PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Future women's health providers' willingness to provide abortion services following decriminalization of abortion in Chile: a cross-sectional survey
AUTHORS	Biggs, M. Antonia; Casas, Lidia; Ramm, Alejandra; Baba, C. Finley; Correa, Sara; Grossman, Daniel

VERSION 1 – REVIEW

REVIEWER	Sarah Rominski University of Michigan, United States of America
REVIEW RETURNED	17-Apr-2019

GENERAL COMMENTS	I enjoyed reading this paper on this important topic. I have just a couple of comments: 1. The introduction could use a little fleshing out. For example, it is noted that abortion is now legally permissible for some indications in Chile. What guidelines have been published and disseminated to clinicians about this change in law? Also in the introduction, it is written, "During that period, practitioners reported a fear of prosecution when treating women with fetal or maternal complications, which may in part explain why healthcare providers and hospitals have been responsible for filing the majority of cases against women who have abortions." I would re-state this to say, "...which may in part be explained by healthcare providers and hospitals being responsible for filing the majority of cases against women who have abortions." The next sentence states, "Since that time, maternal mortality due to abortion has declined considerably, owing to increased access to contraception, misoprostol, and higher quality post-abortion care." Since what time? Are the authors saying the law liberalizing has caused these changes? It is not clear as it is currently written. 2. There are other places (I am thinking of Ghana and Ethiopia, but I'm sure there are others as well) that have changed their abortion laws and then sought to assess provider attitudes and practices. Some of that literature could be cited in the introduction. 3. While the response rate of 18% seems low, can the authors compare this response rate to other online surveys amongst medical students? 4. In the discussion section, it is written, "Most students, even those at religious universities, felt that they should receive abortion-related training and moral opposition to abortion was

	low." Was it ever asked if the students felt they *should* be trained to provide abortion services? I know that they were asked if they planned to be trained, but where did the survey ask if they felt medical and midwifery students should be trained? Along these same lines, it is stated, "The vast majority of secular and over one-third of religiously-affiliated university students have intentions to provide abortion services." From where does this come? I know that 69% said they intend to be trained, but were they ever asked if they actually planned to provide the services? I know that in some places, providers are paid based on the numbers of trainings they attend, and so being trained in a procedure does not actually mean they plan to provide those services. Were these participants asked if they planned to provide abortion services? It would also be interesting to know under what circumstances they would consider providing services, if they were trained. This is something that could be added to a limitations section.

REVIEWER	Elizabeth A. Mosley, PhD MPH Emory University Rollins School of Public Health USA
REVIEW RETURNED	03-May-2019

GENERAL COMMENTS	Abstract: -if possible, can you include confidence intervals and aORs for the significant differences between secular and religious schools? -In the results, you lead with over half of respondents having a concern about abortion provision, but this detail is omitted from the abstract (and seems important). Otherwise, this abstract is very clear and comprehensive. Introduction: very helpful background that sets up the study nicely. One comment: just make it clear early on that the new law allows physicians and midwives to provide abortions (I assume). Materials and Methods: -Could you say a bit more about the representativeness of these universities? Any sense of what proportion of overall Santiago/national medical and midwifery students you sampled? -Could you say a few more sentences on how the outcome scale items were developed? There are existing measures in the literature, but it doesn't seem you used those. That's fine, but I'd like to understand better how you tested the validity and reliability of these new scale measures (any pilot testing, etc?). And perhaps why it was important to develop these new ones. You reference alpha-scores in Table 2, but those are actually listed in Table 3. Results: very clear Discussion: very clear and does not over-reach the analyses done. I would just like to see a bit more on what can be done for these potential abortion providers--both those that do plan to offer abortions and those who are morally opposed. The authors could mention work like the Providers Share Workshop, which tries to lessen abortion provider stigma and improve professional burnout, etc. What are the options for those providers who want to offer services but aren't being trained at their institutions?

	Overall this is a well-done study, well-written paper, and will be of interest to the BMJ Open audience.

REVIEWER	Diane Cooper School of Public Health, University of the Western Cape
REVIEW RETURNED	18-May-2019

GENERAL COMMENTS	The study is timely given that the complete ban has been lifted. Of key relevance as healthcare providers are a key obstacle to access and acquisition of abortion services everywhere, even when abortion legislation is progressive. In addition, particularly important time for women's reproductive rights internationally. Important for maternal health. IVery important as authors indicate for training needs and potential values clarification in education institutions and in health services. important to note still some conservative views even though abortion only allowed in case of danger to woman's life, lethal fetus abnormality and rape. - .It would useful to include in the introduction information on who is able to provide abortions in Chile under the new law and at what stage? - Would be good to know what knowledge the students had on the changes to the abortion law. - In methods add a line for an international audience whether students studying midwifery are studying medicine (medical doctors) or nursing (midwifery). - Is the proportion of the sample at different types of universities similar to where students go to study medicine? Add a line to indicate whether this is the case. In conclusion, are the authors able to comment on who to target for training and when: - For example, comment on the worthwhileness of training providers from religious universities unless they form a substantial part of workforce - clearly would be more difficult. Also comment on strategies to change specifically OB/GYN attitudes particularly important as are those of studying midwifery Would the authors recommend focus on providing training in 3rd or 4th year of midwifery– i.e. timing of training. - Issue of retraining once in practice? Will be very interesting to follow up whether views change to more positive over time.

VERSION 1 – AUTHOR RESPONSE

Reviewers' Comments to Author:

Reviewer: 1

1. The introduction could use a little fleshing out. For example, it is noted that abortion is now legally permissible for some indications in Chile. What guidelines have been published and disseminated to clinicians about this change in law?

    - **We have added a new paragraph to the introduction, describing the current legal landscape around abortion and explaining the guidelines that have been published. "Under the current law, only physicians are authorized to provide abortions, and all women seeking abortion services are required to receive oral and written information about alternatives to abortion, as well as information about social and financial**

support programs.[6] Soon after legal reform, the Ministry of Health provided resources to clinicians informing them about the requirements around conscientious objection and accompaniment, including guidelines around how to provide psychological and emotional support to women seeking abortion, as required by law.[7] The Ministry of Health also provided a brief list of clinical fetal and maternal indications that allow a woman to obtain an abortion on the maternal and fetal health grounds. While the Ministry of Health has provided abortion training to providers throughout the country, it has not disseminated any specific clinical guidelines around abortion provision. Since the first full year of implementation of the law, the Ministry of Health has recorded over 600 legal abortions in the country.[6 8]"

2. Also in the introduction, it is written, "During that period, practitioners reported a fear of prosecution when treating women with fetal or maternal complications, which may in part explain why healthcare providers and hospitals have been responsible for filing the majority of cases against women who have abortions." I would re-state this to say, "...which may in part be explained by healthcare providers and hospitals being responsible for filing the majority of cases against women who have abortions."

    - **We have revised these sentences to clarify.**

The next sentence states, "Since that time, maternal mortality due to abortion has declined considerably, owing to increased access to contraception, misoprostol, and higher quality post-abortion care." Since what time? Are the authors saying the law liberalizing has caused these changes? It is not clear as it is currently written.

- **We have revised to now state "Since the 1990s to early 2000s…"**

3. There are other places (I am thinking of Ghana and Ethiopia, but I'm sure there are others as well) that have changed their abortion laws and then sought to assess provider attitudes and practices. Some of that literature could be cited in the introduction.

    - **We have added a new paragraph to the introduction summarizing this literature, and included some of this literature in the discussion.**

4. While the response rate of 18% seems low, can the authors compare this response rate to other online surveys amongst medical students?

    - **In the limitations section of the paper, we have further developed the implications of our low response rate and compared it to other online surveys.**

5. In the discussion section, it is written, "Most students, even those at religious universities, felt that they should receive abortion-related training and moral opposition to abortion was low." Was it ever asked if the students felt they *should* be trained to provide abortion services? I know that they were asked if they planned to be trained, but where did the survey ask if they felt medical and midwifery students should be trained?

    - **Table 2 lists students' views about whether their university should provide abortion training and who they should provide this training to.**

Along these same lines, it is stated, "The vast majority of secular and over one-third of religiously-affiliated university students have intentions to provide abortion services." From where does this come? I know that 69% said they intend to be trained, but were they ever asked if they actually planned to provide the services? I know that in some places, providers are paid based on the numbers of trainings they attend, and so being trained in a procedure does not actually mean they plan to provide those services. Were these participants asked if they planned to provide abortion services?

- **We appreciate the reviewer's thoughtful feedback, and have corrected our error, by revising the sentence entirely, and revising the language throughout the manuscript. The "intentions scale" included four items, one which as the reviewer correctly points**

out is regarding planning to become *trained* to provide abortion services. We did not have a single item referring to intentions to provide services, but we did have a single, reverse-coded item ("I will not provide abortions"). The combined items we believe are an indicator of intentions to provide (since it includes its one item on intentions not to provide "I will not provide abortions" and one item on intentions to become trained to provide, etc.). We assume that those who responded negatively to "I will not provide abortions", is a close proxy of having intentions to provide services, after reverse coding.

It would also be interesting to know under what circumstances they would consider providing services, if they were trained. This is something that could be added to a limitations section.

- **We appreciate this suggestion and have now included it in our limitations section.**

Reviewer: 2
Reviewer Name
Elizabeth A. Mosley, PhD MPH

Abstract:
-if possible, can you include confidence intervals and aORs for the significant differences between secular and religious schools?

- **We have now included beta coefficients, odds ratios, and confidence intervals in the abstract.**

-In the results, you lead with over half of respondents having a concern about abortion provision, but this detail is omitted from the abstract (and seems important). Otherwise, this abstract is very clear and comprehensive.

- **We have now included this result in the abstract, as suggested.**

Introduction: very helpful background that sets up the study nicely. One comment: just make it clear early on that the new law allows physicians and midwives to provide abortions (I assume).

- **We have clarified in the introduction that the law only allows physicians to provide abortions.**

Materials and Methods:
-Could you say a bit more about the representativeness of these universities? Any sense of what proportion of overall Santiago/national medical and midwifery students you sampled?

- **As suggested we have included this information under recruitment procedures "Based on a review of the Ministry of Education and university websites, we estimated that the seven participating universities serve over 7,000 students seeking these degrees, representing 72% of medical and 38% of midwifery students in the region and 36% of medical and 16% of midwifery students in the country.[16]"**

-Could you say a few more sentences on how the outcome scale items were developed? There are existing measures in the literature, but it doesn't seem you used those. That's fine, but I'd like to understand better how you tested the validity and reliability of these new scale measures (any pilot testing, etc?). And perhaps why it was important to develop these new ones. You reference alpha-scores in Table 2, but those are actually listed in Table 3.

- **We have now included more description of how these scales items were developed, including the existing measures we used from the literature, and have corrected that reliability coefficients are included in Table 3 (not Table 2).**

Results: very clear

- **Thank you.**

Discussion: very clear and does not over-reach the analyses done. I would just like to see a bit more on what can be done for these potential abortion providers--both those that do plan to offer abortions and those who are morally opposed. The authors could mention work like the Providers Share Workshop, which tries to lessen abortion provider stigma and improve professional burnout, etc. What are the options for those providers who want to offer services but aren't being trained at their institutions?

- **We have integrated more information how the kind of support that could be offered to providers at religiously affiliated and secular universities, including those willing and able to provide abortion services.**
- **We have now added programs that could be offered to medical students and future providers to reduce stigma and burnout, including the Providers Share Workshop, in the discussion.**

Overall this is a well-done study, well-written paper, and will be of interest to the BMJ Open audience.

- **Thank you.**

Reviewer: 3

The study is timely given that the complete ban has been lifted. Of key relevance as healthcare providers are a key obstacle to access and acquisition of abortion services everywhere, even when abortion legislation is progressive. In addition, particularly important time for women's reproductive rights internationally. Important for maternal health. IVery important as authors indicate for training needs and potential values clarification in education institutions and in health services. important to note still some conservative views even though abortion only allowed in case of danger to woman's life, lethal fetus abnormality and rape.
- .It would useful to include in the introduction information on who is able to provide abortions in Chile under the new law and at what stage?

- **We have now included more information on who is able to provide abortions in Chile, under the new law. We have added a full new paragraph describing the current context in Chile,**

- Would be good to know what knowledge the students had on the changes to the abortion law.

- **Thank you for this feedback. Unfortunately, we did not collect this information as part of the study. However, we did note your point in our limitations section.**

- In methods add a line for an international audience whether students studying midwifery are studying medicine (medical doctors) or nursing (midwifery).

- **We have now included more information about what midwifery programs in Chile as suggested.**

- Is the proportion of the sample at different types of universities similar to where students go to study medicine? Add a line to indicate whether this is the case.

- **We have now included more information about how our sample in compares to the student pool at the seven recruitment sites, as suggested. In methods we added "Based on a review of the Ministry of Education and university websites, we estimated that the seven participating universities serve over 7,000 students seeking these degrees, representing 72% of medical and 38% of midwifery students in the metropolitan region of Santiago and 36% of medical and 16% of midwifery students in the country.[16] Among the 7026 medical and midwifery students in our student pool at these seven universities, 65% are at secular and 35% are at religiously-affiliated universities; 80% are medical students, 20% are midwifery students." In discussion we added: "While 35% of the student pool at these seven universities were studying at**

religiously-affiliated universities, less than one-quarter (23%) of our responding sample came from religiously-affiliated universities."

In conclusion, are the authors able to comment on who to target for training and when:
- For example, comment on the worthwhileness of training providers from religious universities unless they form a substantial part of workforce - clearly would be more difficult. Also comment on strategies to change specifically OB/GYN attitudes particularly important as are those of studying midwifery Would the authors recommend focus on providing training in 3rd or 4th year of midwifery– i.e. timing of training.
- Issue of retraining once in practice?

- **We have included more information about the importance of training all medical and midwifery students, including those at religiously-affiliated institutions. We do not have any specific recommendations regarding when in their training they should focus this training.**

Will be very interesting to follow up whether views change to more positive over time.

- **Thank you. We are also interesting in doing this.**

VERSION 2 – REVIEW

REVIEWER	Elizabeth Mosley Emory University Rollins School of Public Health; USA
REVIEW RETURNED	10-Jul-2019

GENERAL COMMENTS	This is a very well-written paper and strong study with a cohesive approach, results, and conclusions. It will be an important contribution to the literature on international abortion services and human resources. I recommend it be accepted for publication.

REVIEWER	Diane Cooper University of the Western Cape
REVIEW RETURNED	18-Jul-2019

GENERAL COMMENTS	All the points I have raised have been addressed. Thank you.