

Reviewer's report

Title: Depression and termination of pregnancy (induced abortion) in a national cohort of young Australian women: the confounding effect of women's experience of violence

Version: 1 **Date:** 17 October 2007

Reviewer: Stanley Henshaw

Reviewer's report:

General

This study addresses an important issue with both clinical and policy relevance. Though handicapped by a low response rate, the dataset offers the possibility of shedding important new light on the relation of abortion to depression and domestic violence. I strongly recommend that you pursue this study with the revisions listed below.

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

1. This study fails to take advantage of the dataset's potential. The analysis appears to be essentially cross-sectional. All the key variables, domestic violence, abortion, and depression were taken from the same survey in 2000. The variable "termination first in 1996" adds little. One of the problems with this analysis is that domestic violence could have occurred after the abortion and even been caused by it. In this case, domestic violence should not be used as a control variable in studying the effect of abortion on depression. Another is that depression could have pre-existed the abortion and even been a factor contributing to unintended pregnancy and abortion.

The important questions that should be addressed are whether abortion causes later depression and whether domestic violence is predictive of later abortion. The influence of depression on abortion can be assessed by a regression with depression in 2000 as the dependent variable, abortion between 1996 and 2000 as the key independent variable, and depression in 1996 as another control variable. Other control variables – domestic violence before 1996 and the socio-demographic characteristics -- should of course be included in the regression. This will provide some evidence as to whether the experience of abortion resulted in an increase in depression. If a relationship is found, it may not be conclusive because the increase in depression could have been the cause of the abortion rather than vice versa. If no relationship is found, this would be strong evidence that abortion does not cause depression. This regression will also indicate whether depression and domestic violence are predictive of later abortion.

2. The number of children should be included as one of the demographic control variables. This has been found to be associated with depression.

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. There should be more detail about the survey, in particular, the response rate and an estimate of the extent of abortion underreporting. Given that 11% reported abortions, the lifetime expectation is that 25% of women will have an abortion, and most abortions occur when women are young, there is evidently a significant amount of underreporting, as is the case in most other surveys. Despite what Pratt et al. reported to Parliament, Medicare and state abortion reports give a pretty good idea of the abortion rate in Australia.

2. In Table 1, the sum of cases under Age is greater than the total number of cases.

3. You evidently dichotomized depression in order to emphasize its clinical significance, but a continuous measure of depression might be more powerful statistically. Many readers would be concerned with depression even if it did not reach the level of clinical significance. If you think the dichotomous variable is more important, you could mention in the text that a similar analysis using a continuous variable gave similar (or different) results.

4. The language is unclear in several places. For example, in the last sentence of the first paragraph of Background, "proportion of termination of pregnancies" could be referring to the number of terminations of pregnancy or to the proportion of pregnancies terminated by abortion.

5. In the last sentence of the first paragraph under Methods, how could 14,779 responses in Survey 1 be linked with 9683 responses to Survey 2? I suppose you mean that 14,779 women responded to Survey 1 but only 9683 responded to Survey 2.

6. In the fifth paragraph of the Discussion, you say that you demonstrated that "women were not more likely to experience probably depression if they had terminated a pregnancy", but the relative risk is 1.21 (0.98 – 1.50). A relative risk of 1.2 is not trivial, and while it is not statistically significant, you can't conclude that there is no risk. Based on this information, one might conclude that there is likely to be a risk but we are not 95% sure.

Discretionary Revisions (which the author can choose to ignore)

1. Under Occupation, what is "home duties"? Shouldn't these women be counted as "No paid job", or are they paid for their domestic duties?

2. Most U.S. studies use the terms "univariate" and "multivariate" rather than

“univariable” and “multivariable”. Are these Australian terms?

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.