

**Methodology and Bias:  
Problems with the Way Post-Abortion Research is Done**



Research on the effects of abortion on women's health, especially in North America, is highly prone to the problem of selective citation: Some researchers refer only to previous studies with which they agree and do not consult, or mention, those studies whose conclusions differ from their own.

Other methodological problems exist: short-term follow up which results in many post-abortion complications not being noted because they present themselves after the woman has left the abortion clinic; bias against any negative news about abortion on the part of many researchers whose vested interest is to make abortion appear safe and trouble-free; coding irregularities that do not connect diseases such as uterine perforations, PID, or ectopic pregnancies (sometimes leading to the patient's death), with previous abortions; and infertility attributed to PID and ectopic pregnancy which are actually consequences of previous abortion(s).

Correctives to these biases are epidemiological studies of the reproductive history of patients which may reveal previous abortions as conditions leading to reproductive difficulties.

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## **Methodology and Bias: Problems with the Way Post-Abortion Research is Done**

### **A. Problems with the Medical Research**

When a literature review is done at the beginning of any new research study, the previous works cited are most often those that support the findings of the author or in which the author has participated as a primary or secondary author (i.e., the author appears in the list of authors but as the third name or later). A database search of the whole field will uncover many more studies. But most of these will be treated as secondary or unimportant, while others will be cited over and over until it appears that they are the seminal works in the field, regardless of the extent to which they obey fundamental rules of research or are regarded as seminal by researchers other than the authors of the study that cites them.

Post-abortion research is plagued, to an especially high degree, by this problem of selective citation. It is subject to a number of other methodological weaknesses as well, including the following:

#### **1. Lack of Long-term Follow Up**

Most post-abortion research is short-term. This may have a particular impact where late second- trimester abortions are concerned because these women are often lost to follow up altogether.

For example, a Canadian study by Jacot and colleagues shows the difficulty of achieving accurate follow up on women who abort later in pregnancy, even where an effort is made to do so. Researchers were able to contact 90 per cent of women who aborted at five to fourteen weeks gestation, but only 82 per cent of those who aborted at fifteen to twenty weeks. Among women who aborted at seventeen to twenty weeks the researchers were able to contact only 77 per cent, *of whom the vast majority could not or would not be seen in person.*<sup>1</sup>

Claims that there are no complications need to be considered in light of the unwillingness of many subjects to participate in studies.

## **2. Bias Against Negative Findings**

Many post-abortion problems that have been identified by researchers in Europe have not become widely accepted in the North-American literature because on this continent there is a bias against reporting any kind of negative findings about induced abortion.

## **3. Underreporting**

In addition to the overall bias against negative findings, there is underreporting in the literature of several specific problems, as follows:

### **a. Uterine Perforations and Adhesions**

The literature indicates that there is a high likelihood of underreporting of uterine perforations which do not cause excessive bleeding or infection. As a result, conditions such as Asherman's Syndrome – which produces adhesions that are not immediately detectable – are only discovered much later when a patient seeks treatment for infertility. Pelvic examinations fail to reveal abnormalities.<sup>2</sup> Thus only when a full work-up is done on those women who attend fertility clinics is the syndrome detected. This means that three groups of women will not be identified: 1) Those who would like to conceive but cannot afford fertility treatment; 2) those who believe that the contraceptive devices they continue to use are preventing conception when they are in fact unable to conceive; and 3) those who never later attempt to conceive children. This inability to identify the whole population of affected women confounds the statistical analysis.

### **b. Pelvic Inflammatory Disease**

Pelvic Inflammatory Disease (PID) may develop one or more weeks following the abortion but may or may not be linked to the procedure. How the disease will be coded depends upon the physician treating the patient, the questions asked, and the coding provided by the doctor's staff or the hospital

clerks. If the patient has a history of sexually transmitted diseases (STDs), then that fact would be considered as sufficient explanation for the development of PID and the actual trigger event of the abortion may never be recorded.

The European literature is very clear about the significant impact of abortion on women with previous STDs: that they are at high risk for developing PID. But in North America, pre-abortion screening for PID is not mandatory. Indeed, while the North-American literature discusses antibiotic regimes for such cases, it is not certain that most abortion clinics even discuss this risk as part of their intake procedure.

**c. Failed “Medical” Abortion**

When a “medical” or drug-induced abortion fails, the woman will most likely be referred for a second attempt – a surgical one. Her body will have sustained two abortion procedures within a few weeks. For the purpose of establishing *epidemiological* risks, does this equal one or two abortions? The subject is not discussed in the literature but, given the growing promotion of drug-induced abortion procedures, it merits more attention than it has been given.

**d. Repeat Abortions**

Repeat abortions now make up a significant percentage of all abortions (see Chapter 7). The ways in which these multiple events impact on later health requires further investigation. If women are aborting because they believe that abortion is safe, simple, and without impact on future fertility, they believe too that multiple abortion is also without serious consequences. The recent literature suggests otherwise, but few studies actually consider the long-term epidemiological implications of repeat abortion.

**e. Ectopic Pregnancies**

Within fifteen years of the legalization of abortion ectopic pregnancy became epidemic in North America as the title of an article in *Obstetrics & Gynecology* indicates.<sup>3</sup> However, if a woman is admitted to hospital for this condition, the coding may not reflect the fact that she had recently attended for an

induced abortion. In fact, the American Centers for Disease Control use the International Classification of Disease (called the revised version of ICD-10) for all death records. The reporting codes available for complications specific to abortion omit Code 633 which designates an ectopic pregnancy. Thus hospitals must enter a code which cannot be cross-referenced to induced abortion.<sup>4</sup>

Indeed, recent case reports in the *Journal of Emergency Medicine* and the *Journal of Pathology* note that ectopic pregnancies were not suspected or identified before the women left the facility. Of such a case, Nugent records that the patient “had an uncomplicated intrauterine abortive procedure two weeks earlier.”<sup>6</sup>

In a Canadian study, Jacot and colleagues reported that an ectopic pregnancy “discovered after an unsuccessful uterine aspiration...resulted in a hysterectomy, performed in part for voluntary sterilization.”<sup>7</sup> When, upon the discovery of an ectopic pregnancy, hysterectomy is performed “in part” for voluntary sterilization, the abortion connection can easily be missed in the coding.

When ectopic pregnancy follows an induced abortion, the literature usually identifies the cause in some earlier reproductive event such as pelvic inflammatory disease, without ever identifying the PID as a consequence of the abortion.

#### **4. Epidemiology**

Epidemiology is the discipline that studies the incidence and prevalence of diseases within and across populations. Working at arm’s length from the procedure or disease they are investigating, epidemiologists try to identify public health issues and to provide practitioners and regulatory bodies with the information that will assist them in counseling patients, treating disease, or developing public policy.

Because of the limitations inherent in the direct study of abortion, it is becoming evident that the epidemiological approach may be the most fruitful in determining the long-term effects of abortion. When obstetrical or gynecological

conditions are considered from an epidemiological perspective, there is some hope that abortion, as it affects later medical problems, may be included as part of the reproductive history of the individual patient.

This area of research, however, is fraught with problems. Presently in North America induced abortion is all too likely to be conflated with spontaneous abortion (miscarriages) or, in some cases, included in a study but never discussed in the body of the text of a given research study. As a result, researchers looking at these papers must extrapolate information from raw data – and be prepared to discover that the raw data presented in the results section of a paper may not support the conclusions as stated in the discussion or abstract section of the same paper. Below are some examples of the discrepancies often found between the hard data and the interpretive conclusions:

**Lipworth**

In the Results Section of this study, it was observed that there was a 100 per cent increased risk of breast cancer for women whose first pregnancy ended in abortion, and a 60 per cent increased risk for women who had an induced abortion after first pregnancy.

In the Discussion Section, the author observes, "...perhaps all that can be definitely stated is that any increase associated with induced abortion is at most statistically marginal."<sup>8</sup>

The question arises, however, would most women consider a 60 to 100 per cent increased risk of a serious medical problem to be "statistically marginal"?

**Ewertz and Duffy**

In the Results Section of this study, the authors noted that among women who underwent an early terminated first pregnancy and did not experience a subsequent full-term pregnancy, "Induced abortions were associated with a R[elative]R[isk] of 3.85"<sup>9</sup> (or the women who had had an induced abortion were at an almost *fourfold increased* risk of breast cancer).

In the Discussion Section, the authors simply observed that “[our findings] gave further evidence that pregnancies must go to term to exert a protective effect against breast cancer.”<sup>10</sup> There is no mention here of the connection of induced abortion to a higher risk of breast cancer.

The authors also lump spontaneous and induced abortion together. In the Abstract (the summary at the beginning of the article) they report the risk effects of spontaneous and induced abortion *together* (our italics) as “...an early terminated first pregnancy RR of 1.43.”<sup>11</sup>

#### **Daling and Colleagues**

In the Results Section of their study, these researchers note a RR of 1.2 for breast cancer in nulliparous women whose abortions occurred before age eighteen, and refer to an earlier study in 1994 which came up with a relative risk of 2.5.

Yet they concluded that the “...results of the present study give only slight support to the hypothesis that there is an increase in breast cancer incidence...among women of reproductive age.”<sup>12</sup>

How many women would consider a twenty to 150 per cent increase in the risk of breast cancer only “slight”?

In general, the reporting of abortion in national surveys may be approximately 30 per cent less than the actual abortion rate. National reporting is therefore not a reliable method of connecting abortion to future medical conditions, unless a corrective calculation is performed. Exactly what form such a calculation would take is at present unknown.

## **B. Problems with the Psychological Research**

### **Analytic Shortcomings**

To look more closely at the literature in the field of psychological outcomes, Rogers and colleagues published a detailed analysis of all 280 research studies which dealt specifically with abortion sequelae. These authors found that of these

280 journal articles, 204 had to be excluded "...because they did not report original empirical data." In other words, only 27 per cent (76 studies) were what would be considered real research with actual subjects. The remaining 73 per cent were reviews that rehashed the findings of the 27 per cent. Indeed, of these 76 studies, only 34 were done after the full legalization in 1973 of abortion in the United States.<sup>13</sup>

Through this analytic approach, Rogers and his colleagues identified twenty different methodological limitations that occurred in the abortion literature. They then calculated the occurrence of each of these flaws within the original research articles. The authors found an average of 6.5 methodological weaknesses in each article. They identified the following problems:

- sample inadequacies because of too few subjects
- often no control group for participants who had had multiple abortions
- samples unrepresentative because of selection bias
- information incomplete: data, methods, follow-up interval, or outcome not reported
- no separation of sample for pre-existing psychiatric history
- no before and after measurements for baseline comparisons
- no control for the potential biases of the experimenter or interviewer
- a significant loss (more than fifteen per cent) of subjects to follow up
- when the decision to abort was for psychiatric reasons, the symptoms might be exaggerated in order to obtain permission for the abortion
- the reliability or validity of the assessment instrument low or unknown

Canadian psychiatrist Philip Ney also considered methodological difficulties in the psychiatric literature. His classifications bear a striking resemblance to the weaknesses in the psychological articles identified by Rogers and colleagues.

Ney concluded that the main failings were:

- a lack of control or comparison groups (For example, only ten per cent of the 250 studies used by Doane and Quigley used control or comparison groups.<sup>14</sup>)
- no analysis of pre-pregnant state to determine the comparative health of the woman after an abortion
- no long-term follow up
- no attempt to relate psychiatric to medical sequelae<sup>15</sup>

Another difficulty has plagued the psychological research: the delegitimation of the finds of researchers known to have a pro-life philosophy.

When David Reardon, a researcher who is pro-life, published a large study using 7500 women who were experiencing post-abortion distress, he was criticized for his retrospective approach and sample inadequacy, even though the majority of post-abortion studies are flawed by small samples and significant sample drop-outs. Similarly, the work of Speckhard and Rue has been ignored or criticized because they have suggested the possibility of *Post-traumatic Stress Disorder (PTSD)* following abortion. In his review, Wilmoth stresses that Reardon, Speckhard and Rue, Barnard, and Vaughan are pro-life researchers, whereas pro-abortion researchers are not designated as pro-abortion. A case in point is a review of Adler's research in Wilmoth: Adler, who is pro-abortion and reports no negative outcomes after abortion, is simply identified as a member of the American Psychological Association's "panel of scientists", thus legitimating her results.<sup>16</sup>

#### **Political Constraints**

Any technically complex issue lends itself to political manipulation, most notably to attempts to debunk a finding whose key "flaw" may be that it is politically unpopular.

A significant example of defective epidemiological research in North America is the possible link between induced abortion and breast cancer. It has proven difficult to research the subject in North America because of the political issues that surround abortion (see Chapter 2).

The epidemiological impact of factors in the environment and diet on later breast cancer rates is still in the experimental stage. Controversies arise over the effects of certain chemicals and pollutants but the information from breast cancer centers acknowledges both the possible impact as well as the controversial nature of such factors. Unlike diet and environment, induced abortion is seldom mentioned in the patient information material (see Chapter 2).

**Conclusion**

As we have seen, the present state of research misleadingly minimizes the effects of induced abortion in a number of ways. In addition, an undetermined number of post-abortion women who are infertile may be unaware of their infertility because they are (quite unnecessarily) using contraceptives. Another undetermined number may know that they are infertile, but be unable to afford treatment or unwilling to venture into the high-technology fertility area because of ethical concerns. None of these groups will be identified as infertile, even though they are.

It would be prudent to assume that there are more health problems after induced abortion than are being reported under the present system. Women deserve a more careful and accurate system of risk assessment, one that captures more of the data reflecting the actual risk of abortion to their health.

**Key Points Chapter 17**

- Post-abortion research in North America is often hindered by methodological problems which make it difficult to ascertain accurately the actual effects of abortion on women's future health and fertility.
- Post-abortion follow up tends to be short-term, to suffer from inadequate sample size, no control group, or incomplete information; consequently, many complications are not attributed to the procedure.
- Vested interests in North America do not want the public to hear any bad news about abortion; hence, there is a great deal of underreporting in the literature about the negative sequelae of abortion and their possible connection to a number of medical problems, including low fertility, prematurity, and breast cancer.
- Irregular coding in hospitals and by the Centers for Disease Control does not connect many reproductive problems, such as infertility, pelvic inflammatory disease, Asherman's Syndrome, complications of failed drug-induced and repeat abortions, and ectopic pregnancies to previous abortion(s) when, in fact, abortion is often the trigger cause. Deaths are inaccurately attributed.
- Women deserve a more accountable system of risk assessment where research data accurately reflect the true risks of abortion to their future health and fertility.

### Notes

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  - 6 Nugent PJ. Ruptured ectopic pregnancy in a patient with a recent intrauterine abortion. *Annals of Emergency Medicine* 1992 January;21(1):97-9, p. 97.
  - 7 Jacot et al. 1993. See n. 1, p. 635.
  - 8 Lipworth L, Katsouyanni K, Ekblom A, Michels KB, Trichopoulos D. Abortion and the risk of breast cancer: a case-control study in Greece. *International Journal of Cancer* 1995 April;61(2):181-4, p. 184.
  - 9 Ewertz M, Duffy SW. Risk of breast cancer in relation to reproductive factors in Denmark. *British Journal of Cancer* 1988 July;58(1):99-104, p. 102.
  - 10 Ewertz and Duffy, 1988. See n. 9, p. 103.
  - 11 Ewertz and Duffy, 1988. See n. 9, p. 99.
  - 12 Daling JR, Brinton LA, Voigt LF, Weiss NS, Coates RJ, Malone KE, and colleagues. Risk of breast cancer among white women following induced abortion. *American Journal of Epidemiology* 1996 August;144(4):373-80, p. 379.

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