Memorandum 30

Submission from Professor Patricia Casey

Psychiatric Consequences of abortion

The relationship between abortion and mental health problems has been the subject of considerable debate. Two theories have been promulgated:

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- Abortion causes mental health problems

- Abortion and mental health problems are due to some common third factor (confounder) e.g. previous mental health problems, childhood trauma etc. that determine abortion seeking and subsequent mental health problems.

Until this century there were a few studies linking abortion to subsequent mental health problems and most studies failed to find any association except in those with prior mental health problems.

Criticisms of research

Among the criticisms directed at those who argue that significant psychiatric conditions follow abortion are

- the failure to control for confounders such as previous psychiatric history
- using data obtained from women seeking psychological treatment post-abortion
- comparison groups inappropriate e.g. not comparing women having abortions with those giving birth
- limited outcome measures e.g. psychiatric hospitalization, receiving out-patient treatment

On the other hand those who argue that psychiatric disorders do occur post-abortion point the a number of flaws in the contrary studies

- the absence of long-term data spanning years/decades
- high attrition rates in follow-up studies reducing the potential for identifying psychological problems (those with psychological problems most likely to default)
- small sample sizes reducing the statistical power of the study to identify mental health problems.

However, recent studies have addressed these methodological flaws.

Approaching the present paper

Only original research papers, from peer reviewed learned journals were selected.

Review papers were excluded...

The term post-abortion syndrome will not be used since this is not a recognized psychiatric term.

Only papers since 2000 will be presented since these are the most methodologically and statistically robust.

The conclusions presented at the end of each summary are those of the authors.

A. Outcome measures

1. Psychiatric hospitalisation

Psychiatric admissions of low-income women following abortion and childbirth

Reardon et al . Canadian Medical Association Journal. 2003. 168 (10). 1253-6

Aim: The aim was to examine psychiatric hospitalisation following childbirth or abortion

Method: A record linkage study.

- California Medicaid records of women 13-49 at time of childbirth/abortion in 1989 followed for 90 days – 4 years
- Excluded those with prior psychiatric admissions
- Data set - Pregnancy ending in abortion – 15, 299
  or in delivery – 41,442

Results

- Significant differences in admission rates for women who had abortion compared to those giving birth
  - Adjustment reactions (Odds ratio 2.1)
  - Depressive episode (Odds ratio 1.9)
  - Recurrent depressive disorder (Odds ratio 2.1)
  - Bipolar disorder (Odds ratio 3)
- Post delivery admission rate 634.8/100,000
- Post-abortion admission rate 1117.1/100,000 (Odds ration 1.7)

Conclusions: Psychiatric admission rates higher in women post abortion than post-partum when those with a prior psychiatric history were excluded.

Response to Reardon paper in Canadian Medical Association Journal:
Following a number of exchanges in the letters pages, the journal editorialised in a piece entitled “Unwanted Results: The Ethics of Controversial Research”.

It defended publication of this paper saying "The attack in our letters column is largely an *ad hominum* objection to the authors' ideological biases and credential. There are two questions here: first does ideological bias necessarily taint research? Second are those who publish research responsible for its ultimate use?"

"In light of the passion surrounding the subject of abortion we subjected this paper to especially cautious review and revision……the hypothesis that abortion (or childbirth) might have a psychological impact is not unreasonable and to desist from posing a question because one may obtain an unwanted answer is hardly scientific. If we disqualified these researchers from presenting their data, we would never hear from pro-choice views, either".

"But if it is true that more explicit research into women's health issues will point the way to better care, better outcomes and more equity in access, we cannot toss out data any time we don't like their implications"

2. Psychiatric out-patient attendance

State funded abortions versus deliveries: a comparison of out-patient mental health claims over 4 years

Coleman et al. American Journal Orthopsychiatry. 2002. 72,1. 141-152

Aim: The objective was to ascertain if

- First time psychiatric out-patient contact in 4 years post-abortion.
- 14,297 abortion group, 40,122 birth group
- Controlling for pre-existing psychological problems, age, number of pregnancies and months of eligibility

Results

90 days post-abortion - 63% more claims
180 days post-abortion - 42% more claims
1 year post-abortion - 30% more claims
2 years post-abortion - 16% more claims

Conclusion: At all time points out-patient mental health funding claim were higher in pos-abortion group when prior psychological problems controlled.

3. Any psychiatric disorder

The course of mental health after miscarriage and induced abortion: a longitudinal, five-year follow-up study.

Broen et al. BMC 2005 December 12:3, 18

Aim: To determine whether there are differences in the patterns of normalization of mental health scores after two pregnancy termination events i.e. induced abortion and miscarriage.

Methods: 40 women who experienced miscarriages and 80 women who underwent abortions were interviewed at 10 days (T1), six months (T2), two years (T3), and five years (T4) after the pregnancy termination using valid interview schedules. Prior psychiatric history controlled for.

Results

- Women who had had a miscarriage exhibited significantly quicker improvement in scores throughout the observation period.
- Women who experienced induced abortion had significantly higher scores than the miscarriage group at two and five years after the pregnancy termination and at 5 years 20% were still "cases"

Conclusion: Women experiencing an induced abortion have higher and more persistent mental health problems than those experiencing a miscarriage.

A history of induced abortion in relation to substance abuse during subsequent pregnancies carried to term.

Coleman et al. American Journal Obstetrics and Gynaecology. 2002. 187,6. 1673-1678.

Aim: To compare substance abuse in those subsequently giving birth after abortion or a delivery

Methods: 607 women derived from the National Pregnancy and Health Survey in the United States.
3 groups of women who had recently delivered a baby but with one previous pregnancy with a resolution in

- induced abortion (gravida 2, para 1)
- delivery (gravida 2, para 2).
- A further analysis was carried out on those giving birth for the first time (gravida 1, para 1).

Information on substance abuse (licit and illicit drugs including cigarettes, benzodiazepines and alcohol) during the recent pregnancy was gathered by questionnaire administered shortly after giving birth.

Results: Women who had aborted were significantly more likely to:

- abuse marijuana (Odds ratio OR 10.29)
- abuse other illicit drugs (OR 5.6)
- abuse alcohol (OR 2.2)

during a subsequent pregnancy when compared to those who had no history of induced abortion.

This pattern was replicated, apart the findings relating to cigarette consumption, when the abortion group was compared to first time mothers.

Within the post-abortion group substance abuse was higher in those for whom the time since abortion was longest.

Conclusion: "A history of abortion appears to be a marker for increased risk of substance abuse in subsequent pregnancies".

Note: Fergusson et al (2006) also found an increased risk of substance abuse in the post-abortion group (see 4 below).

4. General population studies

Abortion in Young Women and Subsequent Mental Health
Fergusson et al. Journal of Child Psychology and Psychiatry. 2006. 47 (1), 16-24.

Aim: To test the hypothesis that those who developed mental health problems post-abortion did so because of prior vulnerability

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Methods

- 25 year longitudinal birth cohort study of 1265 New Zealand children from Christchurch
- History of pregnancy/abortion/no pregnancy over 15-25 year interval
- Measures of DSM-IV mental disorders and suicidal behaviour using structured interviews
- Data on childhood and family adversity as well as psychiatric history (confounders) controlled for in the analysis
- Face to face interviews with subjects at ages 15, 16, 18, 21 and 25
- Present analysis based on 506-520 females comparing
    - Those not pregnant
    - Those pregnant and ending in abortion
    - Those pregnant and ending in delivery

Results: Among those who had abortions compared with those who had not been pregnant or who had delivered significantly higher risk of

- Major depression 78.7-41.9% (depending on age group)
- Anxiety disorder 64.3-39.2% ..
- Suicidal ideation 50-27% ..
- Illicit drug dependence 0-12.2% ..
- Overall number of mental health problems 1.93-1.27 depending on age

When confounders controlled, all the above except anxiety disorders still significantly higher risk ratios in those who had an abortion

Predictive analysis

- To ascertain if these associations are cause or effect
- Pregnancy/abortion history prior to age 21 used to predict subsequent mental health history while confounders controlled
- Rate ratio - No pregnancy 0.6

- Pregnant no abortion 0.67
- Abortion group 1

Conclusions

Abortion caused mental health problems in some women and this was not due to prior vulnerability.

The author wrote “The present research raises the possibility that for some young women, exposure to abortion is a traumatic life event which increases longer-term susceptibility to common mental disorders. These findings are inconsistent with the current consensus on the psychological effects of abortion. In particular, in its 2005 statement on abortion, the American Psychological Association concluded that ‘well designed studies of psychological responses following abortion have consistently shown that the risk of psychological harm is low…the percentage of women who experience clinically relevant distress is small and appears to be not greater than in general samples of women of reproductive age’. …

“This relatively strong conclusion about the absence of harm from abortion was based on a relatively small number of studies which had one or more of the following limitations….the statement appears to disregard the findings of a number of studies that had claimed to show negative effects for abortion…..While it is possible to dismiss these findings as reflecting shortcomings in the assessment of exposure to abortion or control for confounders it is difficult to disregard the real possibility that abortion amongst young women is associated with increased risks of mental health problems”.

Comment: This is the largest and best designed study of the psychological consequences of abortion to date as it has a large sample, with an almost 100% follow-up rate, using face to face interviews, with recognized diagnostic instruments and a long follow-up.

The American Psychological Association has now removed references to the safety or otherwise of abortion from its website and established a committee to investigate the issue further (see conclusions) above. Of note, the author is by his admission pro-choice and he set out to demonstrate that those who developed psychological problems post-abortion were those who had prior problems.

Depression and unintended pregnancy in the National Longitudinal Survey of Youth: a cohort study

Reardon et al. British Medical Journal 2002. 324. 151-152.

Aim; To test the hypothesis that psychological maladjustments after abortion are related to prior history of depression.

Methods: Using data from the National Longitudinal Study of Youth the authors identified those with depression using a diagnostic instrument.

Results: Among those who were married the odds ratio for developing depression post-abortion still remained significant after prior psychiatric state was controlled when compared to those bringing an unintended pregnancy to term.

Conclusion: Prior psychiatric history does not predict post-abortion depression.

AND

Depression and unwanted first pregnancy: longitudinal cohort study

Schmiege et al. British Medical Journal. 2005. 331. 1303-

This study failed to find any independent link between abortion and subsequent depression using THE SAME DATASET as that used in the above study.

The authors wrote that this difference may reflect differences in the coding of pregnancies e.g. those who had an abortion after the index pregnancy were included as controls (rather than being excluded). Reardon et al also expressed the view that it was wrong to exclude from the analysis those who any point were ambivalent about the abortion.

5. <u>Suicide</u>

Injury deaths, suicides and homicides associated with pregnancy, Finland 1987–2000

Gissler et al . European Journal of Public Health. 2005. 15, 5. 459-463.

Aim: To examine mortality from external causes by pregnancy outcome and examine possibility of a healthy pregnancy effect.

Methods: Information on deaths from external causes among women aged 15–49 years in Finland in 1987–2000 (*n* = 5299) was linked to three national health registers to identify pregnancy-associated deaths (*n* = 212).

Results:

Table 1 Pregnancy-associated mortality per 100 000 pregnancies and mortality among non-pregnant women per 100 000 person-years from external causes by cause of death and by pregnancy outcome

	Pregnancy associated mortality			Age adjusted and crude mortality rates in non-pregnant women
	Pregnancy	Miscarriage/	Induced	Total

	or birth	ectopic	abortion			
All external causes	9.6***	34.6*	60.0***	19.1***	24.2	29.9
Unintentional injuries	3.9***	14.3 NS	20.4***	7.3***	10.8	14.7
Suicide	5.0***	16.0 NS	31.9***	9.8 NS	11.8	13.3
Homicide	0.7**	4.2 NS	7.7***	2.0 NS	2.1	2.3

Test of relative proportions compared with the age-adjusted mortality among non-pregnant women: NS: not significant; NA: not applicable

*** $P < 0.001$ ** $P < 0.01$ * $P < 0.05$

Conclusion: The authors wrote “In the year after undergoing an abortion, a woman's mortality rate for unintentional injuries, suicide and homicide was substantially higher than among non-pregnant women in all age groups combined. It is unlikely that induced abortion itself causes death due to injury; instead, it is more likely that induced abortions and deaths due to injury share common risk factors…. and more detailed background information for example on mental health, social well-being, substance abuse and socio-economic circumstances among the deceased would be necessary for further analysis”.

“The new recommendation for post-induced abortion care, however, includes the statement that a check-up visit is necessary in order to detect signs of depression and to identify the rare cases of psychosis after an induced abortion”

“The low rate of deaths from external causes suggests the protective effect of childbirth, but the elevated risk after a terminated pregnancy needs to be recognized in the provision of health care and social services”.

Comments: This was part of a series of record linkage studies by Gissler, one of which related to suicide and was published in the British Medical Journal in 1996. The suicide rate among all women in Finland was 11.3/100,000, associated with birth 5.9/100,000 and associated with abortion 34.7/100,000. He concluded that either abortion caused suicide or that there were attributes associated with both suicide and abortion such as impulsivity or mental illness.

B. Abortion for foetal anomaly

Complicated grief after traumatic loss: a 14 month follow-up study.

Kersting et al. European Archives Psychiatry and Clinical Neuroscience. 2007. July (epub ahead of print).

Aim: To obtain information on the course of grief following termination of pregnancy for foetal anomaly

Methods: 62 women had abortion for foetal abnormality between 15th and 32nd gestational week compared with 65 who had given birth on measures of grief, post – traumatic stress disorder, depression and anxiety using structured diagnostic interview schedules.

Results: Women following abortion were significantly more stressed on all measures.

- At 14 days 25% met DSM-IV criteria for psychiatric disorder
- At 6 months 25% met DSM-IV criteria for psychiatric disorder
- At 14 months 16.7% met DSM-IV criteria for psychiatric disorder

Conclusions: The authors wrote "All in all, 25% of these women were critically affected by the traumatic loss.

Long-term psychological consequences of pregnancy termination for fetal abnormality: a cross-sectional study.

Korenromp et al. Prenatal Diagnosis. 2005. 25,3. 253-260.

Aim: To examine the long term psychological well being of women after pregnancy termination for foetal anomaly.

Method: 254 women 2-7 years post termination of pregnancy for foetal anomaly before 24 weeks gestation. Standardised questionnaires administered.

Results: 17.3% pathological scores for PTSD
Higher levels of grief if anomaly compatible with life
Poorer prognosis associated with gestational age, perceived partner support and educational level.

Conclusion: The authors wrote "Termination of pregnancy for foetal anomaly is associated with long-lasting consequences for a substantial number of women.

Psychological outcome for women undergoing termination of pregnancy for ultra-sound detected fetal abnormality: a pilot study

Davies et al. Ultrasound Obstet Gynaecol. 2005. 25,4. 389-392

Aim: Examine psychological morbidity for women having 1st and 2nd trimester abortions for foetal abnormality

Methods: 14 women having first trimester and 16 having 2nd trimester abortions
20-40 years

Follow-up 6weeks, 6 months and 12 months
Measures included GHQ, BDI, IES and Perinatal Grief Scale

Results: High levels of distress for both groups
Present at all time points
Depression:36%, 39%, 32% > cut-off score
Post-traumatic stress: 67%, 50%, 41% > cut-off score

Conclusion: The authors wrote “Psychological morbidity following termination for foetal anomaly is prevalent and persistent”.

C. Qualitative studies

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These studies are designed to evaluate feelings and emotions in greater depth. They do not measure prevalence. Their value lies in the depth of the interviews which last many hours, are taped recorded and subsequently analysed so as to identify common themes that emerge. Due to their labour intensity sample sizes are small.

Women’s reflections upon their past abortions

Goodwin and Ogden. Psychology and Health 2007.22,2. 231-248.

10 women interviewed 1 to 10 years post abortion to ascertain their reflections in the longer term.

- Some described a linear pattern of change with decreasing symptoms over time.
- Many described other patterns including

1. persistent upset
2. later onset distress with no distress in the immediate aftermath
3. No distress at any time

The reactions were related to view of foetus as human, poor social supports, a belief that society is either over judgmental or alternatively negates impact of abortion on women
Women’s responses do not always follow the suggested reactions of grief.

Refused abortion

I have been unable to identify any papers on this topic published since 2000 and most appear to be pre-1990.

Conclusions and Implications

A number of well designed recent studies confirm the view that adverse psychological outcomes occur after abortion and are not just related to prior psychiatric history. A range of disorders including depressive illness, substance abuse and self-harm have been identified. There is evidence for an increase in psychiatric service utilization (in-patient and out-patient) also.

Suicide rates are higher in women post-abortion when compared to pregnant women and non-pregnant women but whether this is due to the abortion or to some pre-existing common factor associated with both abortion seeking and suicide (mental illness or impulsivity) is as yet unanswered. This set of studies (5 above) confirms the safe health status associated with pregnancy.

Written information on the psychological consequences of abortion should be provided to women considering abortion so that their decisions are fully informed. Those seeking abortion for foetal anomaly should also be advised of the long duration of the adverse consequences.

Post-abortion check-ups should include questions relating to mental illness including suicidal behaviour, depressive symptoms and psychotic symptoms.

Appropriate interventions that fully respect the reality of the emotional consequences of abortion should be in place.

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