewers approached consecutive women to participate, **as they signed into the clinic**, regardless of their reason for attending the clinic."

12. At the end of the first paragraph of the results section I suggest changing to, "...who had ever been pregnant, 61% reported their last pregnancy was unintended." **We agree. The sentence has been amended as follows:** "Of the 688 participants who had ever been pregnant, **61% (n=420) reported that their last pregnancy was unintended.**"

13. In the second paragraph under results, sentence three, I would suggest amending to "...from clinic to clinic; the proportion who knew abortion was legal ranged from less than 6% to greater than 64%." Would it be possible to include a graphic that showed where the clinics were and what the proportion knowing legality was? **We agree. The sentence has been amended as follows:** "Furthermore, **from clinic to clinic, the proportion who knew abortion was legal ranged from less than 6% to greater than 64%.**"

14. Further along in the same paragraph "their" should be "there." **Done.**
15. In the discussion, it would be helpful for the authors to define or further explain what they mean by "worrisome."
16. I would like to see the authors write more about their comment that women who do not know abortion is legal may be at high risk of unintended pregnancy--this seems to me to be an important area for future research.
   We agree and have provided further explanation/detail:

   “One-third of women surveyed in 2004/2005 do not know that abortion is legal in South Africa. This finding, coupled with the findings that 61% of last pregnancies in this sample were unintended and 25% of women who did not want to fall pregnant did not use a method of pregnancy protection at last intercourse [9], is worrisome. Not only are an appreciable proportion of these women uninformed about the option of abortion in the case of unwanted pregnancy, they are also unable to protect themselves from unintended pregnancy in the first place.”
Reviewer's report
Reviewer: Deborah Billings
Reviewer's report: General
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The authors need to add the dates of the study to the Abstract and to the methodology section. Done.

The abstract now reads as follows:
“**In 2004/2005, we conducted a cross-sectional study...**”

The methods now reads as follows:
“...in 2004/2005 we undertook a cross-sectional study in 26 community health clinics in one urban and one rural health region in the Western Cape Province, South Africa.”

2. The Conclusion of the Abstract needs to be re-written since it is much broader than the study itself. Suggestion: In South Africa there is unmet need among women for information about abortion. Strategies should be developed to address this gap so that women are fully informed of their rights to a safe and legal termination of pregnancy. **We agree and have revised the conclusion of the abstract per the reviewer’s suggestion. It now reads:**

“In South Africa there is an unmet need among women for information on abortion. Strategies should be developed to address this gap so that women are fully informed of their rights to a safe and legal termination of pregnancy.”

3. In the Conclusion (both Abstract and the text), the authors refer to the need for greater "client-provider dialogue regarding abortion." My question is, why limit the dialogue or source of information to the provider and the client-provider relationship? The authors should explore other areas and means of intervention. **We agree and have expanded the discussion to include other potential ways of increasing knowledge about the law.**

4. Define the term "designated facilities." How does a facility become "designated" in South Africa? **We have done this. We have changed the wording as follows:** “facilities certified by the national or provincial department of health to provide abortions…”

5. Describe more about the place of the study-- West Cape Province. How is it alike and different from other provinces? Why was the study conducted only in this province?

**We have done this. The following sentences have been included in the methods:** “The Western Cape is among South Africa’s better-resourced provinces, has the best reproductive health indicators, and is considered to have the best developed reproductive health infrastructure in the country. The study was requested by the Western Cape provincial health department.”

6. Methods: add the dates of the data collection. Define what it means to approach "consecutive women"; how was "clinic size" defined or determined? Which "participating institutions" provided ethical approval for the study? Each individual clinic or the Department of Health as a whole? **We have addressed all of these comments. See response to Reviewer 1 (comment #3 and #4)**
7. Results/Discussion: what accounted for the wide range of percent of women knowing about the legislation from clinic to clinic (<6% to >64%)? This is a key finding that needs to be discussed and better understood by the reader. **We agree but can shed little light on this important finding without additional research. We have clarified this in the Discussion Section as follows:** “Furthermore, this study reveals tremendous variability from clinic to clinic in terms of women’s knowledge of the abortion legislation. Reasons for this inter-clinic variability are poorly understood. This is a key finding that requires further research so that the health services are able to appropriately to target certain clinics and areas for intervention.”

8. Results: what is the relevance of the finding that only 9% of those aware of the law had even discussed abortion with a health care worker? **We have discussed the relevance of this finding in the discussion section:**

“Given that only 9% of those aware of the law had ever discussed abortion with a healthcare worker, there is clearly a need for greater client-provider dialogue regarding abortion, particularly the time restrictions and safety of the legal procedure.”

9. Results: Page 5: “their” should be “there” **Done.**

10. Results: How many and what percentage of women "would not choose to have an abortion themselves"? **We do not have this data and have removed this confusing sentence from the results.**

11. Results: Of the women who considered legal abortion to be unsafe, did they name what kind of procedure they were referring to or the length of gestation? **The description we gave was for first trimester procedure most widely done and considered most appropriate in South Africa (MVA), so the response is with reference to this procedure. We have clarified this in the results:**

“Of the total sample, most women perceived legal abortion in the first trimester by manual vacuum aspiration as medically safe…”

12. Results: was urban vs rural region not correlated with level of education? (the latter it is noted is not associated with knowledge while the former is). **No, region and level of education were not significantly correlated.**

13. Discussion: did significantly more women know about legal abortion in 1998 or just "more women"? **From the available data (i.e., the 1998 DHS data and our 2004/05 survey) no conclusions can be drawn. Please see how we have revised the discussion of our findings vs. the DHS findings in point 14 below.**

14. Discussion: might the results have been different if the method used was more similar to that of the DHS? Discuss the implications of the sampling methodology more clearly. **We agree. The text has been revised as follows:** “Although this study used the same questions as the DHS, the DHS figures are not directly comparable to these findings due to different sampling methodologies: the DHS was a community-based sample of women and this study sampled women attending health services. A comparison of these data suggests that more women know about legal abortion now than did in 1998. However, another explanation for this apparent difference in level of knowledge is that this survey was conducted among individuals attending public health clinics, with greater access to health education. Thus, the 2004/2005 results may simply reflect greater knowledge in
this sample compared to the general population of the Western Cape, as opposed to an increase in knowledge among all women through time."

15. Discussion: the authors should be more precise than "the findings... are worrisome". What exactly is meant by "worrisome"? We agree and have provided further explanation:

“One-third of women surveyed in 2004/2005 do not know that abortion is legal in South Africa. This finding, coupled with the findings that 61% of last pregnancies in this sample were unintended and 25% of women who did not want to fall pregnant did not use a method of pregnancy protection at last intercourse [9], is worrisome. Not only are an appreciable proportion of these women uninformed about the option of abortion in the case of unwanted pregnancy, they are also unable to protect themselves from unintended pregnancy in the first place."

16. Discussion: the statement that "...this study shows that lack of knowledge of legal abortion is associated with lack of knowledge of other RH knowledge, such as awareness of EC and contraceptive use" is NOT shown, discussed or supported by the data in the article. I'm not sure where this statement comes from or how it is supported. This statement is supported by the following data presented in the results section: “Characteristics independently associated with knowledge of legal abortion were living in the urban vs. rural region (OR 1.5; 95% confidence interval (CI) 1.0-2.0), having heard of emergency contraception (EC) vs. having not heard of EC (OR 2.8; 95% CI 1.9-4.2) and having used an effective method of contraception at last sexual intercourse vs. not using contraception (OR 2.0; 95% CI; 1.2-3.3).”

17. Conclusion: that the study provides insights about women's attitudes towards legal abortion--this is quite weak in the study. Either present more data in the results section and include this in the discussion or cut from the conclusions section. We agree with the reviewer and have cut this sentence from the conclusions section.