

Evidence-Based Ethics

Abortion



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Overview

- Extent of the Problem
- Spiritual Dimension of the Problem
- Philosophical Issues
- Lessons from History
- Medical Implications
- Psychological Implications
- Sociological Implications
- Conclusions



Extent of the Problem

- Abortion was legalized in 1973
- Between 1972 and 2002 there were ~35 million legal, reported abortions in the US alone.
 - In 2002, in the US excluding California, New Hampshire and Alaska, there were 854,122 legal abortions
 - The abortion ratio, defined as the number of abortions per 1,000 live births, was 246 in 2002
 - CDC, MMWR November 25, 2005 / 54(SS07);1-31
 - For 1999, the abortion ratio for black women (529 per 1,000 live births) was 3.0 times the ratio for white women (177 per 1,000 live births), and the abortion ratio for women of other races (367 per 1,000 live births) was 2.1 times the ratio for white women.
 - CDC, MMWR November 29, 2002 / 51(SS09);1-28



Spiritual Dimension of the Problem

- Scriptural Teaching
 - “You formed my inmost being; you knit me in my mother's womb” (Ps 139)
 - “You shall not kill” (Exodus 20:13)
 - “Can a mother forget her infant, be without tenderness for the child of her womb? Even should she forget, I will never forget you.” (Isaiah 49:15)



Spiritual Dimension of the Problem

- Teaching from the Church
 - “Laws which legitimize the direct killing of innocent human beings through abortion or euthanasia are in complete opposition to the inviolable right to life proper to every individual; they thus deny the equality of everyone before the law.” [Pope John Paul II, *Evangelium vitae* \(1995\), no. 72.](#)
 - “It is true that it is not the task of the law to choose between points of view or to impose one rather than another. But the life of the child takes precedence over all opinions. One cannot invoke freedom of thought to destroy this life...”
[Congregation for the Doctrine of the Faith, Declaration on Procured Abortion, November 18, 1974, nos. 19-22](#)
 - “No Catholic can responsibly take a "pro-choice" stand when the "choice" in question involves the taking of innocent human life.” [USCCB Resolution on Abortion \(1989\)](#)



Spiritual Dimension of the Problem

- Teaching from the Catechism
 - "*Human life is sacred* because from its beginning it involves the creative action of God and it remains for ever in a special relationship with the Creator, who is its sole end. God alone is the Lord of life from its beginning until its end: no one can under any circumstance claim for himself the right directly to destroy an innocent human being." 2258
 - "Human life must be respected and protected absolutely from the moment of conception. From the first moment of his existence, a human being must be recognized as having the rights of a person--among which is the inviolable right of every innocent being to life." 2270
 - "Since the first century the Church has affirmed the moral evil of every procured abortion. This teaching has not changed and remains unchangeable. Direct abortion, that is to say, abortion willed either as an end or a means, is gravely contrary to the moral law." 2271
 - "Since it must be treated from conception as a person, the embryo must be defended in its integrity, cared for, and healed, as far as possible, like any other human being." 2274



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Philosophical Issues

- Existential atheistic perspective:
 - “Hell is other people”
 - “Every human being is the natural enemy of every other human being”
 - Jean-Paul Sartre, in “No Exit”
- Catholic perspective:
 - “Heaven is other people, through Jesus Christ, who opens the door of human solitude having Himself descended into the depths of hell, we obtain the grace to see the beatific possibilities for our neighbors”
 - Cardinal Joseph Ratzinger, in “Behold the Pierced One”



Philosophical Issues

- “Without love, man has no other possibility than to be alienated from the God who is love, from himself (who is created in the image and likeness of the God who is love) and from his neighbor (who he is commanded to love as he loves himself)
 - Pope John Paul II, *Redemptor Hominis*



Lessons from History

- Abortion was widespread in the ancient world
- Hebrew Scriptures on Abortion:
 - When men have a fight and hurt a pregnant woman, so that she suffers a miscarriage, but no further injury, the guilty one shall be fined as much as the woman's husband demands of him, and he shall pay in the presence of the judges. Ex 21:22
- The Hippocratic Oath:
 - “I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect. Similarly I will not give to a woman an abortive remedy. In purity and holiness I will guard my life and my art.”



Early Church Teaching

- The Didache (AD 70)
 - The second commandment of the teaching: You shall not murder. You shall not commit adultery. You shall not seduce boys. You shall not commit fornication. You shall not steal. You shall not practice magic. You shall not use potions. You shall not procure [an] abortion, nor destroy a newborn child" (*Didache* 2:1-2 [A.D. 70])
- The Apostolic Constitutions (AD 400)
 - Thou shall not slay thy child by causing abortion, nor kill that which is begotten. . . . [I]f it be slain, [it] shall be avenged, as being unjustly destroyed" (*Apostolic Constitutions* 7:3 [A.D. 400]).
- More at <http://www.catholic.com/library/Abortion.asp>



Later Church teaching

- The Catholic teaching has been constant on this issue, including Thomas Aquinas
 - ...he considered abortion of the fetus in the earlier stages of either the nutritive or sensitive states to be counted among those “the evil deeds” that “are contrary to nature”, (IV Commentary on the Four Books of Sentences of [Peter Lombard](#), dist. 31, q. 2, art. 3 Exposition). Thus, abortion is grave moral evil in the very early stages of development, and clearly murder during the latter stages.
 - <http://www.philosophynotes.com/medley/drury.htm>



Problems with Abortion Research

- In longitudinal and retrospective studies, 50-60% of women conceal prior abortions
- Multiple different psychological reactions can arise from abortion, lowering the incidence of individual problems and making an effect more difficult to detect
- Reactions to abortion vary over time, so a study at one time point may miss an effect seen later on, as delayed reactions occur
- Standardized questionnaires may be inadequate for uncovering deep-seated reactions



Medical Implications of the Problem

- Recent study in the Linacre Quarterly by Thorp, Hartmann and Shadigan
 - Articles gleaned from the literature dealing with abortion and abortion complications that had >100 patients followed for >2 months from 1966 - 2002
 - Limited to studies of legal abortion using surgical techniques
 - Potential complications studied included subsequent miscarriages, ectopic pregnancy, preterm birth, subfertility, breast cancer, and mental health
 - Linacre Quarterly, V72, pp44, 2005
 - See also [Obstet Gynecol Surv.](#) 2003



Conclusions of the Linacre Review

- No association of abortion with subsequent miscarriage, ectopic pregnancy, or subfertility
- Positive association with placenta previa in subsequent pregnancies (especially for >1 induced abortion)
- Positive association of abortion with subsequent pre-term birth and low birth weight, again more so with more abortions
- Breast cancer link remains controversial in the literature. 1/4 reviews/meta-analysis suggest a link (odds ratio 1.3)
 - This was the only quantitative study, the others were reviews
 - The authors also note that pregnancy to term with delivery reduces the risk of subsequent breast cancer, and abortion eliminates this effect.



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Linacre Review and Mental Health

- Very confusing to separate the effects of an unwanted pregnancy and abortion
- Objective studies indicate an increased risk of suicide
- Increased risk of depression or emotional problems also noted



Psychological Implications

- Suicide after Abortion
 - “Suicides after pregnancy in Finland, 1987-94: register linkage study” *BMJ* 1996;313:1431-1434
 - “The mean annual suicide rate was 11.3 per 100 000. The suicide rate associated with birth was significantly lower (5.9) and the rates associated with miscarriage (18.1) and induced abortion (34.7) were significantly higher than in the population.”
- Conclusions:
 - “The risk of suicide after birth is half of that among women of reproductive age in general
 - Suicides are more common after a miscarriage and especially after an induced abortion than in the general population
 - Increased risk for suicide after an abortion indicates either common risk factors for both or harmful effects of induced abortion on mental health”



Other record-based studies

- A study of Medicaid claim records for 173,279 low-income women in California found elevated death rates for women post-abortion that persisted for 8 years
 - Post-abortion women had a 154% increased risk for suicide and a 82% increased risk of death from accidents
 - Reardon DC, et. al. Archives of Women's Health, 3(4) Suppl. 2:104 (2001)
- A study in Denmark compared women who aborted with those who carried to term for psychiatric admissions in the 3 months following. Rates were higher following abortion (18.4/10,000 for aborting women vs 12.0 for delivering women and 7.5 for all Danish women)
 - Henry DP. "Abortion: Medical Progress and Social Implications" (Pitman, London: Ciba Foundation Symposium 115, 1985) 150-164



“Healthy Pregnant Women Effect” Negated

- A retrospective cohort study from Finland for 1987 - 2000 linked information on all deaths of women aged 15 to 49 years (n = 15,823) to the Medical Birth Register (n = 865,988 live births and stillbirths), the Register on Induced Abortions (n = 156,789 induced abortions), and the Hospital Discharge Register (n = 118,490 spontaneous abortions)
 - Mortality Rates per 100,000 pregnancies over 1 year were:
 - Post-pregnancy - 36.7
 - Non-pregnant - 57.0 per 100,000 person-years
 - After birth at term - 28.2
 - Miscarrriage - 51.9
 - Induced abortion - 83.1
- Am J Obstet Gynecol. 2004 Feb;190(2):422-7



Increased Violent Deaths

- Odds ratios of mortality compared to general female mortality rates (age adjusted) :
 - Pregnancy or birth - 0.49 (0.43 - 0.56)
 - Spontaneous abortion or ectopic pregnancy - 0.91 (0.71-1.17)
 - Induced abortion - 1.45 (1.22-1.73)
- Violent Deaths per 100,000 pregnancies
 - Pregnancy or birth - 9.6
 - Spontaneous abortion or ectopic pregnancy - 34.6
 - Induced abortion - 60.0
 - Non-pregnant women - 24.2



Death Rates Post-Abortion

- “Higher death rates associated with abortion persist over time and across socioeconomic boundaries. This may be explained by self-destructive tendencies, depression, and other unhealthy behavior aggravated by the abortion experience.”
- Compared with women who delivered, those who aborted had a significantly higher age-adjusted risk of death from all causes (1.62), suicide (2.54), accidents (1.82), natural causes (1.44), including AIDS (2.18), circulatory diseases (2.87), and cerebrovascular disease (5.46).
 - Southern Medical Journal. 95(8):834-41, 2002
- The age adjusted relative risk of suicide admission for women admitted for miscarriage compared with women admitted for normal delivery was 2.84 (1.67 to 4.81, $P < 0.001$) before the event and 2.29 (1.13 to 4.65, $P < 0.05$) afterwards. For induced abortion the relative risk was 1.72 (0.92 to 3.17, NS) before and 3.25 (1.79 to 5.91, $P < 0.001$) afterwards.
 - BMJ. 314(7084):902



Other Reported Psychological Effects

- “... significantly higher rates of subsequent substance use compared to delivering an unintended pregnancy.”
 - American Journal of Drug & Alcohol Abuse 30:369-83, 2004
- “Women who aborted a first pregnancy were five times more likely to report subsequent substance abuse than women who carried to term, and they were four times more likely to report substance abuse compared to those who suffered a natural loss of their first pregnancy (i.e., due to miscarriage, ectopic pregnancy, or stillbirth).”
 - American Journal of Drug & Alcohol Abuse. 26:61-75, 2000



More Reported Psychological Effects

- Subsequent psychiatric admissions are more common among low-income women who have an induced abortion than among those who carry a pregnancy to term, both in the short and longer term.
 - CMAJ Canadian Medical Association Journal 168:1253-6, 2003
- Those having an abortion had elevated rates of subsequent mental health problems including depression, anxiety, suicidal behaviours and substance use disorders. This association persisted after adjustment for confounding factors. 42% of women who had abortions had experienced major depression within the last four years. That's almost double the rate of women who never became pregnant. The risk of anxiety disorders also doubled. Women who have abortions were twice as likely to drink alcohol at dangerous levels and three times as likely to be addicted to illegal drugs.
 - Journal of Child Psychology and Psychiatry 47:16, 2006



More Reported Psychological Effects

- Higher rates of subsequent generalized anxiety
 - Journal of Anxiety Disorders Volume 19, 137-142, 2005
- Forty women who experienced miscarriages and 80 women who underwent abortions ... were interviewed. All subjects completed the following questionnaires 10 days, six months, two years, and five years after the pregnancy termination.
- Compared with the general population, women who had undergone induced abortion had significantly higher HADS anxiety scores at all four interviews ($p < 0.01$ to $p < 0.001$), while women who had had a miscarriage had significantly higher anxiety scores only at 10 days ($p < 0.01$).
 - BMC Med 2005 Dec 12;3(1):18



The Other Side

- Women arriving at 1 of 3 sites for an abortion of a first-trimester unintended pregnancy were randomly approached to participate in a longitudinal study with 4 assessments-1 hour before the abortion, and 1 hour, 1 month, and 2 years after the abortion. 882 (85%) of 1043 eligible women approached agreed; 442 (50%) of 882 were followed for 2 years.
- Two years postabortion, 72% were satisfied with their decision; 69% said they would have the abortion again; 72% reported more benefit than harm from their abortion; 80% were not depressed. Six (1%) of 442 reported posttraumatic stress disorder. Depression decreased and self-esteem increased from preabortion to postabortion, but negative emotions increased and decision satisfaction decreased over time.
- CONCLUSIONS: Most women do not experience psychological problems or regret their abortion 2 years postabortion, but some do. Those who do tend to be women with a prior history of depression.
 - [Arch Gen Psychiatry](#). 2000 Aug;57(8):777-84



More from the Other Side

- Longitudinal cohort study of 1247 women in the US national longitudinal survey of youth who aborted or delivered an unwanted first pregnancy.
- Terminating compared with delivering an unwanted first pregnancy was not directly related to risk of clinically significant depression (odds ratio 1.19, 95% confidence interval 0.85 to 1.66). No evidence was found of a relation between pregnancy outcome and depression in analyses of subgroups known to vary in under-reporting of abortion. In analyses of the characteristics of non-respondents, refusal to provide information on abortion did not explain the lack of detecting a relation between abortion and mental health.
- Evidence that choosing to terminate rather than deliver an unwanted first pregnancy puts women at higher risk of depression is inconclusive. Discrepancies between current findings and those of previous research using the same dataset primarily reflect differences in coding of a first pregnancy.
 - BMJ 2005;331:1303. 2005



Sociological Implications

- Abortion has many sociological effects as well
- Here, a few of these effects on women and their interrelationships will be reviewed



Sexual dysfunction following abortion

- Eliot Institute Survey of women who had contact with post-abortion ministries:
- 58% of women surveyed reported a loss of sexual pleasure following abortion
- 47% reported an aversion to sexual intercourse
- 1/3rd of women reported increased pain during intercourse
 - Forbidden Grief: The Unspoken Pain of Abortion. Burke, T and Reardon DC. Springfield IL, Acorn Books, 2002.



Effect of Abortion on Relationships

- Abortion appears more likely to damage a couples relationship than to enhance it
- Women with a history of abortion tend to have shorter subsequent relationships with men compared with women without a prior abortion
 - Belsey et al. Predictive Factors and Emotional Response to Abortion”, Soc. Sci. & Med. 11:71-82, 1977
 - Bracken & Kasl. First and Repeat Abortions. Journal of Biosocial Science. 7:473, 1975.
 - Cogle, Reardon and Coleman. Depression Associated with Abortion and Childbirth. Arch. Women’s Mental Health. 3(4) Suppl 2:105 (2001)
- Women in the abortion group were also more likely to report negative relationships (M=0.66, SD=0.07) when compared to the delivery group (M=0.41, SE=0.03). (Cogle, Reardon and Coleman, Med Sci Monit 2003)



Effect of Abortion on Subsequent Children

- Women who have had abortions can suffer from parenting difficulties with later children
 - These include trying to be too perfect, spoiling children, being over protective, and abusing subsequent children
 - Forbidden Grief: The Unspoken Pain of Abortion. Burke, T and Reardon DC. Springfield IL, Acorn Books, 2002.



Effect on Crime Rates

- Some have touted that since abortion was legalized, crime rates have decreased.
- This is attributed by abortion proponents to less unwanted children.
- Recent studies indicate that this is not the case, but that the the “supposed link between abortion and crime is actually the result of omitted variables bias and difficulties in distinguishing between age-period-cohort effects”, such as the crack cocaine epidemic of the late 1980s.
- “abortion legalization did not have any measurable effect on crime 15-20 years later once appropriate controls are included”
- http://www.demog.berkeley.edu/~bryans/fert_abtn-crime.pdf



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Abortion after Rape

- 89% of those who aborted a pregnancy following sexual assault regretted their decision
- >90% would discourage other sexual assault victims from opting for abortion
- Only 7% thought that abortion “usually” would be beneficial in cases of sexual assault.
- Of sexual assault victims who carried to term, 100% believed they made the right decision
 - Victims and Victors: Speaking Out About Their Pregnancies, Abortions and Children Resulting from Sexual Assault. Reardon DC, Makimaa J, Sobie A. (Springfield IL, Acorn Books, 2000).



Fetal Anomalies and Abortion

- A retrospective study examined the reactions to the termination of pregnancy for fetal malformation and the follow up services that were available. Of the 48 women interviewed, 37 (77%) experienced an acute grief reaction after the index pregnancy was ended. Twenty two women (46%) remained symptomatic six months after the pregnancy had been ended, some requiring psychiatric support, compared with no such reaction after spontaneous abortion or termination for medicosocial reasons.
 - [Br Med J \(Clin Res Ed\)](#). 1985 Mar 23;290(6472):907-9
- A pilot study of trauma and grief 2-7 years after termination of a pregnancy for fetal anomalies compared with women who give birth to normal children.
- The results indicate that termination of pregnancy is to be seen as an emotionally traumatic major life event which leads to severe posttraumatic stress response and intense grief reactions that are still detectable some years later
 - [J Psychosom Obstet Gynaecol](#). 2005 Mar;26(1):9-14



“To Save the Life of the Mother”

- A common argument against Church teaching is that abortion may be needed to preserve the life of the mother
- Examples like ectopic pregnancy and tubal pregnancy are often cited.
- The principle of double effect allows termination of a pregnancy (but not direct killing of the child) if the life of the mother is in jeopardy
 - The principle of double effect helps ensure that an act, which has both good and bad effects that are morally certain to occur, will be morally good. Such an act is permissible as long as the act is not evil, the good effect is intended, the good effect is not achieved by means of the bad effect, and the good effect must be proportionate to the bad effect
 - Thus, a diseased tube or a hemorrhaging placenta can be removed to save the mother, but not the deliberate, direct destruction of the child



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From Planned Parenthood

The most common reasons a woman chooses abortion are

- She is not ready to become a parent.
- She cannot afford a baby.
- She doesn't want to be a single parent.
- She doesn't want anyone to know she has had sex or is pregnant.
- She is too young or too immature to have a child.
- She has all the children she wants.
- Her husband, partner, or parent wants her to have an abortion.
- She or the fetus has a health problem.
- She was a survivor of rape or incest.

Emotional Problems After Abortion?

Serious, long-term emotional problems after abortion are extremely rare and less common than they are after childbirth. Such problems are more likely if

- The pregnancy was wanted but the health of the fetus or the woman was in danger
- Having an abortion is related to serious problems in a relationship or other disturbing life events.
- A woman is depressed or already has emotional problems.



Conclusions

- Abortion is quite prevalent, particularly among African-American women
- Abortion is clearly associated with placenta previa, pre-term birth and low birth rate, and perhaps with increased breast cancer risk
- Abortion appears associated with all cause mortality, especially from suicide and “accidents”, perhaps associated with risk-taking behavior
- Abortion is associated with a multitude of psychological effects, including depression, anxiety, suicidal behaviors, substance use disorders, and with sexual dysfunction
- Abortion following rape or for potential fetal anomalies shows similar psychological issues.



Pope John Paul II

- “In the end a nation will be judged by how it treats the poorest and weakest among us.
- And who is poorer or weaker than the unborn?”



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Resources

- Rachel's Vineyard for Post-Abortion Healing
 - www.rachelsvineyard.org
- Elliot Institute Research Center
 - <http://www.afterabortion.org/>
- Catholic Medical Association
 - <http://www.cathmed.org>
- Philadelphia Guild of the Catholic Medical Association
 - <http://www.cathmedphila.org/>



Resources (cont.)

- Philadelphia Natural Family Planning Network
 - <http://www.pnfpn.org/>
- Abortion Facts
 - <http://www.abortionfacts.com/>
- Abortion Essays
 - <http://www.abortionessay.com/>
- Physicians for Life
 - <http://physiciansforlife.org/>
- Priests for Life
 - <http://priestsforlife.org/>



Additional Slides

- Abstracts of papers



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Generalized anxiety following unintended pregnancies resolved through childbirth and abortion: a cohort study of the 1995 National Survey of Family Growth

- [Cogle JR](#), [Reardon DC](#), [Coleman PK](#). *Journal of Anxiety Disorders* 19:137-142, 2005
- The psychological consequences of induced abortion are complex and subject to both considerable controversy and methodological criticisms. While many women report feelings of relief immediately after the procedure, others report feelings of anxiety, which they attribute to their abortions. The purpose of the present study was to examine risk of generalized anxiety following unintended pregnancies ending in abortion or childbirth using a large representative sample of American women. Among all women, those who aborted were found to have significantly higher rates of subsequent generalized anxiety when controlling for race and age at interview. Implications of the findings are discussed. In particular, findings highlight the clinical relevance of exploring reproductive history in therapeutic efforts to assist women seeking relief from anxiety.
- Odds ratio 1.34 (1.05 - 1.70)



Pregnancy-associated mortality after birth, spontaneous abortion, or induced abortion in Finland, 1987-2000

- [Gissler M, Berg C, Bouvier-Colle MH, Buekens P.](#) Am J Obstet Gynecol. 2004 Feb;190(2):422-7
- Objective: To test the hypothesis that pregnant and recently pregnant women enjoy a “healthy pregnant women effect,” we compared the all natural cause mortality rates for women who were pregnant or within 1 year of pregnancy termination with all other women of reproductive age. Study design: This is a population-based, retrospective cohort study from Finland for a 14-year period, 1987 to 2000. Information on all deaths of women aged 15 to 49 years in Finland (n = 15,823) was received from the Cause-of-Death Register and linked to the Medical Birth Register (n = 865,988 live births and stillbirths), the Register on Induced Abortions (n = 156,789 induced abortions), and the Hospital Discharge Register (n = 118,490 spontaneous abortions) to identify pregnancy-associated deaths (n = 419). **Results:** The age-adjusted mortality rate for women during pregnancy and within 1 year of pregnancy termination was 36.7 deaths per 100,000 pregnancies, which was significantly lower than the mortality rate among nonpregnant women, 57.0 per 100,000 person-years (relative risk [RR] 0.64, 95% CI 0.58–0.71). The mortality was lower after a birth (28.2/100,000) than after a spontaneous (51.9/100,000) or induced abortion (83.1/100,000). We observed a significant increase in the risk of death from cerebrovascular diseases after delivery among women aged 15 to 24 years (RR 4.08, 95% CI 1.58–10.55). **Conclusion:** Our study supports the healthy pregnant woman effect for all pregnancies, including those not ending in births.



Substance use associated with unintended pregnancy outcomes in the National Longitudinal Survey of Youth.

- [Reardon DC, Coleman PK, Cogle JR.](#) American Journal of Drug & Alcohol Abuse. 30(2):369-83, 2004 May
- Abortion is known to be associated with higher rates of substance abuse, but no studies have compared substance use rates associated with abortion compared to delivery of an unintended pregnancy. This study examines data for women in the National Longitudinal Survey of Youth whose first pregnancy was unintended. Women with no pregnancies were also used as a control group. Use of alcohol, marijuana, cocaine, and behaviors suggestive of alcohol abuse were examined an average of four years after the target pregnancy among women with prior histories of delivering an unintended pregnancy (n = 535), abortion (n = 213), or those who reported no pregnancies (n = 1144). Controls were instituted for age, race, marital status, income, education, and prepregnancy self-esteem and locus of control. Compared to women who carried an unintended first pregnancy to term, those who aborted were significantly more likely to report use of marijuana (odds ratio: 2.0), with the difference in these two groups approaching significance relative to the use of cocaine (odds ratio: 2.49). Women with a history of abortion also reported more frequent drinking than those with a history of unintended birth. With the exception of less frequent drinking, the unintended birth group was not significantly different from the no pregnancy group. Resolution of an unintended pregnancy by abortion was associated with significantly higher rates of subsequent substance use compared to delivering an unintended pregnancy. A history of abortion may be a useful marker for identifying women in need of counseling for substance use.



Psychiatric admissions of low-income women following abortion and childbirth

- [Reardon DC, Cogle JR, Rue VM, Shuping MW, Coleman PK, Ney PG.](#) CMAJ Canadian Medical Association Journal. 168(10):1253-6, 2003
- BACKGROUND: Controversy exists about whether abortion or childbirth is associated with greater psychological risks. We compared psychiatric admission rates of women in time periods from 90 days to 4 years after either abortion or childbirth. METHODS: We used California Medicaid (Medi-Cal) records of women aged 13-49 years at the time of either abortion or childbirth during 1989. Only women who had no psychiatric admissions or pregnancy events during the year before the target pregnancy event were included (n = 56 741). Psychiatric admissions were examined using logistic regression analyses, controlling for age and months of eligibility for Medi-Cal services. RESULTS: Overall, women who had had an abortion had a significantly higher relative risk of psychiatric admission compared with women who had delivered for every time period examined. Significant differences by major diagnostic categories were found for adjustment reactions (odds ratio [OR] 2.1, 95% confidence interval [CI] 1.1-4.1), single-episode (OR 1.9, 95% CI 1.3-2.9) and recurrent depressive psychosis (OR 2.1, 95% CI 1.3-3.5), and bipolar disorder (OR 3.0, 95% CI 1.5-6.0). Significant differences were also observed when the results were stratified by age. INTERPRETATION: Subsequent psychiatric admissions are more common among low-income women who have an induced abortion than among those who carry a pregnancy to term, both in the short and longer term.



Depression associated with abortion and childbirth: a long-term analysis of the NLSY cohort.

- [Cogle JR, Reardon DC, Coleman PK.](#) Medical Science Monitor. 9(4):CR105-12, 2003
- **BACKGROUND:** Existing research pertaining to emotional reactions to abortion is limited by (a) short follow up periods, (b) the absence of information on prior psychological state, and (c) lack of nationally representative samples. Therefore the purpose of this study was to compare women with a history of abortion vs. delivery relative to depression using a nationally representative longitudinal design, which enabled inclusion of a control for prior psychological state. **MATERIAL/METHODS:** The current study employed data for all women from the National Longitudinal Survey of Youth (NLSY) who experienced their first pregnancy event (abortion or childbirth) between 1980 and 1992 (n=1,884). Depression scores in 1992, an average of 8 years after the subjects' first pregnancy events, were compared after controlling for age, race, marital status, divorce history, education, income, and external locus of control scores. The latter was used to control for pre-pregnancy psychological state. Results were also examined separately for groups based on race, marital status, and divorce history. **RESULTS:** After controlling for several socio-demographic factors, women whose first pregnancies ended in abortion were 65% more likely to score in the 'high-risk' range for clinical depression than women whose first pregnancies resulted in a birth. Differences were greatest among the demographic groups most likely to report an abortion. **CONCLUSIONS:** Abortion may be a risk factor for subsequent depression in the period of 8 years after the pregnancy event. The higher rates of depression identified may be due to delayed reactions, persistence of depression, or some other common risk factor.



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

- [Coleman PK, Reardon DC, Rue VM, Cogle J.](#) American Journal of Obstetrics & Gynecology. 187(6):1673-8, 2002 Dec
- OBJECTIVE: Previous research has revealed a general association between induced abortion and substance use. The purpose of this study was to examine the correlation when substance use is measured specifically during a subsequent pregnancy. STUDY DESIGN: A nationally representative sample of women was surveyed about substance use during pregnancy shortly after giving birth. Women with a previous induced abortion, whose second pregnancy was delivered, were compared separately with women with one previous birth and with women with no previous births. RESULTS: Compared with women who gave birth, women who had had an induced abortion were significantly more likely to use marijuana (odds ratio, 10.29; 95% CI, 3.47-30.56), various illicit drugs (odds ratio, 5.60; 95% CI, 2.39-13.10), and alcohol (odds ratio, 2.22; 95% CI, 1.31-3.76) during their next pregnancy. The results with only first-time mothers were very similar. CONCLUSION: Psychosocial mechanisms that may explain the findings are discussed. Screening for abortion history may help to identify pregnant women who are at risk for substance use more effectively.



Deaths associated with pregnancy outcome: a record linkage study of low income women

- [Reardon DC, Ney PG, Scheuren F, Cogle J, Coleman PK, Strahan TW.](#) Southern Medical Journal. 95(8):834-41, 2002
- BACKGROUND: A national study in Finland showed significantly higher death rates associated with abortion than with childbirth. Our objective was to examine this association using an American population over a longer period. METHODS: California Medicaid records for 173,279 women who had an induced abortion or a delivery in 1989 were linked to death certificates for 1989 to 1997. RESULTS: Compared with women who delivered, those who aborted had a significantly higher age-adjusted risk of death from all causes (1.62), from suicide (2.54), and from accidents (1.82), as well as a higher relative risk of death from natural causes (1.44), including the acquired immunodeficiency syndrome (AIDS) (2.18), circulatory diseases (2.87), and cerebrovascular disease (5.46). Results are stratified by age and time. CONCLUSIONS: Higher death rates associated with abortion persist over time and across socioeconomic boundaries. This may be explained by self-destructive tendencies, depression, and other unhealthy behavior aggravated by the abortion experience.



The psychosocial outcome of induced abortion

- [Ashton JR.](#) British Journal of Obstetrics & Gynaecology. 87(12):1115-22, 1980
- The psychosocial outcome of induced abortion was assessed in 64 women after 8 weeks and in 86 women after 8 months. 3 groups were identified. About 5% had enduring, severe psychiatric disturbance following abortion. Women especially at risk were those with a previous psychiatric or abnormal obstetric history or with physical grounds for abortion and those expressing ambivalence towards abortion. Short-lived disturbances affected about half of all abortion patients. These symptoms included initial guilt and regrets and sensitivity to the comments of people around them which relate to abortion. The third group of women experienced no adverse sequelae. It is suggested that an awareness of the risk factors should lead to the instigation of more adequate counselling and support for those women who need it.



Suicides after pregnancy. Mental health may deteriorate as a direct effect of induced abortion.

- [Morgan CL](#), [Evans M](#), [Peters JR](#). *BMJ*. 314(7084):902; author reply 902-3, 1997 Mar 22
- Our data suggest that a deterioration in mental health may be a consequential side effect of induced abortion. Furthermore, poor mental health, as measured by suicide admission rates, seems unlikely to predispose to abortion.
- The age adjusted relative risk of suicide admission for women admitted for miscarriage compared with women admitted for normal delivery was 2.84 (1.67 to 4.81, $P < 0.001$) before the event and 2.29 (1.13 to 4.65, $P < 0.05$) afterwards. For induced abortion the relative risk was 1.72 (0.92 to 3.17, NS) before and 3.25 (1.79 to 5.91, $P < 0.001$) afterwards.



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

- David C Reardon and Jesse R Cogle BMJ. 324(7330):151-2, 2002 Jan 19.
- risk of subsequent depression was higher following abortion than those who previously carried an unintended first pregnancy to term (odds ratio 1.54, range 0.91 to 2.61; for married women 2.38, range 1.09 to 5.21)

Women scoring in "high risk" range for clinical depression (CES-D score >15) who had their first abortion or first unintended childbirth between 1980 and 1992

	Women with unintended births (who did not abort)			Aborting women			Adjusted odds ratio*	95% CI
	Total	High risk	% High risk	Total	High risk	% High risk		
Married	75	13	17.3	164	43	26.2	2.38	1.09 to 5.21
Unmarried	53	16	30.2	129	37	28.7	0.94	0.43 to 2.03
All women	128	29	22.7	293	80	27.3	1.54	0.91 to 2.61

* Adjusting for family income, education, race, age at first pregnancy, and 1979 Rotter score.



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Depression and unwanted first pregnancy: longitudinal cohort study

- Sarah Schmiege and Nancy Felipe Russo BMJ. 2005 December 3; 331(7528): 1303. Schmiege S, Russo NF
- **Objective** To examine the outcomes of an unwanted first pregnancy (abortion v live delivery) and risk of depression and to explain discrepancies with previous research that used the same dataset. **Design** Longitudinal cohort study. **Setting** Nationally representative sample of US men and women aged 14-24 in 1979. **Participants** 1247 women in the US national longitudinal survey of youth who aborted or delivered an unwanted first pregnancy. **Main outcome measures** Clinical cut-off and continuous scores on a 1992 measure of the Center for Epidemiological Studies depression scale. **Results** Terminating compared with delivering an unwanted first pregnancy was not directly related to risk of clinically significant depression (odds ratio 1.19, 95% confidence interval 0.85 to 1.66). No evidence was found of a relation between pregnancy outcome and depression in analyses of subgroups known to vary in under-reporting of abortion. In analyses of the characteristics of non-respondents, refusal to provide information on abortion did not explain the lack of detecting a relation between abortion and mental health. The abortion group had a significantly higher mean education and income and lower total family size, all of which were associated with a lower risk of depression. **Conclusions** Evidence that choosing to terminate rather than deliver an unwanted first pregnancy puts women at higher risk of depression is inconclusive. Discrepancies between current findings and those of previous research using the same dataset primarily reflect differences in coding of a first pregnancy.



Abortion and subsequent substance abuse

- [Reardon DC, Ney PG.](#) American Journal of Drug & Alcohol Abuse. 26(1):61-75, 2000
- A statistical association between a history of substance abuse and a history of abortion has been identified in several studies, but this association has not yet been thoroughly analyzed. This study draws on a subset of data from a reproductive history survey that included a nonparametric self-assessment of past substance abuse distributed to a random sample of American women. Analysis of this substance abuse variable showed that a report of substance abuse following a first pregnancy was associated significantly with (a) abortion for all women, (b) abortion for adolescents, and (c) abortion for women over 19 years of age. Women who aborted a first pregnancy were five times more likely to report subsequent substance abuse than women who carried to term, and they were four times more likely to report substance abuse compared to those who suffered a natural loss of their first pregnancy (i.e., due to miscarriage, ectopic pregnancy, or stillbirth). Women with a history of abortion or a history of substance abuse were significantly more likely to feel discomfort in responding to the survey. The findings of this study have important implications for the design of future studies examining substance abuse, adolescents, and women. These findings may also have clinical and counseling implications.



Maternal perinatal risk factors and child abuse

- [Lewis E. Child Abuse & Neglect Volume 9, Issue 2, 1985, Pages 217-224](#)
- A retrospective matched pair study was designed to compare maternal perinatal factors such as abnormal pregnancy history and labor and delivery experience in families who subsequently were reported as physically abusive to one or more of their children as compared to non-abusive families. The study population consisted of the mothers of 532 children reported to the Baltimore (Maryland) Department of Social Services as physically abused during the years 1975-1977. The comparison group was handmatched to the study group from State of Maryland birth certificates on the basis of the abused child's birth year and sex, maternal race, education and hospital of delivery¹. mothers in maltreating families were younger, had shorter birth intervals, less prenatal care and were significantly more likely to have had a stillbirth or reported abortion or a prior child death. Study limitations are addressed as are suggestions for future research.



Abortion in young women and subsequent mental health

- [Fergusson DM, John Horwood L, Ridder EM.](#) **Journal of Child Psychology and Psychiatry** v 47, Page 16 January 2006
- The extent to which abortion has harmful consequences for mental health remains controversial. We aimed to examine the linkages between having an abortion and mental health outcomes over the interval from age 15-25 years. **Methods:** Data were gathered as part of the Christchurch Health and Development Study, a 25-year longitudinal study of a birth cohort of New Zealand children. Information was obtained on: a) the history of pregnancy/abortion for female participants over the interval from 15-25 years; b) measures of DSM-IV mental disorders and suicidal behaviour over the intervals 15-18, 18-21 and 21-25 years; and c) childhood, family and related confounding factors.
- **Results:** Forty-one percent of women had become pregnant on at least one occasion prior to age 25, with 14.6% having an abortion. Those having an abortion had elevated rates of subsequent mental health problems including depression, anxiety, suicidal behaviours and substance use disorders. This association persisted after adjustment for confounding factors. **Conclusions:** The findings suggest that abortion in young women may be associated with increased risks of mental health problems.
- Some 42 percent of the women who had abortions had experienced major depression within the last four years. That's almost double the rate of women who never became pregnant. The risk of anxiety disorders also doubled. According to the study, women who have abortions were twice as likely to drink alcohol at dangerous levels and three times as likely to be addicted to illegal drugs.



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

- [Broen AN](#), [Moum T](#), [Bodtker AS](#), [Ekeberg O](#). *BMC Med.* 2005 Dec 12;3(1):18
- BACKGROUND: Miscarriage and induced abortion are life events that can potentially cause mental distress. The objective of this study was to determine whether there are differences in the patterns of normalization of mental health scores after these two pregnancy termination events. METHODS: Forty women who experienced miscarriages and 80 women who underwent abortions at the main hospital of Buskerud County in Norway were interviewed. All subjects completed the following questionnaires 10 days (T1), six months (T2), two years (T3), and five years (T4) after the pregnancy termination: Impact of Event Scale (IES), Quality of Life, Hospital Anxiety and Depression Scale (HADS), and another addressing their feelings about the pregnancy termination. Differential changes in mean scores were determined by analysis of covariance (ANCOVA) and inter-group differences were assessed by ordinary least squares methods. RESULTS: Women who had experienced a miscarriage had more mental distress at 10 days and six months after the pregnancy termination than women who had undergone an abortion. However, women who had had a miscarriage exhibited significantly quicker improvement on IES scores for avoidance, grief, loss, guilt and anger throughout the observation period. Women who experienced induced abortion had significantly greater IES scores for avoidance and for the feelings of guilt, shame and relief than the miscarriage group at two and five years after the pregnancy termination (IES avoidance means: 3.2 vs 9.3 at T3, respectively, $p < 0.001$; 1.5 vs 8.3 at T4, respectively, $p < 0.001$). Compared with the general population, women who had undergone induced abortion had significantly higher HADS anxiety scores at all four interviews ($p < 0.01$ to $p < 0.001$), while women who had had a miscarriage had significantly higher anxiety scores only at T1 ($p < 0.01$). CONCLUSION: The course of psychological responses to miscarriage and abortion differed during the five-year period after the event. Women who had undergone an abortion exhibited higher scores during the follow-up period for some outcomes. The difference in the courses of responses may partly result from the different characteristics of the two pregnancy termination events.



Long-term physical and psychological health consequences of induced abortion: review of the evidence.

- [Thorp JM Jr](#), [Hartmann KE](#), [Shadigian E](#). [Obstet Gynecol Surv](#). 2003 Jan;58(1):67-79
- Induced abortion is a prevalent response to an unintended pregnancy. The long-term health consequences are poorly investigated and conclusions must be drawn from observational studies. Using strict inclusion criteria (study population >100 subjects, follow up >60 days) we reviewed an array of conditions in women's health. Induced abortion was not associated with changes in the prevalence of subsequent subfertility, spontaneous abortion, or ectopic pregnancy. Previous abortion was a risk factor for placenta previa. Moreover, induced abortion increased the risks for both a subsequent preterm delivery and mood disorders substantial enough to provoke attempts of self-harm. Preterm delivery and depression are important conditions in women's health and avoidance of induced abortion has potential as a strategy to reduce their prevalence. Only review articles including the single published meta-analysis exploring linkages between abortion and breast cancer were relied upon to draw conclusions. Reviewers were mixed on whether subsequent breast neoplasia can be linked to induced abortion, although the sole meta-analysis found a summary odds ratio of 1.2. Whatever the effect of induced abortion on breast cancer risk, a young woman with an unintended pregnancy clearly sacrifices the protective effect of a term delivery should she decide to abort and delay childbearing. That increase in risk can be quantified using the Gail Model. Thus, we conclude that informed consent before induced abortion should include information about the subsequent risk of preterm delivery and depression. Although it remains uncertain whether elective abortion increases subsequent breast cancer, it is clear that a decision to abort and delay pregnancy culminates in a loss of protection with the net effect being an increased risk. TARGET AUDIENCE: Obstetricians & Gynecologists, Family Physicians. LEARNING OBJECTIVES: After completion of this article, the reader will be able to define the terms and, to outline the epidemiologic problems in studying the long-term consequences of abortion, and to list the associated long-term consequences of abortion.



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Induced abortion and traumatic stress: a preliminary comparison of American and Russian women.

- [Rue VM, Coleman PK, Rue JJ, Reardon DC. Med Sci Monit. 2004 Oct;10\(10\):SR5-16. Epub 2004 Sep 23.](#)
- **BACKGROUND:** Individual and situational risk factors associated with negative postabortion psychological sequelae have been identified, but the degree of posttraumatic stress reactions and the effects of culture are largely unknown. **MATERIAL/METHODS:** Retrospective data were collected using the Institute for Pregnancy Loss Questionnaire (IPLQ) and the Traumatic Stress Institute's (TSI) Belief Scale administered at health care facilities to 548 women (331 Russian and 217 American) who had experienced one or more abortions, but no other pregnancy losses. **RESULTS:** Overall, the findings here indicated that American women were more negatively influenced by their abortion experiences than Russian women. While 65% of American women and 13.1% of Russian women experienced multiple symptoms of increased arousal, re-experiencing and avoidance associated with posttraumatic stress disorder (PTSD), 14.3% of American and 0.9% of Russian women met the full diagnostic criteria for PTSD. Russian women had significantly higher scores on the TSI Belief Scale than American women, indicating more disruption of cognitive schemas. In this sample, American women were considerably more likely to have experienced childhood and adult traumatic experiences than Russian women. Predictors of positive and negative outcomes associated with abortion differed across the two cultures. **CONCLUSIONS:** Posttraumatic stress reactions were found to be associated with abortion. Consistent with previous research, the data here suggest abortion can increase stress and decrease coping abilities, particularly for those women who have a history of adverse childhood events and prior traumata. Study limitations preclude drawing definitive conclusions, but the findings do suggest additional cross-cultural research is warranted.



Psychological responses of women after first-trimester abortion.

- [Major B, Cozzarelli C, Cooper ML, Zubek J, Richards C, Arch Gen Psychiatry.](#) 2000 Aug;57(8):777-84
- **BACKGROUND:** Controversy exists over psychological risks associated with abortion. The objectives of this study were to examine women's emotions, evaluations, and mental health after an abortion, as well as changes over time in these responses and their predictors. **METHODS:** Women arriving at 1 of 3 sites for an abortion of a first-trimester unintended pregnancy were randomly approached to participate in a longitudinal study with 4 assessments-1 hour before the abortion, and 1 hour, 1 month, and 2 years after the abortion. Eight hundred eighty-two (85%) of 1043 eligible women approached agreed; 442 (50%) of 882 were followed for 2 years. Preabortion and postabortion depression and self-esteem, postabortion emotions, decision satisfaction, perceived harm and benefit, and posttraumatic stress disorder were assessed. Demographic variables and prior mental health were examined as predictors of postabortion psychological responses. **RESULTS:** Two years postabortion, 301 (72%) of 418 women were satisfied with their decision; 306 (69%) of 441 said they would have the abortion again; 315 (72%) of 440 reported more benefit than harm from their abortion; and 308 (80%) of 386 were not depressed. Six (1%) of 442 reported posttraumatic stress disorder. Depression decreased and self-esteem increased from preabortion to postabortion, but negative emotions increased and decision satisfaction decreased over time. Prepregnancy history of depression was a risk factor for depression, lower self-esteem, and more negative abortion-specific outcomes 2 years postabortion. Younger age and having more children preabortion also predicted more negative abortion evaluations. **CONCLUSIONS:** Most women do not experience psychological problems or regret their abortion 2 years postabortion, but some do. Those who do tend to be women with a prior history of depression.



The effects of induced abortion on emotional experiences and relationships: a critical review of the literature.

- [Bradshaw Z, Slade P, Clin Psychol Rev.](#) 2003 Dec;23(7):929-58
- This paper reviews post-1990 literature concerning psychological experiences and sexual relationships prior to and following induced abortion. It assesses whether conclusions drawn from earlier reviews are still supported and evaluates the extent to which previous methodological problems have been addressed. Following discovery of pregnancy and prior to abortion, 40-45% of women experience significant levels of anxiety and around 20% experience significant levels of depressive symptoms. Distress reduces following abortion, but up to around 30% of women are still experiencing emotional problems after a month. Women due to have an abortion are more anxious and distressed than other pregnant women or women whose pregnancy is threatened by miscarriage, but in the long term they do no worse psychologically than women who give birth. Self-esteem appears unaffected by the process. Less research has considered impact on the quality of relationships and sexual functioning, but negative effects were reported by up to 20% of women. Conclusions were generally concordant with previous reviews. However, anxiety symptoms are now clearly identified as the most common adverse response. There has been increasing understanding of abortion as a potential trauma, and studies less commonly explore guilt. The quality of studies has improved, although there are still some methodological weaknesses.



Psychosocial aspects of induced abortion.

- **Stotland NL** [Clin Obstet Gynecol.](#) 1997 Sep;40(3):673-86
- PIP: US anti-abortion groups have used misinformation on the long-term psychological impact of induced abortion to advance their position. This article reviews the available research evidence on the definition, history, cultural context, and emotional and psychiatric sequelae of induced abortion. Notable has been a confusion of normative, transient reactions to unintended pregnancy and abortion (e.g., guilt, depression, anxiety) with serious mental disorders. Studies of the psychiatric aspects of abortion have been limited by methodological problems such as the impossibility of randomly assigning women to study and control groups, resistance to follow-up, and confounding variables. Among the factors that may impact on an unintended pregnancy and the decision to abort are ongoing or past psychiatric illness, poverty, social chaos, youth and immaturity, abandonment issues, ongoing domestic responsibilities, rape and incest, domestic violence, religion, and contraceptive failure. Among the risk factors for postabortion psychosocial difficulties are previous or concurrent psychiatric illness, coercion to abort, genetic or medical indications, lack of social supports, ambivalence, and increasing length of gestation. Overall, the literature indicates that serious psychiatric illness is at least 8 times more common among postpartum than among postabortion women. Abortion center staff should acknowledge that the termination of a pregnancy may be experienced as a loss even when it is a voluntary choice. Referrals should be offered to women who show great emotional distress, have had several previous abortions, or request psychiatric consultation.



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Depression and unwanted first pregnancy: longitudinal cohort study

- [BMJ](#). 2005 Dec 3;331(7528):1303. Epub 2005 Oct 28, [Schmiege S](#), [Russo NF](#)
- OBJECTIVE: To examine the outcomes of an unwanted first pregnancy (abortion v live delivery) and risk of depression and to explain discrepancies with previous research that used the same dataset. DESIGN: Longitudinal cohort study. SETTING: Nationally representative sample of US men and women aged 14-24 in 1979. PARTICIPANTS: 1247 women in the US national longitudinal survey of youth who aborted or delivered an unwanted first pregnancy. MAIN OUTCOME MEASURES: Clinical cut-off and continuous scores on a 1992 measure of the Center for Epidemiological Studies depression scale. RESULTS: Terminating compared with delivering an unwanted first pregnancy was not directly related to risk of clinically significant depression (odds ratio 1.19, 95% confidence interval 0.85 to 1.66). No evidence was found of a relation between pregnancy outcome and depression in analyses of subgroups known to vary in under-reporting of abortion. In analyses of the characteristics of non-respondents, refusal to provide information on abortion did not explain the lack of detecting a relation between abortion and mental health. The abortion group had a significantly higher mean education and income and lower total family size, all of which were associated with a lower risk of depression. CONCLUSIONS: Evidence that choosing to terminate rather than deliver an unwanted first pregnancy puts women at higher risk of depression is inconclusive. Discrepancies between current findings and those of previous research using the same dataset primarily reflect differences in coding of a first pregnancy.



Trauma and grief 2-7 years after termination of pregnancy because of fetal anomalies --a pilot study.

- [Kersting A](#), [Dorsch M](#), [Kreulich C](#), [Reutemann M](#), [Ohrmann P](#), [Baez E](#), [Arolt V](#). [J Psychosom Obstet Gynaecol](#). 2005 Mar;26(1):9-14
- The aim of the study was to obtain information on the long-term posttraumatic stress response and grief several years after termination of pregnancy due to fetal malformation. We investigated 83 women who had undergone termination of pregnancy between 1995 and 1999 and compared them with 60 women 14 days after termination of pregnancy and 65 women after the spontaneous delivery of a full-term healthy child. Women 2-7 years after termination of pregnancy were expected to show a significantly lower degree of traumatic experience and grief than women 14 days after termination of pregnancy. Contrary to the hypothesis, however, the results showed no significant intergroup differences with respect to the degree of traumatic experience. With the exception of one subscale (fear of loss), this also applied to the grief reported by the women. However, both groups differed significantly in their posttraumatic stress response from women who had given spontaneous birth to a full-term healthy child. The results indicate that termination of pregnancy is to be seen as an emotionally traumatic major life event which leads to severe posttraumatic stress response and intense grief reactions that are still detectable some years later.



Sequelae and support after termination of pregnancy for fetal malformation.

- [Lloyd J, Laurence KM. Br Med J \(Clin Res Ed\). 1985 Mar 23;290\(6472\):907-9](#)
- A retrospective study examined the reactions to the termination of pregnancy for fetal malformation and the follow up services that were available. Women resident in Mid Glamorgan who had had a termination between 1977 and 1981 because of positive findings after midtrimester prenatal diagnostic tests for neural tube defect or chromosome abnormalities were interviewed at home using a semistructured interview schedule. Three retrospective internal comparison groups were formed from those women who had also had a spontaneous abortion, previous stillbirth, or neonatal death or previous termination for medicosocial reasons early in pregnancy. Of the 48 women interviewed, 37 (77%) experienced an acute grief reaction after the index pregnancy was ended. This reaction was akin to that documented after stillbirth or neonatal death. Twenty two women (46%) remained symptomatic six months after the pregnancy had been ended, some requiring psychiatric support, compared with no such reaction after spontaneous abortion or termination for medicosocial reasons. All the women who had previously had a stillbirth or neonatal death were visited at home either by the general practitioner or by the midwife after that event but such follow up was limited to only eight of the study group after termination for fetal malformation. The findings suggest that support is inadequate for these patients and that improved follow up and counselling services may lessen the adverse sequelae of termination for fetal malformation.



Fertility and the Abortion-Crime Debate

- Bryan L. Sykes, Departments of Demography & Sociology, University of California-Berkeley; Dominik Hangartner, Departments of Economics & Sociology, University of Bern; Earl Hathaway, Departments of Math & Economics, University of Wisconsin-Madison
- January 16, 2006 (http://www.demog.berkeley.edu/~bryans/fert_abtn-crime.pdf)
- Recently some scholars have asserted that abortion legalization during the 1970s resulted in lower crime 15-20 years later. While economists have both substantiated and challenged these findings, sociologists and demographers have been mute on the topic. In this paper, we show that the supposed link between abortion and crime is actually the result of omitted variables bias and difficulties in distinguishing between age-period-cohort effects. We correct these problems and use quasi-experimental methods to retest the causal argument for homicide, property, and violent crime. Using a unique data set compiled from multiple sources, we find that abortion legalization did not have any measurable effect on crime 15-20 years later once appropriate controls are included. Our findings indicate that any drop in crime is the result of a mixture of unmeasured period and cohort effects and not abortion.



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The Principle of the Double Effect

- The principle of the double effect is a guide developed over several centuries in the Catholic moral tradition and designed to help ensure that an act, which has both good and bad effects that are morally certain to occur, will be morally good. There are four conditions of the principle of the double effect, all of which must be fulfilled in order for an act to be good which has both good and bad effects: (1) the act performed cannot be in itself morally evil, and must be good or at least indifferent; (2) the good effect must be directly intended while the bad effect is foreseen but unintended; (3) the good effect cannot be achieved by means of the bad effect (the bad effect cannot be the cause of the good effect even though the good effect can only be reasonably achieved together with the bad effect); (4) the good effect must have a moral status proportionate to the bad effect. The principle of the double effect can be an indispensable guide if properly applied, but it cannot supplant the virtues in the pursuit of morally good action such as the virtue of prudence.



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