

ABORTION TRAUMA RESEARCH

10% Mental Illness in Women attributed to Abortion.

Meta-Analysis of 877,181 women 163,831 of whom had experienced abortion found, an overall 81% increased risk of mental illness: Specifically, abortion increased the risk of:

- ↑ Suicidal behaviour by 155%
- ↑ Anxiety disorders by 34%
- ↑ Depression by 37%
- ↑ Alcohol use/abuse by 110%
- ↑ Marijuana use/abuse by 220%

Compared to women who delivered:

- ↑ Risk to mental health increased by 138%
- ↑ 'Unintended pregnancy', risk to mental health increased by 55%.

Coleman, P. K. (2011). Abortion and mental health: quantitative synthesis and analysis of research published 1995–2009. *The British Journal of Psychiatry*, 199(3), 180-186.



Australian Research

Presented: World Psychiatric Association Conference (Melbourne Nov 2007)

Tracking 1,223 young women from birth at the Mater Hospital for 21 years, researcher Kaeleen Dingle from the Queensland University presented her findings of a clear link between self-destructive behaviour and abortion. Those who had an abortion were:

- ↑ 3.6 times more likely to abuse hard drugs.
- ↑ Twice as likely to be binge drinkers.
- ↑ Nearly twice as likely to suffer depression.

Dingle, K., Clavarino, A., Alati, R., & Williams, G. (2011). Pregnancy loss and psychiatric disorders in young men and women: Results from Australian longitudinal cohort study [Conference Abstract]. *Asian Journal of Psychiatry*, 4(S1), S29-S29.

Premature Death

A record linkage study of more than **1.1 million pregnancies**, including all Finnish women of childbearing age between 1987 to 2000, found within one year, an average **six times increased suicide rate** associated with abortion compared to women who gave birth. The **increased risk of death by accident and homicide** was **four** and **ten times** respectively.

For **young women** (under 25 years) the **suicide rate** associated with abortion was **twelve times** compared to those who gave birth and **four times** compared to non-pregnant peers.

Gissler, M., Berg, C., Bouvier-Colle, M. H., & Buekens, P. (2005). Injury deaths, suicides and homicides associated with pregnancy, Finland 1987–2000. *The European Journal of Public Health*, 15(5), 459-463.

A study of 173,279 low income Californian women linking death certificates to women who delivered or aborted, found compared to women who delivered, women who aborted, were more likely to die from **suicide (154%)** more likely to die from **accidents (82%)** more likely to die from **circularly disease (187%)** more likely to die from **cerebrovascular disease (446%)** more likely to die from **AIDS (118%)** and more likely to die from **natural causes (44%)** over an **eight year** period.

Reardon, D. C., Ney, P. G., Scheuren, F., Cogle, J., Coleman, P. K., & Strahan, T. W. (2002). Deaths associated with pregnancy outcome: a record linkage study of low income women. *Southern Medical Journal*, 95(8), 834-842.

A Finnish register linkage study found that within **12 months**, women who aborted were **six times** more likely to **die from suicide** compared to those who delivered and more than **three and a half times** compared to non-pregnant women.

Gissler, M., Hemminki, E., & Lonnqvist, J. (1996). Suicides after pregnancy in Finland, 1987–94: register linkage study. *Bmj*, 313(7070), 1431-1434.

Mental Health Outcomes

“Common ground exists regarding the very basic fact that at least some women do have significant mental health issues that are caused, triggered, aggravated, or complicated by their abortion experience. In many cases, this may be due to feeling pressured into an abortion or choosing an abortion without sufficient attention to maternal desires or moral beliefs that may make it difficult to reconcile one’s choice with one’s self-identity.

There is also common ground regarding the fact that risk factors identifying women who are at greater risk, including a history of prior mental illness, can be used to identify women who may benefit from more pre-abortion and post-abortion counseling.”

Reardon, D. C. (2018). The abortion and mental health controversy: A comprehensive literature review of common ground agreements, disagreements, actionable recommendations, and research opportunities. *SAGE open medicine*, 6, 2050312118807624.

Analysed data collected using DSM-IV criteria from 3,310 nationally representative US women found **5.8% of suicidal ideation** and **24.7% drug use among US women** could be **related to abortion**.

Women who aborted were **3.8 times more likely to abuse drugs**, more likely to have mood and anxiety disorders and suicidal thought or actions.

Mota, N. P., Burnett, M., & Sareen, J. (2010). Associations between abortion, mental disorders, and suicidal behaviour in a nationally representative sample. *The Canadian Journal of Psychiatry*, 55(4), 239-247.

A nationally representative US co-morbidity survey of 5,887 women found abortion to be associated with an increased risk of a variety of **mental health problems (panic attacks, panic disorder, agoraphobia, post-traumatic stress disorder, bipolar disorder, major depression with and without hierarchy), and substance abuse disorder** after statistical controls were instituted for a wide range of personal, situational and demographic variables.

Coleman, P. K., Coyle, C. T., Shuping, M., & Rue, V. M. (2009). Induced abortion and anxiety, mood, and substance abuse disorders: isolating the effects of abortion in the national comorbidity survey. *Journal of psychiatric research*, 43(8), 770-776.

A review of the medical records of 56,741 Californian medical patients found that women who had abortions were **160%** more likely than delivering women to be **hospitalized for psychiatric treatment** within **three months**, and remained significantly higher for at least **four years**.

Reardon, D. C., Cogle, J. R., Rue, V. M., Shuping, M. W., Coleman, P. K., & Ney, P. G. (2003). Psychiatric admissions of low-income women following abortion and childbirth. *Cmaj*, 168(10), 1253-1256.

A 25-year longitudinal study of 1,265 women born in Christchurch NZ, studied from birth to 25 years, found abortion associated with ‘...elevated rates of subsequent mental health problems including depression, anxiety, suicidal behaviours and substance use disorders.’

Fergusson, D. M., John Horwood, L., & Ridder, E. M. (2006). Abortion in young women and subsequent mental health. *Journal of Child Psychology and Psychiatry*, 47(1), 16-24.

Tracking over 500 New Zealand women born in Christchurch over thirty years researchers found women exposed to induced abortions were 30% more likely to have mental health problems. Rates of all forms of disorder were higher however, conditions most associated with abortion were anxiety disorders and substance use disorders.

Fergusson, D. M., Horwood, L. J., & Boden, J. M. (2008). Abortion and mental health disorders: evidence from a 30-year longitudinal study. *The British Journal of Psychiatry*, 193(6), 444-451.

Outpatient Psychiatric Care

Analysis of California Medicaid records show that women who have abortions subsequently require more treatments for psychiatric illness through outpatient care.

Coleman, P. K., Rue, V. M., Reardon, D. C., & Cogle, J. (2002). State-Funded Abortions Versus Deliveries: A Comparison of Outpatient Mental Health Claims Over 4 Years. *American Journal of Orthopsychiatry*, 72(1), 141-152.

Adolescents who abort are more likely to suffer mental health problems.

Unintended Pregnancies

Adolescent girls who abort compared to their peers who carried unplanned pregnancies to term:

- ↑ 5 times more likely to seek help for psychological/emotional problems
- ↑ Over 3 times more likely to report trouble sleeping
- ↑ 9 times more likely to report marijuana use

Federally funded US longitudinal study of adolescent girls who participated in two series of interviews (1995&1996).

Coleman, P. K. (2006). Resolution of unwanted pregnancy during adolescence through abortion versus childbirth: Individual and family predictors and psychological consequences. *Journal of Youth and Adolescence*, 35, 903-911.

Clinical Depression

A study of over 700 Norwegian women aged between 15 and 27, found women who aborted in their twenties were 3.5 times more likely to be depressed. Controlling for variables reduced the association but it still remained significant, at 2.9 times.

Pedersen, W. (2008). Abortion and depression: a population-based longitudinal study of young women. *Scandinavian journal of public health*, 36(4), 424-428.

Compared to women who carry their first unintended pregnancy to term, women who abort their first pregnancy are at significantly higher risk of clinical depression as measured an average of eight years after their first pregnancy.

Reardon, D. C., & Cougle, J. R. (2002). Depression and unintended pregnancy in the National Longitudinal Survey of Youth: a cohort study. *BMJ*, 324(7330), 151-152.

Women who reported induced abortion were 65% more likely to score in the high-risk range for clinical depression, compared to women whose pregnancies resulted in birth.

ACDEF, J. R. C., ADEFG, D. C. R., & Coleman3AcDE, P. K. (2003). Depression associated with abortion and childbirth: a long-term analysis of the NLSY cohort. *Signature*, 9(4), 164.

Post Traumatic Stress Disorder (PTSD)

'High rates of PTSD characterize women who have undergone surgical abortions (almost one fifth of the sample meet criteria for PTSD)' at three months post abortion

Sharain Suliman et al, 'Comparison of pain, cortisol levels and psychological distress in women undergoing surgical termination of pregnancy under local anesthesia vs. intravenous sedation'. BMC Psychiatry 2007, 7:24.

65% of American women who had undergone abortions reported symptoms of PTSD, which they attributed to their abortions and slightly over 14% reported all the symptoms necessary for a clinical diagnosis of PTSD.

VM Rue et al, 'Induced abortion and traumatic stress: A preliminary comparison of American and Russian women'. Medical Science Monitor, 10:SR5-16, 2004

Child Abuse and/or Neglect

Women with a history of one induced abortion were 2.4 times more likely to physically abuse their children.

Coleman, P. K., Maxey, C. D., Rue, V. M., & Coyle, C. T. (2005). Associations between voluntary and involuntary forms of perinatal loss and child maltreatment among low-income mothers. *Acta Paediatrica*, 94(10), 1476-1483.

For first born children, maternal history of abortion was associated with lower emotional support in the home among children aged one to four, and more behavioural problems among five- to nine-year-olds.

Coleman, P. K., Reardon, D. C., & Cogle, J. (2002). The quality of the caregiving environment and child developmental outcomes associated with maternal history of abortion using the NLSY data. *Journal of Child Psychology and Psychiatry*, 43(6), 743-757.

Sleep Disorders

Women who abort were nearly twice as likely as delivering women to be treated for sleep disorders within six months of the pregnancy ending, according to a record based study of nearly 57,000 women. Sleep disorders can indicate unresolved trauma.

Reardon, D. C., & Coleman, P. K. (2006). Relative treatment rates for sleep disorders and sleep disturbances following abortion and childbirth: a prospective record-based study. *Sleep*, 29(1), 105-106.

Domestic Violence

A study of pregnancy outcomes (abortion or carrying to term) based on a national survey of low-income women who delivered within the previous 18 months, found that: Irrespective of other difficulties raising a first child, a **lack of male support was associated with an abortion outcome** with the next pregnancy.

Those who had an abortion were:

- ↑ Over three times more likely to report heavy alcohol usage
- ↑ Twice as likely to report cigarette smoking
- ↑ More likely to report subsequently being slapped or kicked by the child's father.

Coleman, P. K., Maxey, C. D., Spence, M., & Nixon, C. L. (2009). Predictors and correlates of abortion in the fragile families and well-being study: paternal behavior, substance use, and partner violence. *International journal of mental health and addiction*, 7, 405-422.

A study of 906 and 658 Chicago women and men respectively, found abortion was associated with conflicted relationship compared to those with no abortion exposure.

Abortion in a *previous relationship*:

- Was associated with domestic violence in the current relationship.
- Men were more likely to report jealousy (95%) and conflict about drugs (385%) if their current partner had abortion exposure.

Abortion in *current relationship*:

- For women, was associated with various forms of sexual dysfunction (122-182%), verbal conflict about money, relatives, and children.
- For men, more likely to report arguing about children (196%).

Coleman, P. K., Rue, V. M., & Coyle, C. T. (2009). Induced abortion and intimate relationship quality in the Chicago Health and Social Life Survey. *Public health, 123*(4), 331-338.

UK researchers found 30% of women having second abortions were in abusive relationships with a statistical increase with three or more abortions.

Aston, G., & Bewley, S. (2009). Abortion and domestic violence. *The Obstetrician & Gynaecologist, 11*(3), 163-168.

Repeat Abortions and Mental Health

Higher number of pregnancy losses, particularly abortions, correlated with poor health.

Ney, P. G., Fung, T., Wickett, A. R., & Beaman-Dodd, C. (1994). The effects of pregnancy loss on women's health. *Social science & medicine, 38*(9), 1193-1200.

A study of the Danish Central Psychiatric Register of all women admitted over 2 ½ years between 1973-75, found that psychiatric admissions increased with self-reported number of past abortions.

↑ No abortions	1.90%
↑ One abortion	3.4%
↑ Two abortions	4.0% ²
↑ Three abortions	6.0%

No increase was observed as number of live births increased.

Somers, R. L. (1979). *RISK OF ADMISSION TO PSYCHIATRIC INSTITUTIONS AMONG DANISH WOMEN WHO EXPERIENCE INDUCED ABORTION: AN ANALYSIS BASED ON NATIONAL RECORD LINKAGE*. University of California, Los Angeles.

South Australian Repeat Abortion Rate

The repeat rate for different ages groups are:

➤	Under 15	7.7%
➤	15 – 19	16.7%
➤	20 – 24	34.5%
➤	25 – 29	44.5%
➤	30 – 34	49%
➤	35 – 39	45%
➤	Over 40	39.7%

The overall repeat abortion rate was 37.0%.

Pregnancy Outcome Unit Epidemiology Branch, South Australian Health 2007

Early Premature Delivery and Low Birth Rate

Presented: European Society of Human Reproduction & Embryology 25th Annual Meeting (Amsterdam June 2009).

Reviewing 75 studies published 1980-2008 an international group of researchers found a clear link between abortion and very premature birth and exceptionally low birth weight:

One abortion increased risk of:

- ↑ Premature birth, before 37 weeks by 20%
- ↑ Very premature birth, before 34 weeks by 50%
- ↑ Very low birth rate by more than two and half times, 170%

Two or more increased risk of:

- ↑ Premature birth, before 37 weeks almost doubled, 90%
- ↑ Very premature birth, before 34 weeks by more than two and half times, 160%
- ↑ Very low birth rate by more than three and half times, 260%

Van Oppenraaij, R. H. F., Jauniaux, E., Christiansen, O. B., Horcajadas, J. A., Farquharson, R. G., & Exalto, N. (2009). Predicting adverse obstetric outcome after early pregnancy events and complications: a review. *Human reproduction update*, 15(4), 409-421.

Evaluating over 2 million singleton pregnancies, between 1995-2000, using the German Perinatal Database, 46% of whom had no previous live births, researchers found abortion increased risk of very premature birth, before 34 weeks by:

- ↑ 30% for one abortion
- ↑ 90% for two or more abortions

Voigt, M., Olbertz, D., Fusch, C., Krafczyk, D., & Briese, V. (2008). THE MOST RECENT STUDY ON ABORTION AND SUBSEQUENT PRETERM BIRTH. *Z Geburtshilfe Neonatol*, 212(1), 5-12.

French researchers, examining the records of 1,943 pre-term births (about one third of all premature deliveries in France) found that abortion was associated with very premature deliveries VPD (before 33 weeks gestation) - 50% and extremely premature deliveries EPD (22 to 28 weeks gestation) - 70%.

The increased risks were striking for specific causes. For VPD and EPD respectively:

- ↑ Placenta abruption, 40% and 50%
- ↑ Placenta previa, 140 % and 310%
- ↑ Foetal growth restriction, premature ruptured membranes, early onset of labour, 70% and 120%

Moreau, C., Kaminski, M., Ancel, P. Y., Bouyer, J., Escande, B., Thiriez, G., ... & EPIPAGE Group are listed on Appendix. (2005). Previous induced abortions and the risk of very preterm delivery: results of the EPIPAGE study. *BJOG: An International Journal of Obstetrics & gynaecology*, 112(4), 430-437.

In-depth Studies of Women Post Abortion

Reardon's Study (1987) of over 100 women who suffered post abortion trauma found:

- 80% Expressed feelings of self-hatred
- 49% Began or increased their use of drugs
- 39% Began or increased their use of alcohol
- 14% Described themselves as having become 'addicted' or 'alcoholic' post abortion
- 60% Experienced suicidal ideation
- 28% Had attempted suicide
- 18% Attempted suicide more than once (often several years post abortion)

Reardon, D. 'Criteria for the identification of high risk abortion patients: Analysis of an in-depth survey of 100 aborted women'. Presented at the 1987 Paper Sessions of the Association.

1993 Study of the 828 aborted women by the American organisation 'Open Arms' found:

- 27% reported suicidal tendencies
- 81% reported lowered self-esteem
- 32% reported drug/alcohol abuse
- 32% reported nightmares
- 11% reported attempted suicide
- 46% reported feelings of despair/hopelessness

Open Arms. (1993) Abortion Information Survey Project, Columbia, MO: PO Box 1056. Reported by Rue, V. "The Psychological Realities of Induced Abortion". Post-Abortion Aftermath. Sheed & Ward.

1991 Study of 232 aborted women from 39 states in USA, her mean time 11 years post event:

- 94% Unmarried relationships failed
- 36% Experienced suicidal ideation
- 45% Negative feelings regarding:
 - Subsequent pregnancies;
 - Problems with bonding; and/or
 - Obsessive thoughts of having a replacement child.

'...that worsened interpersonal relationships correlated with higher post-abortion levels of anger and guilt'.

Vaughan, H. P. (1990). Canonical variates of postabortion syndrome. The University of North Carolina at Greensboro.

Speckhard in her 1987 Study of 30 aborted women, found that all '...had long term grief reactions, some lasting five years'. The breakdown of reactions was as follows:

- 100% Depression
- 92% Anger
- 92% Guilt
- 81% Feelings of low self worth
- 81% Frequent crying
- 73% Flashbacks
- 69% Sexual dysfunction
- 65% Suicidal thoughts
- 61% Increased alcohol usage

The majority of the women studied reported being surprised at such intense reactions to their abortion.

Speckhard, A. C. (1985). The psycho-social aspects of stress following abortion. University of Minnesota.

Elliott Institute Study of 260 women:

- 53% Losing their temper more easily
- 48% Stated 'I became more violent when angered after the abortion'.

Self-hatred, hatred of the male and hatred of men in general, were all significantly correlated to each other.

Elliott Institute, The Post-Abortion Review. Vol.4 No. 2&3, p13.

25 Studies linking abortion to substance abuse

Presented: World Psychiatric Association Conference (Melbourne Nov 2007)

Tracking 1,122 young women from birth at the Mater Hospital for 21 years, researcher Kaeleen Dingle from the Queensland University presented her findings of a clear link between self-destructive behaviour and abortion.

Those who had an abortion were:

- ↑ 3.6 times more likely to abuse hard drugs
- ↑ Twice as likely to be binge drinkers
- ↑ Nearly twice as likely to suffer depression

Those who miscarried were:

- ↑ 2.6 times more likely to abuse hard drugs.

Dingle, K., Alati, R., Clavarino, A., Najman, J. M., & Williams, G. M. (2008). Pregnancy loss and psychiatric disorders in young women: an Australian birth cohort study. *The British Journal of Psychiatry*, 193(6), 455-460.

Women who aborted were **3.8 times more likely to abuse drugs**, more likely to have mood and anxiety disorders and suicidal thought or actions. Analysed data collected using DSM-IV criteria from 3,310 nationally representative US women found **5.8% of suicidal ideation** and **24.7% drug use among US women** could be **related to abortion**.

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Federally funded US longitudinal study of adolescent girls who participated in two series of interviews (1995&1996)

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A 25-year longitudinal study of 1,265 women born in Christchurch NZ, studied from birth to 25 years, found abortion associated with ‘...elevated rates of subsequent mental health problems including depression, anxiety, suicidal behaviours and substance use disorders. This association persisted after adjustment for confounding factors.’

Fergusson, D. M., John Horwood, L., & Ridder, E. M. (2006). Abortion in young women and subsequent mental health. *Journal of Child Psychology and Psychiatry, 47*(1), 16-24.

Drawing on data from an 11 year federally-funded longitudinal study of adolescent girls throughout the US, researchers found adolescent girls who abort unintended pregnancies were found to be five times more likely to seek subsequent help for psychological and emotional problems, three times more likely to report subsequent trouble sleeping and nine times more likely to report subsequent marijuana use, compared to their peers who carry unwanted pregnancies to term.

Coleman, P. K. (2006). Resolution of unwanted pregnancy during adolescence through abortion versus childbirth: Individual and family predictors and psychological consequences. *Journal of Youth and Adolescence, 35*, 903-911.

Compared to women who carries to term, women who abort are twice as likely to use alcohol, five times more likely use illicit drugs and ten times more likely to use marijuana during the first pregnancy they carry to term.

Coleman, P. K., Reardon, D. C., Rue, V. M., & Cogle, J. (2002). A history of induced abortion in relation to substance use during subsequent pregnancies carried to term. *American journal of obstetrics and gynecology*, 187(6), 1673-1678.

Compared to women who deliver unintended pregnancies to those who abort were more likely to report, an average of four years later, more frequent and recent use of alcohol, marijuana and cocaine.

Delivering women were found to be not generally different from their never-pregnant peers, with the exception that they used alcohol less frequently.

Reardon, D. C., Coleman, P. K., & Cogle, J. R. (2004). Substance use associated with unintended pregnancy outcomes in the National Longitudinal Survey of Youth. *The American journal of drug and alcohol abuse*, 30(2), 369-383.

Women who were binge drinkers during their pregnancy had a significantly higher rate of previous therapeutic abortions.

Gladstone, J., Levy, M., Nulman, I., & Koren, G. (1997). Characteristics of pregnant women who engage in binge alcohol consumption. *Cmaj*, 156(6), 789-794.

In a California study of more than 12,000 women during 1975 - 1977, of those having a history of two or more abortions, virtually all (98.5%) consumed alcohol throughout the entire nine months of a subsequent pregnancy and at higher levels than any of the other categories studied (up to 3 oz. Per day).

Kuzma, J. W., & Kissinger, D. G. (1981). Patterns of alcohol and cigarette use in pregnancy. *Neurobehavioral toxicology and teratology*, 3(2), 211-221.

In a study of inner-city adolescent mothers, those with a history of induced abortion were twice as likely to be involved in alcohol, marijuana or cocaine compared with non-using controls.

Amaro, H., Zuckerman, B., & Cabral, H. (1989). Drug use among adolescent mothers: Profile of risk. *Pediatrics*, 84(1), 144-151.

Increased use of alcohol, tobacco, drugs and tranquillizers was found in women who aborted compared to women who were refused abortion and had a variety of pregnancy outcomes where each group had presented for abortion for psychiatric reasons at a Capetown, South Africa hospital.

Drower, SJ & Nash, E. S. (1978). Therapeutic abortion on psychiatric grounds- Part I. A local study. *South African Medical Journal*, 54(15), 604-608.

In a 1991 Alabama study of women attending maternity, family planning and obstetrical clinics throughout the state, the prevalence of positive findings for any drug, marijuana or cocaine significantly increased with an increasing number of abortions.

Pegues, D. A., Engelgau, M. M., & Woernle, C. H. (1994). Prevalence of illicit drugs detected in the urine of women of childbearing age in Alabama public health clinics. *Public Health Reports*, 109(4), 530.

A significant association was found between a recorded and treated drug overdose either before or after an induced abortion with a majority of such events occurring within two years of each other.

Houston, H., & Jacobson, L. (1996). Overdose and termination of pregnancy: an important association?. *British journal of general practice*, 46(413), 737-738.

In a Toronto study of pregnant women, cocaine users had a higher mean average of elective abortions compared to non-users of drugs.

Graham, K., & Koren, G. (1991). Characteristics of pregnant women exposed to cocaine in Toronto between 1985 and 1990. *CMAJ: Canadian Medical Association Journal*, 144(5), 563.

A retrospective review of hospital charts over a one year period compared women who tested positive for cocaine during pregnancy compared with matched controls who did not use cocaine found that cocaine use was the best predictor of increased incidence of abortions.

Singer, L., Arendt, R., Song, L. Y., Warshawsky, E., & Kliegman, R. (1994). Direct and indirect interactions of cocaine with childbirth outcomes. *Archives of pediatrics & adolescent medicine*, 148(9), 959-964.

In a San Diego study of drug use, women who used heroin or methadone were more likely to have had abortions (2.4 vs. 1.2) than non-drug using controls.

Oro, A. S., & Dixon, S. D. (1987). Perinatal cocaine and methamphetamine exposure: maternal and neonatal correlates. *The Journal of pediatrics*, 111(4), 571-578.

A study of young women in the state New York found that the current use of illicit drugs (other than marijuana) was 6.1 times higher if there was a history of a prior abortion. In contrast, women with post marital births were much less likely (0.14) to report current use of illicit drugs.

Yamaguchi, K., & Kandel, D. (1987). Drug use and other determinants of premarital pregnancy and its outcome: A dynamic analysis of competing life events. *Journal of Marriage and the Family*, 257-270.

A survey of American women in 1981 indicated that those with an abortion history were over twice more likely to be heavy drinkers than the rest of the female population.

Klassen, A. D., & Wilsnack, S. C. (1986). Sexual experience and drinking among women in a US national survey. *Archives of Sexual Behavior*, 15, 363-392.

In a study of drug abuse among Boston inner-city women during pregnancy, those using cocaine were twice as likely to have a history of two elective abortions (19% vs.9%) and three times more likely to have had three or more elective abortions (9% vs. 3%) than non-cocaine using controls.

Frank, D. A., Zuckerman, B. S., Amaro, H., Aboagye, K., Bauchner, H., Cabral, H., ... & Vinci, R. (1988). Cocaine use during pregnancy: prevalence and correlates. *Pediatrics*, 82(6), 888-895.

Women hospitalised for major psychiatric disorders with a history of abortion were significantly more likely to have received the diagnosis of psychoactive substance abuse (DSM-IIIIR criteria) and significantly more likely to report substance abuse, alcohol abuse and cocaine abuse compared to women with no live birth.

Thomas, T., Tori, C. D., Wile, M. J. R., & Scheidt, S. D. (1996). Psychosocial characteristics of psychiatric inpatients with reproductive losses. *Journal of Health Care for the Poor and Underserved*, 7(1), 15-23.

Women who aborted a first pregnancy were five times more likely to report subsequent substance abuse compared to women who carried to term.

Reardon, D. C., & Ney, P. G. (2000). Abortion and subsequent substance abuse. *The American journal of drug and alcohol abuse*, 26(1), 61-75.

A study at the Medical College of Ohio compared differences in 35 women who had their abortion as teenagers with 36 women who had their abortions after the age of 20. Antisocial and paranoid disorders as well as drug abuse and psychotic delusions were found to be significantly higher in the group who aborted as teenagers. Adolescents were more likely to retreat into sexual activity or drug and alcohol abuse.

Campbell, N. B., Franco, K., & Jurs, S. (1988). Abortion in adolescence. *Adolescence*, 23(92), 813.

In a Scottish study of 1,008 women, those with a history of induced abortion had significantly higher self-reported levels of alcohol consumption in pregnancy than those with a history of stillbirth, miscarriage, or having had a mentally or physically handicapped child.

Moria Plant, 'Drinking and Pregnancy', *Women*, London: Tavistock Publications, 1985.