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Abortion and Mental Health

There are few issues related to abortion as controversial as the potential link between abortion and mental health complications. Of course, mental health risks can be difficult to decipher, because often poor social support and difficult life circumstances can factor into a woman's decision to have an abortion, and these can affect her mental health as well. Most pro-choice advocates recommend abortion to a woman in crisis under the assumption that it will resolve the crisis and lead to better mental health outcomes for the woman. They may interpret the "relief" a woman feels with the resolution of the pregnancy crisis to mean that there could be no mental harm from the procedure.[1] Pro-life advocates, particularly those who work with women who have had mental health crises that they attribute to their abortion, argue the opposite: that intentionally ending the life of an unborn child leads to much guilt and regret for a woman, triggering symptoms of anxiety, depression, substance abuse, and potentially suicidal thoughts. An honest evaluation of the literature is imperative for those who care for women.

Background

The pro-abortion advocacy of professional society reports

National Academy of Sciences

From 1993 to 2018, there were 75 studies examining the abortion-mental health link, of with 2/3 showed an increased risk of mental health complications after abortion. Yet, recently, the National Academies of Sciences, Engineering, and Medicine (NAS) published a widely reported book, *The Safety and Quality of Abortion Care in the United States*, which concluded that induced abortion is extremely safe.[2] It concluded that serious complications or long-term physical or mental health effects are virtually non-existent. It stated that abortion is so safe that the only deterrent to its safety is legislative restrictions enacted by the states that may prevent a woman from accessing an abortion immediately, "creating barriers to safe and effective care." Abortions can be performed safely in an office-based setting or by telemedicine without the need for hospital admitting privileges. No special equipment or emergency arrangements are required for medical abortions. It is so safe, in fact, that it does not need to be performed by physicians; it can safely be performed by trained certified nurse midwives, nurse

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practitioners, and physician assistants. The NAS concluded that abortion has no long-term adverse effects, and it specifically does not increase the risk of preterm delivery, mental health disorders, or breast cancer.

The National Academy of Sciences has a prestigious professional reputation, so at first glance this statement appears to settle the issue. The NAS is a private nonprofit foundation comprised of scholars in operation since the presidency of Abraham Lincoln. It currently consists of 2,100 members, and its past membership has included over 500 Nobel Prize winners. The organization was founded to be free from bias. From their best practices guidelines, "On Being a Scientist," the NAS states:

> *The scientific research enterprise is build on a foundation of trust. Scientists trust that the results reported by others are valid. Society trusts that the results of research reflect an honest attempt by scientists to describe the world accurately and without bias. But this trust will endure only if the scientific community devotes itself to exemplifying and transmitting the values associated with ethical scientific conduct.*[3]

Does today's National Academy of Sciences still adhere to this ethical standard? In 2006, the Center for Science in the Public Interest stated in their watchdog report, *Are the National Academies Fair and Balanced?: One in Five Scientists on NAS Issue Panels Tied to Firms Involved in the Issue*: "We found serious deficiencies in the NAS committee's selection process… The NAS has allowed numerous scientists and others to sit on committees… These conflicts of interest are usually not disclosed to the public."[4] It appears that there are a number of financial or institutional conflicts which have not been disclosed by the current academy members.

The origin of the NAS abortion safety report demonstrates these biases. The NAS report acknowledges:

> *Funding for this study was provided by the David and Lucile Packard Foundation, The Grove Foundation, The JPB Foundation, The Susan Thompson Buffett Foundation, Tara Health Foundation, and William and Flora Hewlett Foundation.*

In 2016, these six outspoken pro-choice organizations (Packard, JPB, Grove, Buffett, Tara Health, and Hewlett Foundations) all have donated liberally to promote abortion. The Susan T. Buffett Foundation is the largest non-governmental funder of abortion worldwide, with a total of $1.2 billion donations, including $300 million to Planned Parenthood and $88 million to UCSF Bixby Center for Global Reproductive Rights. It is clear that these organizations hoped the NAS would create a report exonerating abortion of the implications that it could result in adverse effects, and that is exactly what they got for their money.

Regarding the abortion-mental health link specifically, the NAS simply ignored most of the 75 published studies and chose only seven studies to review. Five of these seven studies were derived from the same group of women, the Turnaway cohort,[5] and the

remaining two were reviews by professional organizations: the American Psychological Association (APA)[6] and the Royal College of Psychiatrists.[7]

Problems with the Turnaway cohort

The Turnaway cohort is a database accumulated by Advancing New Standards in Reproductive Health (ANSIRH). Led by longtime abortion activist Dr. Daniel Grossman,[8] who has extensive financial ties to the abortion industry, ANSIRH accumulated a database to rebut any association between abortion and adverse mental health outcomes. This database is the Turnaway cohort, which has resulted in numerous publications all based on the same database.

The Turnaway cohort has been extensively criticized for its poor participation rate and high attrition. Only 37% of the women approached agreed to participate, and an additional 44% dropped out before the study's completion. This leaves a cohort of only 17% of those originally surveyed.[9] This extremely low participation rate calls into question whether a self-selection bias occurred, since women more deeply wounded would reasonably be less likely to participate in such a study, falsely lowering the final incidence of mental health problems.

Other important details regarding this cohort were also missing, such as how many women in late gestational ages were included, since a known risk factor for adverse mental health consequences is advanced gestational age. The six mental health measures considered in the study were very simplistic. Yet, five of the total seven studies that the NAS relied on came out of this flawed cohort, performed by a known pro-abortion organization.

In summary, the NAS examined only seven papers coming from only three study groups out of the then-existing 75 published studies to make their determination of no effect of abortion on subsequent mental health. Worse, one of those study groups, the Turnaway study, which formed the basis of five of the seven total studies reviewed, was deeply flawed by an extremely low participation rate and an extremely low follow-up rate. Not surprisingly, considering the NAS' preexisting bias, the answer the NAS produced for its funders was "no link" between abortion and mental health complications.

American Psychological Association (APA) bias

There are other professional organizations in medicine and psychology that also have a pro-choice bias which affects their interpretation of the literature. Prior to *Roe v. Wade*, the APA had previously advocated for abortion on demand, stating in 1969, "Termination of a pregnancy should be considered a civil right of a pregnant woman."[10] In 2008, the APA published: "There is no credible evidence that a single, elective abortion of an unwanted pregnancy, in and of itself, causes mental health problems for the adult woman."[11]

It should be noted, however, that most women who present to an abortion clinic in

real life are *not included* by this statement, since:

- 40-50% of American women have had multiple abortions.[12]
- 20-60% of women may desire their pregnancy but experience pressure or coercion to terminate. (14% lack support from husband or partner; 19% not sure about relationship; 25% don't want others to know about pregnancy; 14% husband or partner who wants the abortion; 6% parents want the abortion)[13]
- Others may terminate a desired pregnancy due to perceived health risks for themselves (12%) or perceived abnormalities in the baby (13%).[14]
- 15-30% of abortions occur in minor women, and at least two studies showed that these young women have a significantly higher suicide rate than their peers.[15,16]
- 20-50% of women have preexisting mental health conditions that may be triggered or aggravated by the abortion.[17,18]
- A late-term abortion is also a significant risk factor for psychiatric distress after an abortion.[19]

In fact, if the 14 risk factors for adverse mental health outcomes published in the APA statement[20] are applied to the cohort of women who present to the abortion clinic, then the overwhelming majority of women have at least one of the 14 risk factors. That means a majority of women who actually abort are at risk for adverse mental health outcomes.

Royal College of Psychiatrists Report

Similarly, a 2011 systematic review on induced abortion and mental health from the Royal College of Psychiatrists of all the scientific literature on the topic from 1990 onward found no evidence of adverse mental health consequences after abortion.[21] However, as in the NAS study, many studies were excluded without explanation. Only three reviews of the literature were included, but 19 were "missed." Twenty-seven empirical studies identifying risk factors were included, but 20 were ignored without explanation. One of the given explanations for exclusion was if the follow-up was 90 days or less. But surely we should care if a woman has significant adverse mental health effects within the first three months. That would still be important. Not surprisingly, many of the excluded studies demonstrated adverse post-abortion consequences.[22]

Evaluating existing studies for quality

Coleman Scoring Rubric

Dr. Priscilla Coleman, who has extensively studied the association between abortion and mental health, developed an assessment tool with a rubric consisting of nine scientific factors, each of which is scored from 0 to 4. Total scores range from 0 to 36, with higher scores indicative of a stronger overall scientific methodology. The factors incorporated into the assessment tool are listed as:

1. **Sample size**
2. **Generalizability** – does the sample adequately represent the population?
3. **Consent to participate or initial response rate**
4. **Concealment** – many don't want to reveal abortion
5. **Confounding control** – variables likely to be systematically related to the choice to abort
6. **Control group** – those who have not experienced an abortion
7. **Measures** – assessment of validity and reliability of instruments used
8. **Prospective**
9. **Attrition rate**

Dr. Coleman has now applied this assessment tool to a literature review, examining all studies published worldwide from 1993 to 2018. The paper will be submitted for publication early in 2020. Coleman's preliminary findings were presented at the Matthew Bulfin Educational Conference in 2019. Coleman's presentation included data which showed that of the 75 published studies reviewed, 49 (65%) showed a positive correlation between abortion and adverse mental health consequences, and 26 (35%) showed no correlation. The majority of highly reliable studies demonstrated an association.

Reardon Composite Descriptions

Dr. David Reardon, in an insightful paper,[23] acknowledges that many pro-choice advocates will concede that some women have adverse mental health consequences after abortion, but they feel the procedure itself has minimal impart and the adverse consequences are more likely to be related to the situation that drove them to the abortion. He splits the ideologic camps into abortion-mental health "minimalists" and "proponents," mirroring the controversy often seen regarding climate change. He described two composite young women who had abortions:

"Allie All-Risk" *is a 15-year-old abuse victim with a history of anxiety and depression. She was raised in church and believes that abortion is the killing of a human being. She has always wanted to be a mother and when she becomes unintentionally pregnant with her older boyfriend, she is excited. However, her boyfriend and her parents do not want her to have a child and coerce her into an abortion.*

"Betsy Best-Case" *also becomes pregnant. She is 32 years old, was raised in a secular home, does not desire to become a mother, and is very focused on her career. She easily chooses to have an abortion because she believes the value of a "person" is not based on biological features, but on the individual capacity to have a fulfilling life.*

It is easy to see that these two different women have far different risks for suffering adverse mental health consequences after their abortions. Honest pro-choice advocates should acknowledge this if they truly care for the well-being of women. The 96% of Planned Parenthood's pregnancy services which are abortions fit the

perceived needs of Betsy Best-Case. However, it is clear that offering abortion as the only option does not fit individual psychological needs of women like Allie All-Risk.

Clinical Questions and Answers

Q *What risk factors may place a woman at increased risk for mental health complications after abortion?*

The world literature on abortion and women's mental health has grown considerably over the past several decades and the scientific rigor of the published studies has increased substantially. Identification of risk factors for adverse outcomes and exploration of a wide range of negative psychological consequences have been the focus of most of this research.[24-26]

Numerous studies have identified the demographic, individual, relationship, and situational characteristics that place women at risk for psychological disturbance in the aftermath of abortion. Up to 146 risk factors have been identified. Among the most thoroughly substantiated risk factors are the following:

1. Perceptions of the inability to cope with the abortion[27]
2. Low self-esteem[28]
3. Difficulty with the decision[29,30]
4. Emotional investment in the pregnancy[31,32]
5. Perceptions of one's partner, family members, or friends as non-supportive[33]
6. Timing during adolescence or being unmarried[34,35,36]
7. Pre-existing emotional problems or unresolved traumatization[37]
8. Involvement in violent relationships[38,39]
9. Traditional sex-role orientations[40]
10. Conservative views of abortion and/or religious affiliation[41]
11. Intended pregnancy[42,43,44]
12. Second trimester[45]
13. Pre-abortion ambivalence or decision difficulty[46]
14. Involvement in unstable partner relationship[47]
15. Feelings of being forced into abortion by one's partner, others, or by life circumstances[48]

Studies done with nationally representative samples and a variety of controls for personal and situational factors that may differ between women choosing to abort or deliver indicate abortion significantly increases risk for the following mental health problems:

1. Depression[49-53]
2. Anxiety[54,55]
3. Substance abuse[56-59]
4. Suicidal ideation and behavior[60,61]

Abortion is associated with a higher risk for negative psychological outcomes when compared to other forms of perinatal loss and with unintended pregnancy carried to term.[62-64]

There is consensus among most social and medical science scholars that a minimum of 20 to 30% of women who abort suffer

from serious, prolonged negative psychological consequences,[65,66] yielding at least 260,000 new cases of mental health problems each year.

Adjustment to abortion is a highly individualized experience; as Goodwin and Ogden note, "women's responses to their abortion do not always follow the suggested reactions of grief but are varied and located within the personal and social context."[67]

Women who perceived pre-abortion counseling as being inadequate were more likely to report relationship problems, symptoms of intrusion, avoidance, and hyperarousal, and to meet diagnostic criteria for post-traumatic stress disorder (PTSD). Women who disagreed with their partners concerning the decision to abort were more likely to report symptoms of intrusion and to meet the diagnostic criteria for PTSD.[68]

Women who have abortions after the first trimester may be at greater risk for experiencing trauma symptoms than those who have an abortion during the first 12 weeks of pregnancy.[69]

Women who suffer from mental health problems associated with abortion may find a path to healing through conventional therapeutic interventions or through faith-based counseling. Unfortunately, very little research has been conducted to assess the efficacy of various treatment protocols.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. Women who have abortions after the first trimester may be at greater risk for experiencing trauma symptoms than those who have an abortion during the first 12 weeks of pregnancy.
2. All women who present for elective abortion should be screened for risk factors for adverse mental health outcome, and these risk factors should be discussed with the patient as part of informed consent.

The following recommendations are based on limited and inconsistent scientific evidence (Level B):

1. Women experiencing adverse mental health outcomes after abortion may benefit from mental health interventions.

The following recommendations are based primarily on consensus and expert opinion (Level C):

1. More research on short- and long-term mental health outcomes after abortion should be a priority for researchers.

References

1. Charles . Abortion and Long-Term Mental Health Outcomes: A Systematic Review of the Evidence. Contraception. 2008 Dec;78(6):436-50. doi:

10.1016/j.contraception.2008.07.005. Epub 2008 Sep 23. https://www.ncbi.nlm.nih.gov/pubmed/?term=Contraception.+2008%3B78%3A436.
2. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Care Services; Board on Population Health and Public Health Practice; Committee on Reproductive Health Services: Assessing the Safety and Quality of Abortion Care in the U.S. Washington (DC): National Academies Press (US);2018 Mar. available at: https://www.ncbi.nlm.nih.gov/books/NBK507236/pdf/Bookshelf_NBK507236.pdf
3. Committee on Science, Engineering and Public Policy, National Academy of Sciences, National Academy of Engineering and Institute of Medicine. "On Being a Scientist: A guide to Responsible Conduct in Research: Third Edition" Full text available: http://biblioteca.ucv.cl/site/colecciones/manuales_u/12192.pdf
4. Center for Science in the Public Interest. "Are the National Academies Fair and Balanced?: One in Five Scientists on NAS Issue Panels Tied to Firms Involved in the Issue." Available at: https://cspinet.org/new/200607241.html
5. https://www.ansirh.org/research/turnaway-study
6. Major B, Appelbaum M, Beckman L, Dutton MA, Russo NF, West C. Report of the APA Task Force on Mental Health and Abortion. Full text https://www.apa.org/pi/women/programs/abortion/mental-health.pdf
7. Academy of Medical Royal Colleges and National Collaborating Centre for Mental Health. Induced Abortion and Mental Health A systematic review of the mental health outcomes of induced abortion , including their prevalence and associated factors. Dec 2011. Full text: https://www.aomrc.org.uk/wpcontent/uploads/2016/05/Induced_Abortion_Mental_Health_1211.pdf
8. https://www.ansirh.org/about/faculty-and-staff
9. Biggs MA, Upadhyay UD, McCulloch CE. Women's Mental Health and Well-being 5 Years After Receiving or Being Denied an Abortion A Prospective, Longitudinal Cohort Study JAMA Psychiatry. 2017;74(2):169-178. doi:10.1001/jamapsychiatry.2016.3478 https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2592320
10. American Psychological Association Abortion Resolutions available at: https://www.apa.org/about/policy/abortion
11. Ibid.
12. Guttmacher Institute. https://www.guttmacher.org/united-states/abortion
13. Finer LB, Frohwirth LF, Duphinee LA, Sing S, Moore AM. Reasons women have abortions: Quantitative and Qualitative Perspectives. Perspectives on Sexual and Reproductive Health, 2005, 37(3):110–118. At Table 2. Full text https://www.guttmacher.org/sites/default/files/article_files/3711005.pdf
14. Ibid. Table 2.
15. Garfinkel. Stress, Depression and Suicide: A Study of Adolescents in Minnesota. Univ of Minnesota Extension Service. 1986. Full text

https://conservancy.umn.edu/bitstream/handle/11299/195269/Adolescent%20Stress%20and%20Depression%20_%20Research%20_%20Youth%20Development%20_%20University%20of%20Minnesota%20Extension.pdf?sequence=1&isAllowed=y

16. Morgan CL, Evans M, Peters JR. Suicides after pregnancy. Mental health may deteriorate as a direct effect of induced abortion. Full text letter https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2126260/pdf/9093118.pdf
17. Rue VM, Coleman PK, Rue JJ, Reardon DC. Induced abortion and traumatic stress: A preliminary comparison of American and Russian women Med Sci Monit 2004; 10(10): SR5-16. https://www.medscimonit.com/download/index/idArt/11784
18. Mota NP, Sareen BM. Associations Between Abortion, Mental Disorders, and Suicidal Behavior in A Nationally Representative Sample. Canadian J of Psychiatry. 2010;55(4):239-247. https://www.ncbi.nlm.nih.gov/pubmed/20416147
19. Op. cit. footnote 6 APA Task Force on Mental Health and Abortion
20. Op. cit. footnote 6 APA Task Force on Mental Health and Abortion
21. Op. cit. footnote 7 Royal College 2011
22. Coleman PK. A critique of the systematic Review on induced abortion and mental health released by the Royal College of Psychiatrists http://wecareexperts.org/sites/default/files/articles/Critique%20of%20Royal%20College%20Systematic%20Review%20of%20Abortion%20and%20Mental%20Health%20Literature.pdf
23. Reardon DC. The abortion and mental health controversy: A comprehensive literature review of common ground agreements, disagreements, actionable recommendations, and research opportunities. SAGE Open Med. 2018 Oct 29;6:2050312118807624. doi: 10.1177/2050312118807624. eCollection 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6207970/
24. Bradshaw Z., Slade P. The effects of induced abortion on emotional experiences and relationships: A critical review of the literature. Clin Psychol Rev. 2003 Dec;23(7):929-58.https://www.ncbi.nlm.nih.gov/pubmed/14624822
25. Coleman PK, Reardon DC, Strahan T, Cougle J. The psychology of abortion: A review and suggestions for future research. Psychology & Health Psychology and Health 20(2) April 2005. https://www.researchgate.net/publication/263534312_The_psychology_of_abortion_A_review_and_suggestions_for_future_research
26. Thorp J, Hartmann K, Shadigan, E. Long-term physical and psychological health consequences of induced abortion: Review of the evidence. Obstet Gynecol Surv. 2003 Jan;58(1):67-79. Review. https://www.ncbi.nlm.nih.gov/pubmed/12544786
27. Major B, Cozzarelli C, Sciacchitano AM, Cooper ML, Testa M, Mueller PM. Perceived social support, selfefficacy, and adjustment to abortion. J Pers Soc Psychol. 1990 Sep;59(3):452-63. https://www.ncbi.nlm.nih.gov/pubmed/2231279

28. Cozzarelli C, Karrasch A, Sumer N, Major B. The meaning and impact of partner's accompaniment on women's adjustment to abortion. Journal of Applied Social Psychology 1994;24:2028-2056. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1559-1816.1994.tb00573.x
29. Bracken MB. A causal model of psychosomatic reactions to vacuum aspiration abortion. Social Psychiatry 1978;13:135-145. https://afterabortion.org/risk-factors-for-psychological-problems-after-abortion/
30. Osofsky JD, Osofsky HJ. The psychological reaction of patients to legalized abortion. Am J Orthopsychiatry. 1972 Jan;42(1):48-60. https://psycnet.apa.org/doiLanding?doi=10.1111%2Fj.1939-0025.1972.tb02470.x
31. Lyndon J, Dunkel-Schetter C, Cohan CL, Pierce T. Pregnancy decision-making as a significant life event: A commitment approach. J Pers Soc Psychol. 1996 Jul;71(1):141-51. https://www.ncbi.nlm.nih.gov/pubmed/?term=.++Pregnancy+decisionmaking+as+a+significant+life+event%3A+A+commitment+approach.
32. Remennick LI, Segal R. Sociocultural context and women's experiences of abortion: Israeli women and Russian immigrants compared. Culture, Health & Sexuality Vol. 3, No. 1 (Jan. - Mar., 2001), pp. 49-66. https://www.jstor.org/stable/3986607?seq=1
33. Major B, Cozzarelli C, Sciacchitano AM, Cooper ML, Testa M, Mueller PM. Perceived social support, selfefficacy, and adjustment to abortion. J Pers Soc Psychol. 1990 Sep;59(3):452-63. https://psycnet.apa.org/record/1991-05535-001
34. Campbell N, Franco K, Jurs S. Abortion in adolescence. Adolescence. 1988 Winter;23(92):813-23. https://www.ncbi.nlm.nih.gov/pubmed/?term=Abortion+in+adolescence.+Adolescence+1988%3B23%3A813-823
35. Franz W, Reardon D. Differential impact of abortion on adolescents and adults. Adolescence. 1992 Spring;27(105):161-72. https://www.ncbi.nlm.nih.gov/pubmed/?term=Differential+impact+of+abortion+on+adolescents+and+adults.+Adolescence+1992%3B27%3A161-172.
36. Adler NE. Emotional responses of women following therapeutic abortion: How great a problem? American Journal of Orthopsychiatry Volume 45, Issue 3 First published: April 1975. https://onlinelibrary.wiley.com/action/doSearch?field1=AllField&text1=Emotional+responses+of+women+following+therapeutic+abortion&field2=AllField&text2=&field3=AllField&text3=&Ppub=&AfterMonth=&AfterYear=1975&BeforeMonth=&BeforeYear=
37. Speckhard A, Rue V. Postabortion syndrome: An emerging public health concern. Journal of Social Issues 1992;48:95-119. https://spssi.onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-4560.1992.tb00899.x
38. Allanson S, Astbury J. Attachment style and broken attachments: Violence, pregnancy, and abortion. Australian Journal of Psychology 2001;53:146-151.

https://aps.onlinelibrary.wiley.com/doi/10.1080/00049530108255137

39. Russo N, Denious JE. Violence in the lives of women having abortions: Implications for policy and practice. Professional Psychology Research and Practice 2001;32:142-150. https://psycnet.apa.org/doiLanding?doi=10.1037%2F0735-7028.32.2.142
40. Gold D, Berger C, Andres D. The abortion choice: Psychological determinants and consequences. Montreal: Concordia University, Department of Psychology. 1979.
41. Soderberg H, Janzon L, Slosberg NO. Emotional distress following induced abortion: A study of its incidence and determinants among adoptees in Malmo, Sweden. European Journal of Obstetrics, Gynecology, and Reproductive Biology 1998;79:173-178. https://www.rachelsvineyard.org/PDF/Articles/Emotional%20Distress%20Following%20-%20European%20Journal.pdf
42. Ashton J. The psychosocial outcome of induced abortion. Br J Obstet Gynaecol. 1980 Dec;87(12):1115-22. https://www.ncbi.nlm.nih.gov/pubmed/?term=British+Journal+of+Obstetrics+and+Gynecology++1980%3B87%3A1115-1122
43. Friedman C., Greenspan R, Mittleman F. The decision-making process and the outcome of therapeutic abortion. Am J Psychiatry. 1974 Dec;131(12):1332-7. https://www.ncbi.nlm.nih.gov/pubmed/4432932
44. Miller WB. An empirical study of the psychological antecedents and consequences of induced abortion. Journal of Social Issues 1992;48:67-93. https://spssi.onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-4560.1992.tb00898.x
45. Anthanasiou R, Oppel W., Michelson L, Unger T, Yager M. Psychiatric sequelae to term birth and induced early and late abortion: A longitudinal study. Fam Plann Perspect. 1973 Fall;5(4):227-31. https://www.ncbi.nlm.nih.gov/pubmed/4156672
46. Major B, Cozzarelli C, Sciacchitano AM, Cooper ML, Testa M, Mueller PM. Perceived social support, selfefficacy, and adjustment to abortion. J Pers Soc Psychol. 1990 Sep;59(3):452-63. PMID:2231279 DOI:10.1037//0022-3514.59.3.452 https://www.ncbi.nlm.nih.gov/pubmed/2231279
47. Llewellyn SP, Pytches R. An investigation of anxiety following termination of pregnancy. J Adv Nurs. 1988 Jul;13(4):468-71. https://onlinelibrary.wiley.com/doi/10.1111/j.1365-2648.1988.tb02851.x
48. Ashton J. The psychosocial outcome of induced abortion. British Journal of Obstetrics and Gynecology 1980;87:1115-1122
49. Cougle J, Reardon DC, Coleman PK. Depression associated with abortion and childbirth: A long-term analysis of the NLSY cohort. Med Sci Monit. 2003 Apr;9(4):CR105-12. PMID:12709667 https://www.medscimonit.com/download/index/idArt/4701
50. Fergusson DM, Horwood J, Ridder EM. Abortion in young women and subsequent mental health. J Child Psychol Psychiatry. 2006 Jan;47(1):16-24. PMID:16405636 DOI:10.1111/j.1469-7610.2005.01538.x

https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-7610.2005.01538.x

51. Reardon, D. C., Coleman, P. K., & Cougle, J. (2004) Substance use associated with prior history of abortion and unintended birth: A national cross sectional cohort study. Am J Drug Alcohol Abuse. 2004 May;30(2):369-83. PMID:15230081 DOI:10.1081/ada-120037383 https://www.tandfonline.com/doi/full/10.1081/ada-120037383
52. Pedersen W. Abortion and depression: A population-based longitudinal study of young women. Scand J Public Health. 2008 Jun;36(4):424-8. doi: 10.1177/1403494807088449. https://journals.sagepub.com/doi/abs/10.1177/1403494807088449
53. Rees DI, Sabia JJ. The relationship between abortion and depression: New evidence from the Fragile Families and Child Wellbeing Study. Med Sci Monit. 2007 Oct;13(10):CR430-6. PMID:17901849 DOI:10.12659/msm.502357 https://www.medscimonit.com/download/index/idArt/502357
54. Cougle J, Reardon DC, Coleman PK. Generalized anxiety associated with unintended pregnancy: A cohort study of the 1995 National Survey of Family Growth. Journal of Anxiety Disorders Volume 19, Issue 1, 2005, Pages 137-142. https://doi.org/10.1016/j.janxdis.2003.12.003
55. Fergusson DM, Horwood J, Ridder EM. Abortion in young women and subsequent mental health. J Child Psychol Psychiatry. 2006 Jan;47(1):16-24. PMID:16405636 DOI:10.1111/j.1469-7610.2005.01538.x https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-7610.2005.01538.x
56. Coleman, PK. Resolution of unwanted pregnancy during adolescence through abortion versus childbirth: Individual and family predictors and psychological consequences. J Youth Adolescence (2006) 35: 903. https://doi.org/10.1007/s10964-006-9094-x https://link.springer.com/article/10.1007%2Fs10964-006-9094-x
57. Rees DI, Sabia JJ. The relationship between abortion and depression: New evdence from the Fragile Families and Child Wellbeing Study. Med Sci Monit. 2007 Oct;13(10):CR430-6. DOI:10.12659/msm.502357 https://www.ncbi.nlm.nih.gov/pubmed/?term=Medical+Science+Monitor+2007%3B13(10)%3A430-436.
58. Pedersen W. Childbirth, abortion and subsequent substance use in young women: a population-based longitudinal study. Addiction. 2007 Dec;102(12):1971-8.
59. Reardon DC, Coleman PK, Cougle J. Substance use associated with prior history of abortion and unintended birth: A national cross sectional cohort study. American Journal of Drug and Alcohol Abuse 2004;26:Med Sci Monit. 2007 Oct;13(10):CR430-6.-383. DOI:10.1111/j.1360-0443.2007.02040.x https://www.ncbi.nlm.nih.gov/pubmed/?term=Addiction++2007%3B102(12)%3A1971-78.
60. Gissler ,. et al. Suicides after pregnancy in Finland, 1987-94: Register linkage study. BMJ. 1996 Dec 7;313(7070):1431-4. DOI:10.1136/bmj.313.7070.1431

https://www.ncbi.nlm.nih.gov/pubmed/8973229

61. Gissler M, et al. Injury deaths, suicides and homicides associated with pregnancy, Finland 1987-2000. Eur J Public Health. 2005 Oct;15(5):459-63. Epub 2005 Jul 28. DOI:10.1093/eurpub/cki042 https://www.ncbi.nlm.nih.gov/pubmed/?term=European+Journal+of+Public+Health+2005%3B15%3A459-463.
62. Broen AN, Moum T, Bodtker AS, Ekeberg O. Psychological impact on women of miscarriage versus induced abortion: A 2-year follow-up study. Psychosom Med. 2004 Mar-Apr;66(2):265-71. DOI:10.1097/01.psy.0000118028.32507.9d https://www.ncbi.nlm.nih.gov/pubmed/?term=Psychological+impact+on+women+of+miscarriage+versus+induced+abortion%3A+A+2-year+follow-up+study.
63. Broen AN, Moum T, Bodtker AS, Ekeberg O. The course of mental health after miscarriage and induced abortion: A longitudinal, five-year follow-up study. BMC Med. 2005 Dec 12;3:18. DOI:10.1186/1741-7015-3-18 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1343574/
64. Coleman PK., Reardon DC, Cougle JR. Substance use among pregnant women in the context of previous reproductive loss and desire for current pregnancy. Br J Health Psychol. 2005 May;10(Pt 2):255-68. DOI:10.1348/135910705X25499 https://www.ncbi.nlm.nih.gov/pubmed/?term=British+Journal+of+Health+Psychology+2005%3B10(2)%3A255-268
65. Major B, Cozzarelli C. Psychological predictors of adjustment to abortion. Journal of Social Issues 1992;48:121-142. https://doi.org/10.1111/j.1540-4560.1992.tb00900.x https://spssi.onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-4560.1992.tb00900.x
66. Zolese G, Blacker CVR. The psychological complications of therapeutic abortion. Br J Psychiatry. 1992 Jun;160:742-9. DOI:10.1192/bjp.160.6.742 https://www.ncbi.nlm.nih.gov/pubmed/?term=British+Journal+of+Psychiatry+1992%3B160%3A742-749.
67. Goodwin P, Ogden J. Women's reflections about their past abortions: An exploration of how emotional reactions change over time. Psychology and Health 2007;22:231-248. https://www.tandfonline.com/doi/abs/10.1080/14768320600682384
68. Coyle CT, Coleman PK, Rue VM. Inadequate pre-abortion counseling and decision conflict as predictors of subsequent relationship difficulties and psychological stress in men and women. Traumatology 2010;16(1):16-30. DOI: 10.1177/153476560934755. https://doi.org/10.1177/1534765609347550 https://journals.sagepub.com/doi/10.1177/1534765609347550
69. Coleman PK, Coyle CT, Rue VM. Late-term elective abortion and susceptibility to posttraumatic stress symptoms. J Pregnancy. 2010;2010:130519. doi: 10.1155/2010/130519. Epub 2010 Aug 1. DOI:10.1155/2010/130519 https://www.ncbi.nlm.nih.gov/pubmed/2149073

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