Psychological implications of abortion — highly charged and rife with misleading research

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Abortion and its psychological implications are highly controversial, politically charged issues. Increasingly, scientific research on psychological responses to abortion is being cited as a basis for making policy decisions about access to abortion. In such a climate, it is essential that health providers and policy-makers base their conclusions on reputable scientific research that is methodologically rigorous, conceptually sound and free from ideological bias.

In this issue (page 1253),[1] David Reardon and colleagues describe how they conducted a record-linkage study of psychiatric admissions among a sample of low-income women who had received state funding for either an abortion or delivery in 1989. They report that subsequent psychiatric admission rates were higher for women who had an abortion than for women who delivered. Their conclusion implies that this was the result of problems related to aborting a pregnancy. This conclusion is misleading.

It is a fundamental tenet of science that one cannot infer cause from a correlation between 2 variables. Consider, for example, the strong correlation that exists between the number of bars in a city and the number of churches in a city. How can we explain this finding? Some may conclude that religion drives people to drink. Others may conclude that drinking drives people to religion. The most likely explanation, however, is that the correlation is spurious, caused by a third unmeasured variable that is associated both with the number of churches and the number of bars in a city — such as city size. A similar analysis can be applied to the association reported here between abortion (v. delivery) and psychiatric admissions. Although it is possible that abortion leads to psychiatric problems, it is just as plausible that the direction of causality is reversed, namely, that psychiatric problems cause women who become pregnant to feel less capable of raising a child and to terminate their pregnancy. Reardon and colleagues[1] attempted to control for this by omitting from their analyses women who had been admitted for inpatient psychiatric care in the year before the target pregnancy. As noted by the authors, however, they did not measure, or control for, psychiatric admissions before this year and were unable to control for other indicators of prior mental health that might predispose a woman to terminate a pregnancy rather than carry it to term.

The most plausible explanation for the association observed by Reardon and colleagues[1] is that it is spurious: it reflects unmeasured differences that existed before the target pregnancy between the women in the delivery and the abortion samples. The life circumstances of women who will continue a pregnancy differ from those of women who will abort a pregnancy in myriad and meaningful ways that have implications for mental health. Women who choose to deliver are more likely to have planned and wanted their pregnancies and feel emotionally and financially capable of raising a child. Women who seek abortion cite financial concerns, worries about their relationship (or the lack of a relationship) and their lack of readiness to assume responsibility for a child as their major reasons for their decision.[2] In contrast to women who deliver, women who terminate a pregnancy are less likely to be married or in an intimate relationship with their partner.[3] Both of these social factors are associated with poorer mental health.[4] Reardon and colleagues[1] failed to control for these important social and psychological differences between groups in their analyses. Thus, the ways in which these women's lives differed before the target pregnancy probably account for the small difference observed in the rate of psychiatric admission subsequent to the target pregnancy. It is inappropriate to imply from these data that abortion leads to subsequent psychiatric problems.

It is also essential to consider the context in which women seek abortions when discussing the mental health implications of abortion. Women typically seek an abortion because they are faced with an unplanned and unwanted pregnancy. To compare the mental health of women who give birth (typically of a planned, wanted pregnancy) to those who have abortions (typically of an unintended, unwanted pregnancy), as Reardon and colleagues[1] did, is to compare apples to oranges. From a mental health or social policy perspective, it is more appropriate to compare women who abort an unwanted pregnancy with women who are denied or unable to obtain an abortion, and hence are forced to carry to term a pregnancy that is unwanted. Another appropriate comparison group would be women who deliver a child and give it up for adoption. By at least partly controlling for the "wantedness" of pregnancy, such comparisons provide assurance that the women being compared are similar in the predicament they face and their risk factors for subsequent psychiatric illness, thus allowing for more meaningful inferences about the mental health impli-

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cations of abortion compared with its true alternatives.

Researchers seeking to study women's psychological reactions to abortion face a number of methodological obstacles. A truly definitive study of the psychological effects of abortion is impossible, as such a study would involve randomly assigning women with unwanted pregnancies to continue or abort their pregnancies, a prospect that is clearly unethical. Thus, the best one can do is base conclusions on those findings that emerge consistently from the most rigorously designed research. The findings of Reardon and colleagues[1] are inconsistent with a number of well-designed earlier studies that compared the psychological and emotional reactions of women who gave birth with those of women who aborted unplanned pregnancies.[5–9] These studies assessed the psychological reactions of women from 4 weeks to 2 years post abortion or delivery. All of these studies concluded that the emotional well-being of women who abort an unplanned pregnancy does not differ from that of women who carry a pregnancy to term. Reardon and colleagues[1] cite none of these studies. Reardon and colleagues' conclusions also conflict with those reached by a panel of scientific experts convened by the American Psychological Association.[10] On the basis of their review of all studies of psychological responses following abortion that met reasonable scientific criteria, this panel of experts concluded that first trimester abortion generally is "psychologically benign" for most women. The surgeon general of the United States reached a similar conclusion.[11]

Politics and values shape the way that research on women's psychological responses to abortion is conducted and interpreted. On the basis of correlations such as the one reported here, abortion-rights opponents assert that scientific evidence indicates that abortion causes psychological harm.[12,13] Because they are not experts in scientific reasoning, most people are unable to evaluate the validity of these claims. Statistics such as those reported by Reardon and colleagues[1] thus run a high risk of being used in ways that misinform and mislead the public.

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