Interdisciplinary Bibliography of the World's Peer-Reviewed Literature on the Psychology of Abortion

Compiled by the International Institute for Reproductive Loss

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1. **Adler N. E. (1975). Emotional responses of women following therapeutic abortion. Am J Orthopsychiatry, 45(3), 446-54.**

Factor analysis of post-abortion emotional responses revealed three factors. Negative emotions split into two factors, socially based and internally based. Positive emotions, constituting the third factor, were experienced most strongly. Correlations with background variables suggested two influences on responses: the woman's social environment and her internalized concerns about abortion.

2. **Adler, N. E. (1976). Sample attrition in studies of psychosocial sequelae of abortion: How great a problem? Journal of Applied Social Psychology, 6(3), 240–259.**

This study examined sample attrition problems in abortion-related research and the implications for conclusions reached about sequelae (negative conditions resulting from an event or injury) of abortion. The author reviewed 17 recent studies and found that the percentage of initial samples lost to follow-up ranges from a low of 13% to a high of 86%. Younger women and Catholic women appear to be less likely to participate in follow-up. Both of these groups can be associated with a greater likelihood of negative sequelae, so follow-up studies may not be an accurate indicator of the extent of negative reactions to abortion. In a recent study in which data are presented, comparisons were made between characteristics of initial volunteers and the total population, as well as the population of volunteers who did not return for the follow-up interview. Results suggested that women for whom the abortion process was more stressful are less likely to be represented in the final sample. This highlights an issue when collecting data that the authors suggested may be rectified by increasing the representativeness of samples through the use of incentives.

3. **Allanson S. (2007). Abortion decision and ambivalence: Insights via an abortion decision balance sheet. Clinical Psychologist, 11(2), 50–60. https://doi.org/10.1080/13284200701675767.**

This study explored the concept of decision ambivalence via an Abortion Decision Balance Sheet (ADBS) with reasons both for and against terminating an unintended pregnancy. Ninety-six women undergoing an early abortion for psychosocial reasons participated in a prospective, longitudinal study with repeated measures (Impact of Event Scale; Positive and Negative Affect Schedule) taken at initial consultation (T1) and 3 months postoperatively (T2). Confronting the problem pregnancy and abortion decision was a high stress event. Up to 40% of the variability in women's emotional wellbeing at T1, and up to 19% of variability at T2, was predicted by fewer than five ADBS items. These items gave insight into the importance of a woman's concern

about mothering capacity, abortion role models, and stability of the relationship with the partner.

4. **Alter, R. C. (1984). Abortion outcome as a function of sex-role identification. Psychol Women Q., 8(3):211-33.**

Investigated the relationship between sex-role identification and abortion outcome in 120 women receiving 1st trimester abortions. The sex-role concept dimension was measured both self-attributions of sex-role traits (as measured by the Bem Sex-Role Inventory) and by lifestyle (career vs. homemaker) trait attributions. Psychological and physiological aspects of abortion outcome were included: slightly more than 7% of scores were in the symptomatic range, similar to percentages found in previous studies. Both Androgyny and Masculinity were found to be related to positive abortion outcome. Congruence between one's self-image and one's image of a career woman was related to abortion outcome (r = .31, P.01). Androgyny and self-career congruence accounted for 32% of the variance in abortion outcome.

5. **Arena, A., Moro, E., Degli Esposti, E., Zanello, M., Lenzi, J., Casadio, P., Seracchioli, R., Perrone, A., & Lenzi, M. (2023). How much will it hurt? Factors associated with pain experience in women undergoing medication abortion during the first trimester. Contraception, 119, 109916.**

This study investigated the risk factors for experiencing pain during medication abortion, with a additional focus on psychological distress and anxiety levels experienced. An observation study was carried out at two centers in Bologna, Italy which included 252 women in its analysis, 92 (38%) reported severe pain during medication abortion. Those with higher anxiety levels or a prior anxiety disorder were found to have a higher probability of experiencing pain, as well as those who reported dysmenorrhea. Previous vaginal deliveries were inversely correlated with pain intensity. The study authors concluded that it is important to identify women at higher risk for experiencing pain and ensure adequate analgesic regimens are applied.

6. **Ashok, P. W., Hamoda, H., Flett, G.M., Kidd, A, Fitzmaurice A, & Templeton A. (2005). Psychological sequelae of medical and surgical abortion at 10-13 weeks gestation. Acta Obstet Gynecol Scand., 84(8), 761-6.**

The aim of this study was to assess the psychological sequelae and emotional distress following medical and surgical abortion at 10-13 weeks gestation. There were no significant differences in hospital anxiety and depression scales scores for anxiety or depression between the groups. Visual analog scales showed higher anxiety levels in women randomized to surgery prior to abortion ($P < 0.0001$), while women randomized to surgical treatment were less anxious after abortion ($P < 0.0001$). Semantic differential rating scores showed a fall in self-esteem in the randomized medical group compared to those undergoing surgery ($P = 0.02$).

7. **Ashton, J. R. (1980). The psychosocial outcome of induced abortion. Br J Obstet Gynaecol. 1980, 87(12), 1115-22.**

The psychosocial outcome of induced abortion was assessed in 64 women after 8 weeks and in 86 women after eight months. Three groups were identified. About 5 per cent 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.

8. **Barglow, P, & Weinstein S. (1973). Therapeutic abortion during adolescence: psychiatric observations. J Youth Adolesc. 1973, 2(4), 331-42.**

The psychological reactions of 78 adolescent girls who underwent an abortion during the first trimester of pregnancy were studies. Adolescent emotional responses differed from those of adult patients in 2 ways: 1) the abortion decision was more "outer-other" directed by parents, peer group or sexual partner and was therefore more difficult and 2) developmental immaturity contributed to decision ambivalence, distorted perceptions of the procedure, and to a variety of pathological reactions. Patient symptoms suggested a mourning process in response to failure to realize an expectation rather than an object loss. Pre-abortion dreams were a “potential adjuvant to psychiatric diagnosis and prognosis for adolescent patients”.

9. **Basile, K. C., Smith, S. G., Liu, Y., Kresnow, M. J., Fasula, A. M., Gilbert, L., & Chen, J. (2018). Rape-Related Pregnancy and Association with Reproductive Coercion in the U.S. American Journal of Preventive Medicine, 55(6), 770–776.**

The authors studied the prevalence and characteristics of rape-related pregnancy in U.S. women and the association with intimate partner reproductive coercion. Data from the National Intimate Partner and Sexual Violence Survey (2010–2012), a telephone survey of U.S. adults served as the data source. Results revealed that almost 2.9 million U.S. women (2.4%) experienced rape-related pregnancy during their lifetime. Among rape victims, 77.3% identified a current/former intimate partner perpetrator; 26.2% of intimate partner rape victims reported rape-related pregnancy. This high rate contrasted with those raped by an acquaintance (5.2%) or stranger (6.9%). Women raped by an intimate partner and reporting rape-related pregnancy were also significantly more likely to report reproductive coercion compared with women who were raped by an intimate partner but did not become pregnant. This study provided the first National prevalence of rape-related pregnancy by distinct types of perpetrators in two decades.

10. **Belsey, E. M., Greer, H. S., Lal, S., Lewis, S. C., Beard, R. W. (1977). Predictive factors in emotional response to abortion: King’s termination study--IV. Social Science and Medicine, 11(2), 71-82.**

The emotional attitudes of a consecutive sample of 360 women were assessed before and 3 months after a first trimester abortion with the aim of establishing an objective approach to abortion counseling. A small number of women developed one or more features of emotional disturbance after the abortion, yet the dominant influence was the degree of adjustment existing before pregnancy. Those most likely to be disturbed after post-abortion had a history of psychosocial instability, poor or no family ties, few friends, a poor work pattern, and commonly

failed to take contraceptive precautions.

11. **Bento, S. F., Pádua, K. S., Pacagnella, R. C., Fernandes, K. G., Osis, M. J. D., Duarte, G. A., & Faúndes, A. (2020). Advantages and Disadvantages of Medical Abortion, According to Brazilian Residents in Obstetrics and Gynaecology. Vantagens e desvantagens do aborto medicamentoso, segundo os residentes brasileiros em ginecologia e obstetrícia. Revista brasileira de ginecologia e obstetricia : revista da Federacao Brasileira das Sociedades de Ginecologia e Obstetricia, 42(12), 793–799.**

The primary goal of this study was to find out the opinion of residents in obstetrics and gynecology about the advantages and disadvantages of medical abortion as compared with surgical procedures. The method employed for gathering data was a cross-sectional multicenter analysis via questionnaire of residents in obstetrics and gynecology, with 21 maternity hospitals located in 4 different geographic regions in Brazil included. The main findings of this study's analysis were that most residents agreed that the main advantages of medical abortion were the procedure being "less invasive" (94.7%), "does not require anesthesia" (89.7%), can "be accompanied during the process" (89.1%), "prevents physical trauma" (84.4%). The study authors conclude that residents found clinical and personal advantages of medical abortion when compared to more invasive procedures.

12. **Bota, I. A., Frandes, M., Anastasiu-Popov, D. M., & Lungeanu, D. (2020). Psychosocial risk factors of elective abortion: A structural equation modelling approach. Applied Medical Informatics, 42, No. 2, 63-68.**

Although in Romania the number of elective abortions (EAB) has decreased in recent years, the percentage is still quite high given the variety and availability of contraception. The authors pose that the principal factors that influence the EAB decision process are family, education, and income. The aim of their study was to determine the extent to which psychosocial factors influenced EAB. For methodology, a sociological survey-based study was employed, including women who presented for abortion on request during the years 2015 to 2018 at Bega University Clinic of Obstetrics/Gynecology, Timisoara. The researchers investigated the amount of information and the use of contraceptive methods at the time of the termination request through structural equation modeling. Other data extracted included women's general perception of abortion, emotional involvements with the pregnancy, relationship and family life, knowledge of consequences, and social status. These 5 factors were found to have a major influence on EAB.

13. **Bracken, M. B. (1978). A Causal Model of Psychosomatic Reactions to Vacuum Aspiration Abortion, Social Psychiatry, 13, 135-145.**

Among 215 women who underwent an abortion by vacuum aspiration, approximately 15% experienced a difficult abortion decision, were quite anxious before, and anxious and depressed after the abortion, and experienced a very painful abortion, Being married was the dominant socio-demographic correlate of a difficult abortion decision which predicted greater anxiety before the abortion. Higher anxiety before abortion interacted with inferior skill of the operator to increase pain experienced during the procedure. Increased postabortion anxiety resulted from

the additive, independent effects of more pain during the procedure, greater pre-procedure anxiety, and a difficult decision as well as null-parity.

14. **Bracke, M. B., Hachamovitch, M., & Grossman, G. (1974). The decision to abort and psychological sequelae. J Nerv Ment Dis. 1974, 158(2), 154-62.**

A brief critique of published research on psychological responses to abortion emphasizing the need to consider the pre-abortion decision-making process and the psychological and sociological context of abortion decisions. The importance of the level of support of significant others is examined as a predictor of reactions to abortion among a sample of 489 women who underwent an abortion at a New York clinic.

15. **Bracken, M. B., Klerman, L. V., Bracken, M. (1978). Coping with pregnancy resolution among never-married women. Am J Orthopsychiatry, 48(2), 320-34.**

Never-married women delivering (n=249) and aborting a pregnancy (n=249) were matched for age, race, parity, and welfare status. In general, all pregnancies were greeted with sadness, but women delivering were relatively happier about the pregnancy, were more likely to initially accept delivery, received more support for their decision from others, had an easier decision process, and were happier with their eventual choice than women who aborted. All women received more support than opposition to their choice from significant others. Results revealed that sadness about the eventual decision was a function of a more difficult decision process, initial rejection of the choice made, and deciding to abort rather than deliver. Strategies the women used to cope with the stress of making a decision included the following: 1) the use of ego defense mechanisms to avoid the reality of unwanted pregnancy, 2) management of interpersonal relationships with significant others as they impinge on the decision process, 3) the use of authority figures and societal expectations to arrive at a decision, 4) attitude and cognitive restructuring to avoid cognitive dissonance, 5) searching for new knowledge relevant to the decision, and 6) techniques to maintain self-esteem through the whole process.

16. **Brewer, C. J. (1978). Induced abortion after feeling fetal movements: its causes and emotional consequences. Biosoc Sci., 10(2), 203-8.**

Of 40 women who had late abortions (20 and 24 weeks gestation) and had felt fetal movements, 11 had a history of significant menstrual irregularity, 6 had changed their minds about an initially wanted pregnancy, 5 had been told that they were not pregnant, and 5 had either been refused by the NHS or were unable to get advice at an earlier stage. In 14 cases “wishful thinking” or an unrealistic attitude regarding continuation of the pregnancy was an important cause. Twenty-five were followed-up a minimum of 3 months post-abortion. Five reported feeling depressed because of their abortion and one had time off work or school for this reason.

17. **Broen, A. N., Moum, T., Bödtker, A. S., & Ekeberg, O. (2006). Predictors of anxiety and depression following pregnancy termination: a longitudinal five-year follow-up study. Acta Obstetricia Et Gynecologica Scandinavica [Acta Obstet Gynecol Scand], 85 (3), 317-23.**

This prospective, longitudinal follow-up study examined women who had a miscarriage or an induced abortion relative to the women's level of distress compared to a sample from the general population. Women who experienced miscarriage (n =/40) and induced abortion (n =/80) were interviewed ten days (T1), six months (T2), two years (T3), and five years (T4) after the pregnancy loss. Women with miscarriage had significantly more anxiety and depression at T1 than the general population, while women with induced abortion had significantly more anxiety at all time points and more depression at T1 and T2. In both groups, predictors of anxiety and depression at T2 and T4 were recent life events and poor former psychiatric health. Childbirth events between T1 and T4 had no significant influence on the scores. For women with induced abortion, doubt about the decision to abort was related to depression at T2 ($p < 0.05$), while a negative attitude towards induced abortion was associated with anxiety at T2 ($p < 0.05$) and T4 ($p < 0.05$).

18. **Broen, A. N., Moum, T., Bödtker, A. S., & Ekeberg, O. (2005). Reasons for induced abortion and their relation to women's emotional distress: a prospective, two-year follow-up study. General hospital psychiatry, 27(1), 36–43.**

This study examined the most important reasons for induced abortion and their relationship to emotional distress at follow-up. The women (n=80) were interviewed 10 days, 6 months (T2) and 2 years (T3) after they underwent an abortion. Reasons related to education, job and finances were highly rated. Also, "a child should be wished for," "male partner does not favour having a child at the moment," "tired, worn out" and "have enough children" were important reasons. "Pressure from male partner" was listed as the 11th most important reason. When the reasons for abortion and background variables were included in multiple regression analyses, the strongest predictor of emotional distress at T2 and T3 was "pressure from male partner."

19. **Broen, A.N., Moum, T.Å., Bødtker, A.S., & Ekeberg, Ø. (2005). The course of mental health after miscarriage and induced abortion: a longitudinal, five-year follow-up study. BMC Medicine, 3, 18.**

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 showed significantly quicker improvement on IES scores for avoidance, grief, loss, guilt and anger throughout the study 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. Compared with the general population, women who had undergone induced abortion had significantly higher HADS anxiety scores at all four assessments, while women who had had a miscarriage had significantly higher anxiety scores only at T1.

20. **Brown, D., Elkins, T. E., & Larson, D. B. (1993). Prolonged grieving after abortion: a descriptive study. The Journal of Clinical Ethics, 4(2), 118–123.**

This study examined detailed descriptive letters from 45 women prepared in response to a request by a pastor of an upper-middle-class Protestant congregation in Florida. Results indicated

that prolonged grieving after abortion may be more widespread phenomenon than previously believed. The women were 25 to 60 years-old, 75% were unmarried at the time of the procedure, and 29% aborted before abortion was legalized in the US. The most common long-term effect, especially among those who felt coerced by others, was a continued feeling of guilt. Fantasies about the aborted fetus was the next most often mentioned experience. Half of the letter writers referred to their abortions, as "murder" and 44% voiced regret about their decision to abort. Other long-term effects included depression (44%), feelings of loss (31%), shame (27%), and phobic responses to infants (13%). For 42% of these women, the adverse psychological effects of abortion lasted over 10 years. The authors noted that because the letter-writers were a self-selected population group with a known bias against abortion and because only negative experiences were solicited, the data could not be generalized. They further noted the need for methodologically sound studies of a possible prolonged grief syndrome among a small percentage of women who have abortions, especially when coercion is involved.

21. **Campbell, N. B., Franco, K., & Jurs, S. (1988). Abortion adolescence. *Adolescence, 23*(92), 813–823.**

This study compared 35 women who had abortions during their teenage years with 36 women whose abortions occurred after the age of twenty. A demographic questionnaire, the Millon Clinical Multiaxial Inventory, and the Beck Depression Inventory were completed by women who participated in a patient-led support group. Premorbid psychiatric histories, the decision-making process, and post-abortion distress responses were reported. Specific differences in perceptions of coercion, pre-abortion suicidal ideation, and nightmares post-abortion were found in the adolescent group. Antisocial and paranoid personality disorders, drug abuse, and psychotic delusions were found to be significantly higher in the teenage abortion group.

22. **Campbell, J. C., Pugh, L. C., Campbell, D., & Visscher, M. (1995). The influence of abuse on pregnancy intention. Women's health issues: official publication of the Jacobs Institute of Women's Health, 5(4), 214–223.**

Each year in the US millions of women report being the victims of physical or sexual violence, and between 40-45% of these women have been forced into sex by their partner. It’s also been established in past studies that sexual abuse is linked to adolescent pregnancy. The aim for this study was to provide background information on the link between abuse and pregnancy intention as well as pregnancy resolution using focus group data. The authors also looked to explore the decision-making process and how abuse can affect it. Women from wife abuse shelters were invited to take part in the discussion about decision-making and partner violence. The participation rate was 100% through the use of 15-dollar incentives, and five major themes were identified. The themes included male partner control, relentless abuse, lack of consistency and jealousy from their partner, defining manhood, and health problems that resulted from abuse and/or abortions. The results also indicated clear connections between relationship abuse and unintended pregnancy through loss of autonomy. A lack of contraceptive use was also linked to the male partners’ self-perception and idea of “manhood”. The implication put forward by the authors was that health care professionals need to make much more frequent abuse assessments in order to have a chance of helping women escape from dangerous situations.

23. **Chae, S., Desai, S., Crowell, M., & Sedgh, G. (2017). Reasons why women have induced abortions: a synthesis of findings from 14 countries. Contraception, 96(4), 233–241.**

The objective of this study was to present reasons women give for obtaining induced abortion from data collected in 14 countries. The authors examined nationally representative data from the included countries in official stats, population-based surveys, and facility-based surveys of abortion patients. Sociodemographic characteristics were considered, and where data was available the multiple reasons women give for having an abortion were studied. Results showed in most countries, the most frequently cited reasons for having an abortion were socio-economic concerns or a desire to limit childbearing. In instances where multiple reasons could be given, women often stated more than one. The authors concluded that women have abortions for a variety of reasons, and provided a broad picture of the circumstances that inform a woman's decisions. They indicate that future research should examine in greater depth the personal, social, economic, and health factors that inform a woman's decision in order to shed light on the potential consequences of unintended births.

24. **Chalana. H., & Sachdeva, J.K. (2012). A study of psychiatric morbidity during second trimester of pregnancy subsequent to abortion in the previous pregnancy. Asian Journal of Psychiatry, 5, 215-19.**

Subjects with history of previous abortion, whether single or more had significantly higher mean depression and anxiety score than primigravida or subjects with history of previous delivery; depression and anxiety scores decreased with increase in time gap between abortion and current pregnancy. High anxiety was found in 36.67% of females with history of previous abortion. Results further demonstrated that 36.67% of subjects with previous single abortion and 30% of subjects with previous 2 or more abortions were suffering from a depressive episode. No psychotic disorders were observed.

25. **Ceran, M. U., Tasdemir, U. (2022). A comparative prospective study with depression, anxiety and quality of life scales in women with induced abortion and miscarriage before pregnancy termination. J Contemp Med., 12(2), 364-368.**

The aim of this study was to compare the pre-termination quality of life (QoL) domains, depression, and anxiety symptoms of women whose pregnancy would be terminated by induced abortion or miscarriage. A prospective case control study was employed that included women hospitalized for pregnancy termination at less than 10 weeks at a university hospital between January 2020 and December 2020. Self-evaluation questionnaires were given to 35 women in the induced abortion and miscarriage group respectively. Becks Depression and Anxiety Inventories were used to determine stress levels before termination. Results showed moderate to severe depression symptoms were found to be statistically higher in the induced abortion group (31.4%) than the miscarriage group (5.7%). The researchers also reported that the lowest percentages were in the environmental domain of QoL in both groups, and in the psychological and physical domain for QoL, results were significantly lower in the induced abortion group. The authors concluded that women who had induced abortion were more prone to depression and anxiety before pregnancy termination than those who miscarried. They suggested that whether women

have a pregnancy plan or not, supporting women of reproductive age with self-efficacy enhancing strategies and increasing their psychological resilience will help them with early pregnancy problems and management that they may face in their lives.

26. **Cohan, C. L., Dunkel-Schetter, C., & Lydon, J. (1993). Pregnancy decision making: Predictors of early stress and adjustment. *Psychology of women quarterly, 17*(2), 223–239. https://doi.org/10.1111/j.1471-6402.1993.tb00446.x**

Pregnancy decision-making was examined in pregnant and non-pregnant women who sought pregnancy testing. Most of the women had decided and were certain of their decision to abort or carry a possible pregnancy before learning the test results. Adjustment to pregnancy decision making was examined longitudinally among the women who tested positive for pregnancy. Pregnant participants were interviewed about their decisions to carry to term or abort their pregnancies at three times…immediately before pregnancy testing, a day after positive test results, and 4 weeks later. Nearly all maintained their original decision over the course of the study. Adjustment was related primarily to the chosen outcome and, to a lesser degree, to whether a woman had decided initially. Pregnancy testing was stressful for women who decided to abort their pregnancies.

27. **Cohen, L. & Roth, S. J. (1984). Coping with abortion. Human Stress, 10(3), 140-5.**

This study evaluated coping styles in response to abortion. The average level of distress was fairly high. When divided into groups based on coping style, "avoiders" were found to experience more distress that "nonavoiders," and "approachers" decreased in distress over time while "nonapproachers" did not. Prior to abortion the patients showed fairly high levels of denial, anxiety, and depression, similar to those observed for bereaved individuals in other studies. The women could not be neatly divided into avoiders and approachers; however those who tended to be high deniers were more distressed initially than low deniers. High approachers were initially more distressed than low approachers. Distress was significantly decreased after the abortion for high approachers, but not for low approachers. Following abortion, both high approachers and low approachers had similar levels of distress, ie., anxiety and depression.

28. **Coleman P. K. (2015). Diagnosis of Fetal Anomaly and the Increased Maternal Psychological Toll Associated with Pregnancy Termination. Issues in law & medicine, 30(1), 3–23.**

Approximately 4% of abortions in the U.S. occur in wanted pregnancies, with many resulting from fetal anomalies. Most occur in the second trimester; however, in recent years first-trimester ultrasound measurement for nuchal translucency, calculation of risk based on maternal age, and biochemistry at 11-14 weeks gestation, have enabled earlier prenatal diagnoses for chromosomal abnormalities. First trimester ultrasound can also now lead to diagnoses of major structural anomalies. The American College of Medical Genetics released recommendations emphasizing the importance of ethical counseling and substantive communication with parents facing a fetal anomaly. Professionals often attempt to steer expectant parents toward termination even when they express a strong desire to carry the pregnancy as long as possible. Perinatal hospice is a family-centered and comprehensive alternative. The care provided by perinatal hospice units is

delivered by an interdisciplinary team in well over a hundred U.S. locations, Support is offered from diagnosis until death and beyond with time for "bonding, loving, and losing." The approach taken is realistic without shattering hope that the diagnosis was wrong or that a miracle will occur. There is also recognition that building memories is essential to the grieving process and frequent use of ultrasound provides visualization experience. Perinatal hospice teams assist in the development of birth plans, address the type and location of the delivery, and provide aftercare of the mother and infant.

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

Using data from the National Longitudinal Study of Adolescent Health, various demographic, psychological, educational, and family variables were examined as predictors of pregnancy resolution. Only 2 of the 17 variables examined were significantly associated with pregnancy resolution (risk-taking and the desire to leave home). After controlling for these variables, adolescents with an abortion history, compared to those with a birth history, were 5 times more likely to seek counseling for psychological or emotional problems and 4 times more likely to report frequent sleep problems, a common symptom of depression. In addition to use of controls, strengths include use of nationally representative, diverse sample with an exclusive focus on unwanted pregnancies aborted and delivered.

30. **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.**

Abortion made significant independent contributions to 8 of the 15 mental health variables above and beyond the effects of 22 control variables. The degree of increased risk of experiencing each variable associated with abortion were as follows: PTSD (95%), Agoraphobia with or without Panic Disorder (124%), Agoraphobia without Panic Disorder (132%), Alcohol Abuse with or without dependence (105%), Alcohol Dependence (134%), Drug abuse with or without dependence (70%), Drug Dependence (104%), and Major Depression with hierarchy (42%). The effect for Major Depression without hierarchy approached significance (p=.055), with an increased risk of 38%. In addition to inclusion the control variables, strengths included a nationally representative sample, and thorough assessments of psych outcomes by trained professionals.

31. **Coleman, P. K., Coyle, C. T., & Rue, V.M. (2010). Late-term elective abortion and susceptibility to posttraumatic stress symptoms, Journal of Pregnancy. Article ID 130519.**

The primary aim of this study was to compare early abortion (1st trimester) to a late abortion (2nd and 3rd trimester) on a measure of Posttraumatic Stress Disorder (PTSD) after controlling for socio-demographic and personal history variables. Online surveys were completed by 374 women and the results indicated that later abortions were associated with higher Intrusion subscale scores and with a greater likelihood of reporting disturbing dreams, reliving of the

abortion, and trouble falling asleep. Reporting the pregnancy was desired by one's partner, experiencing pressure to abort, having left the partner prior to the abortion, not disclosing the abortion to the partner, and physical health concerns were more common among women who had later abortions. Social reasons for abortion were correlated with higher PTSD total and subscale scores for the full sample.

32. **Coleman, P. K., Maxey, D. C., Spence, M., & Nixon, C. (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.**

Predictors of the choice to abort or deliver a child within 18 months of a previous birth were examined. Comparisons were also made of mothers who chose to abort or deliver relative to substance use and adverse partner behavior. Data from the Fragile Families and Well-Being Study were examined. The results indicated several variables related to the father's commitment to raising a previously born child and to his relationship with the mother predicted the choice to abort. A recent abortion was related to substance use and partner perpetrated physical aggression after the effects of confounding variables were removed. More specifically, women who terminated a second pregnancy when compared to women who delivered a second time, were over 3 times more likely to report recent heavy use of alcohol (consumption of 5 or more drinks on 1 day in the past 30 days) and they were nearly 2 times as likely to report recent cigarette smoking (in the past 30 days). The authors noted professionals who work with women from impoverished environments facing an unplanned pregnancy should sensitively explore the woman's support system.

33. **Coleman, P. K., & Nelson, E. S. (1998). The quality of abortion decisions and college students' reports of post-abortion emotional sequelae and abortion attitudes. *Journal of social and clinical psychology*, *17*(4), 425–442. https://doi.org/10.1521/jscp.1998.17.4.425.**

The sample consisted of 63 college students (31 males and 32 females) with prior histories of abortion experience. The primary objective was to examine dimensions of abortion decisions (ambivalence, regret, and comfort) and emotional connection to the fetus as possible predictors of self-reported post-abortion anxiety and depression. A secondary objective was to assess different aspects of abortion decisions and emotional connection to the fetus as predictors of abortion attitudes. A sizable proportion of college men and women apparently do not take the abortion decision lightly. The quality of abortion decisions and emotional connection to the fetus may partially explain differences in post-abortion emotional adjustment.

34. **Coleman, P. K., Reardon, D. C., & Cougle, J. (2005). Substance use among pregnant women in the context of previous reproductive loss and desire for current pregnancy. British Journal of Health Psychology, 10, 255-268.**

The primary objectives of this study were to examine maternal history of perinatal loss and pregnancy wantedness as predictors of substance use during pregnancy. Women who gave birth in Washington DC hospitals during 1992 were interviewed, with the data including pregnancy

history (prior births, induced abortions, miscarriages, and stillbirths), desire for the pregnancy (wanted, not wanted, mistimed), socio-demographic information, timing of onset of prenatal care, and substance use (cigarettes, alcohol, and drugs) during pregnancy. A history of induced abortion was associated with elevated risk for maternal substance use of various forms; whereas other forms of perinatal loss (miscarriage and stillbirth) were not related to substance use. Unwanted pregnancy was associated with cigarette smoking during pregnancy, but not with any other forms of substance use.

35. **Coleman, P. K., Reardon, D. C., Rue, V., & Cougle, J. (2002). History of induced abortion in relation to substance use during subsequent pregnancies carried to term. American Journal of Obstetrics and Gynecology, 187, 1673-1678.**

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. Compared with women who had previously given birth, women who aborted were significantly more likely to use marijuana (929%), various elicit drugs (460%), and alcohol (122%) during their next pregnancy. Differences relative to marijuana and use of any elicit drug were more pronounced among married and higher income women and when more time had elapsed since the prior pregnancy. Results were stratified by potentially confounding factors (marital status, income, ethnicity, and time elapsed since a prior abortion or birth). Differences relative to alcohol use were most pronounced among the white women and when more time had elapsed since the prior pregnancy.

36. **Coleman, P. K., Reardon, D. C., Rue, V. M., & Cougle, J. (2002). State-funded abortions versus deliveries: a comparison of outpatient mental health claims over 4 years. The American Journal of Orthopsychiatry, *72*(1), 141–152.**

Rates of 1st-time outpatient mental health treatment for 4 years following an abortion or a birth among women receiving medical assistance through California were compared. After implementing controls. the rate of care was 17% higher for the abortion group (n = 14,297) compared to the birth group (n = 40,122). Within 90 days after the pregnancy, the abortion group had 63% more claims than the birth group, with the percentages equaling 42%, 30%, and 16% for 180 days, 1 year, and 2 years. Additional comparisons between the abortion and birth groups were conducted on the basis of claims for specific types of disorders and age. For example, across the 4-yrs, the abortion group had 40% more claims for neurotic depression than the delivery group. This large, record-based study employed a homogeneous population and controls were instituted for pre-pregnancy psychological difficulties, age, and months of eligibility. By using actual claims data, concealment, recruitment, and retention problems were avoided along with simplistic forms of assessment.

37. **Coleman, P. K., Rue, V., Coyle, C. (2009). Induced abortion and quality of intimate relationships: Analysis of male and female data from the Chicago Health and Social Life Survey. Public Health 123, 331–338.**

The purpose of this study was to examine associations between abortion and relationship

functioning. Independent variables studied included abortion in a previous relationship and abortion in a current relationship. Perceptions of quality-of-life changes associated with ending the relationship, conflict, aggressiveness, and sexual dysfunction were the outcome measures. Data analyzed was from interviews with an ethnically diverse urban sample of men (n=658) and women (n=906). Surveys were conducted in person using computer-assisted personal interview technology by the National Opinion Research Center affiliated with the University of Chicago, USA. Results indicated that for men and women, an abortion in a previous relationship was associated with negative outcomes in the current relationship, perceptions of improved quality of life if the current relationship also ended, and intimate partner violence. An abortion within a current relationship was associated with 116% and 196% increased risk of arguing about children for women and men, respectively. Among females, experience of an abortion within a current relationship was associated with increased risk for sexual dysfunction (122-182%), increased risk of arguments about money (75%), increased risk of conflict about the partner's relatives (80%), and increased risk of arguing about the participant's relatives (99%). Men whose current partners had an abortion were more inclined to report jealousy (96% greater risk) and conflict about drugs (385% greater risk).

38. **Congleton, G. K., & Calhoun, L. G. (1993). Post-abortion perceptions: a comparison of self-identified distressed and nondistressed populations. *The International journal of social psychiatry*, *39*(4), 255–265.**

This study investigated the experiences of 25 women who described themselves as responding in an emotionally distressed manner to abortion and a comparison group of 25 women reporting more relieving/neutral responses. Current and initial stress response to the abortion, general mental health, and demographic characteristics were assessed quantitatively, and interviews explored subjective perceptions. The distress group had significantly higher scores on initial stress response and religiosity, were more often currently affiliated with conservative churches, and reported lower degree of social support and confidence in the abortion decision. Qualitatively, 48% of the distress group recalled experiencing feelings of loss immediately post-abortion, in contrast to none in the nondistress group. Both groups identified post-abortion "catalytic" events, such as subsequent childbirth, that affected responses to the abortion over time.

39. **Conklin, M. P., & O'Connor, B. P. (1995). Beliefs about the fetus as a moderator of post-abortion psychological well-being. *Journal of Social and Clinical Psychology, 14*(1), 76–95.**

This study examined whether beliefs about the fetus played a moderating role in post-abortion psychological well-being. Participants (N=817) were recruited from physicians' offices and answered questions on pregnancy history, self-esteem, satisfaction with life, and emotional states. Results revealed that women who had an abortion and tended to believe that fetuses are human scored lower on the abortion well-being variables than women who had not had an abortion. In contrast, women who had an abortion and who tended to believe that fetuses are not human were as well adjusted as women who had not had an abortion. Beliefs about the fetus predicted psychological well-being among women who have had an abortion, but not among women who have not had an abortion.

40. **Cougle, J. R., Reardon, D. C., & Coleman, P. K. (2003). Depression associated with abortion and childbirth: a long-term analysis of the NLSY cohort. Medical Science Monitor: International Medical Journal of Experimental and Clinical Research, 9(4), CR105–CR112.**

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, with control for prior psychological state. 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) were included. 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 (a proxy variable for pre-pregnancy psychological state). Results were also examined separately for groups based on race, marital status, and divorce history. Women whose first pregnancies ended in abortion were 65% more likely to score in the 'high-risk' range for clinical depression than women who gave birth. Differences were greatest among the demographic groups most likely to report an abortion.

41. **Cougle, J. R., Reardon, D. C., & Coleman, P. K. (2005). Generalized anxiety following unintended pregnancies resolved through childbirth and abortion: a cohort study of the 1995 National Survey of Family Growth. *Journal of anxiety disorders, 19*(1), 137–142.**

The purpose of this study was to examine risk of Generalized Anxiety following unintended pregnancies ending in abortion or childbirth using a large representative sample of American women. Those who aborted were found to have significantly higher rates of subsequent Generalized Anxiety after controlling for race and age. The findings highlight the clinical significance of considering reproductive history in therapeutic efforts to assist women seeking relief from anxiety.

42. **Coyle, C. T., Coleman, P. K., & Rue, V. M. (2010). Inadequate preabortion counseling and decision conflict as predictors of subsequent relationship difficulties and psychological stress in men and women. *Traumatology, 16*(1), 16–30.**

The purpose of this study was to examine associations between perceptions of preabortion counseling adequacy and partner congruence in abortion decisions and outcomes involving relationship problems and individual psychological stress. Data were collected through online surveys from 374 women and 198 men who experienced an abortion. For women, perceptions of preabortion counseling inadequacy predicted relationship problems, symptoms of intrusion, avoidance, and hyperarousal, and meeting full diagnostic criteria for posttraumatic stress disorder (PTSD) with controls for demographic and personal/situational variables. For men whose partners had an abortion, perceptions of inadequate counseling predicted relationship problems and symptoms of intrusion and avoidance with the same controls used. Incongruence in the decision to abort predicted intrusion and meeting diagnostic criteria for PTSD among women with controls used, whereas for men, decision incongruence predicted intrusion, hyperarousal, meeting diagnostic criteria for PTSD, and relationship problems. Findings suggest that both

perceptions of inadequate preabortion counseling and incongruence in the abortion decision are related to adverse personal and interpersonal outcomes.

43. **Cozzarelli, C. & Major, B. (1994). The effects of anti-abortion demonstrators and pro-choice escorts on women's psychological responses to abortion. Journal of Social & Clinical Psychology, 13(4), 404-27.**

Explored the impact of antiabortion demonstrators and pro-choice escorts on women's postabortion distress. The more women seeking an abortion reported being upset by antiabortion demonstrators and the more intense antiabortion activity, the more depressed women were immediately post-abortion. Pro-choice escorts partially insulated women against direct contact with the antiabortion demonstrators and helped to protect women from the negative effects attributable to the number of antiabortion demonstrators outside the clinic. Escorts were not able to buffer effects related to the intensity of antiabortion picketing.

44. **Cozzarelli, C., Sumer, N., & Major, B. (1998). Mental models of attachment and coping with abortion. *Journal of personality and social psychology*, *74*(2), 453–467.**

The relationship between attachment and adjustment to abortion was explored in 408 women undergoing first-trimester procedures in Buffalo, New York. As hypothesized, women who had secure attachment styles perceived higher levels of social support and lower levels of conflict from their male partners compared to those with higher self-esteem. The more positive a woman's model of self, the less distress she reported in the immediate postabortion period. A positive model of self also predicted self-efficacy for coping. Model of self-effects were largely a reflection of the overlap between model of self and self-esteem. The combination of self-esteem, the attachment variables, and mediator variables accounted for 24% of the variance in postabortion distress and 65% of the variance in postabortion positive well-being.

45. **Curley M, & Johnston C. (2013). The characteristics and severity of psychological distress after abortion among university students. Journal of Behavioral Health Services & Research, 40,279–93.**

Psychological outcomes were compared among those who preferred or did not prefer psychological services after abortion to those who were never pregnant. All who had abortions reported symptoms of post-traumatic stress disorder (PTSD) and grief lasting on average 3 years. Yet, those who preferred services experienced heightened psychological trauma indicative of partial or full PTSD, perinatal grief, dysthymia, and co-existing mental health problems.

46. **David H. P. (1985). Post-abortion and post-partum psychiatric hospitalization. *Ciba Foundation symposium*, *115*, 150–164.**

The paper reviews what is known from published research about post-abortion and post-partum admissions to psychiatric hospitals and addresses findings obtained from computer linkages of Danish national registers. Admissions to psychiatric hospitals were tracked for a three-month period after either delivery or abortion for all women under age 50 and then compared with the three-month admission rate to psychiatric hospitals for all Danish women of similar age. For

never-married and currently married women, the post-pregnancy-related risk of admission was about the same, 12 per 10,000 abortions or deliveries. Higher psychiatric admission rates were noted for separated, divorced and widowed women having abortions or carrying to term.

47. **Dingle, K., et al. (2008). Pregnancy loss and psychiatric disorders in young women: An Australian birth cohort study. The British Journal of Psychiatry, 193, 455-460.**

This study was designed to examine whether abortion or miscarriage were associated with psychiatric and substance use disorders. The sample of women (n=1223) were from a cohort born between 1981 and 1984 in Australia, assessed at 21 years for psychiatric and substance use disorders and lifetime pregnancy histories. Young women reporting an abortion had over three times the odds of experiencing a lifetime illicit drug disorder. Abortion was also associated with alcohol use disorder and 12-month depression.

48. **Drower, S. J., & Nash, E. S. (1978). Therapeutic abortion on psychiatric grounds. Part I. A local study. *South African medical journal = Suid-Afrikaanse tydskrif vir geneeskunde*, *54*(15), 604–608.**

A study of 197 women referred for termination of pregnancy on psychiatric grounds was undertaken from February 1974 to May 1975 in Cape Town. The personal, social and psychiatric information collected from this study, which included both women who were refused and those granted termination on psychiatric grounds, was analyzed. The authors gained enough data to focus on the psychosocial and 'hard' psychiatric data, to statistically compare the two groups, and to isolate variables which appeared to have influenced decision-making. Eighty per cent of the women were followed up for 12 - 18 months. Twelve women (14%) in the termination group were receiving or had received psychiatric treatment since the initial assessment and 6 (8.7%) of the women in the nontermination group were under psychiatric care, 4 of whom had prior psychiatric care. Some emotional distress, not requiring formal psychiatric care was identified at follow-up in both groups, but was greater among those patients granted a termination.

49. **Ely, G., Flaherty, C., & Cuddeback, G. S. (2010). The relationship between depression and other psychosocial problems in a sample of adolescent pregnancy termination patients. Child and Adolescent Social Work Journal, 27, 269-282.**

The relationship between depression and 16 psychosocial life problems was examined in a sample of U.S. adolescent abortion patients. Using the Multidimensional Adolescent Assessment Scale (MAAS), depression and related psychosocial problems were measured in 120 adolescents between the ages of 14 and 21. Patients scoring above the clinical cut score for depression also generally reported higher levels of psychosocial problems in other areas. Approximately 40% of adolescents who had an abortion reported elevated levels of depression. This rate is well above the estimated 8% previously estimated for the general adolescent population.

50. **Eisen, M., & Zellman, G. L. (1984). Factors predicting pregnancy resolution decision satisfaction of unmarried adolescents. *The Journal of genetic psychology*, *145*(2D Half), 231-239.**

Caucasian and Mexican-American adolescents (N = 299) aged 13 to 19 years who received pregnancy counseling, pregnancy termination, or prenatal services at a county clinic were reinterviewed six months after delivery or abortion to assess post-decision satisfaction. Among women who aborted, four factors--positive pre-procedure abortion opinion, more liberal attitudes towards abortion, consistent contraceptive use following abortion, and their mothers' higher educational attainment--accounted for about 20% of the variance in satisfaction. Among single mothers, positive pre-procedure attitude towards single motherhood and lack of attempts to attend school in the six months post-delivery were associated with decision satisfaction.

51. **Ekstrand, M., Tydén, T., Darj, E., & Larsson, M. (2009). An illusion of power: qualitative perspectives on abortion decision-making among teenage women in Sweden. Perspectives on Sexual and Reproductive Health, 41(3), 173–180.**

Swedish law allows abortion upon request until the 18th week of gestation. However, there is debate around how much of this decision is a woman's own. For this study, individual in-depth interviews about the pregnancy and abortion decision were conducted 3-4 weeks after a woman had an abortion with 25 women aged 16-20 at different periods, 2003, 2005, and 2007 included. The interviews were audiotaped and transcribed. The results indicated that the main reasons for unwanted pregnancy were underestimation of pregnancy risk and inconsistent contraceptive use. Pregnancy prevention was generally perceived as the woman's responsibility. The abortion decision was seen to be accompanied by mixed emotions and was viewed as a natural yet difficult choice. After having an abortion, women reported feeling pressured by contraceptive counselors to use highly effective contraceptives despite their previous negative experiences or worries about side effects. The authors concluded that Swedish teenagers' basic right to decide whether to have an abortion may be limited by societal norms and disapproval of teenage childbearing. Due to the fact that women are often seen as responsible for contraception, the authors urged programs to emphasize pregnancy prevention as a shared responsibility and stated that greater efforts to include males in prevention practices are needed.

52. **Faramarzi, M., et al. (2020). Prevalence and factors related to psychiatric symptoms in low risk pregnancy. Caspian journal of internal medicine, 11(2), 211–218.**

Due to the fact that psychiatric disorders are associated with poor pregnancy outcomes both for the mother and child, this study aimed to determine the prevalence and related demographic risk factors of psychiatric symptoms among pregnant women in Babol City. For the methodology, a cross-sectional study was conducted in five private and public obstetrics clinics in Babol City. During routine prenatal care appointments, 176 pregnant women filled in three questionnaires including a sociodemographic questionnaire, Edinburg Prenatal Depression Scale (EPDS), and Symptom Checklist-25 (SCL-25). To interpret the data; a Wilcoxon test, Spearman correlation, and multivariate logistic regression tests were used. The results showed that the prevalence of depressive disorders was 15.5% for Edinburg scores ≥)13. The overall rate of maternal psychiatric symptoms was 48.5%. These high rates of psychiatric symptoms experienced were further broken down as; somatization 25%, anxiety 25.8%, OCD 6.4%, interpersonal sensitivity 7.6%, and psychoticism 1.2%. It was also determined that pregnant women with history of abortion in previous pregnancy were more at risk of depressive symptoms. The authors concluded that the high prevalence of psychiatric symptoms in pregnant women, especially

depressive symptoms, highlights the need for continued research on screening, identifying the risk factors, and developing treatments for mental disorders in pregnant women.

53. **Faure, S., & Loxton, H. (2003). Anxiety, depression and self-efficacy levels of women undergoing first trimester abortion. South African Journal of Psychology, 33(1), 28–38.**

Examined the relationships among anxiety, depression, perceived self-efficacy and biographical variables, before and after the termination of a first trimester pregnancy. Seventy-six participants were recruited from health facilities in the Western Cape, South Africa. High levels of state-anxiety and moderate levels of depression were documented before abortion. Levels of anxiety and depression generally decreased significantly within a three-week period after the abortion. High self-efficacy was related to lower levels of anxiety and depression. Higher levels of education and self-efficacy and low levels of depression, trait-anxiety and gestational age were significantly related to healthy short-term adjustment. Pre-abortion depression and self-efficacy scores predicted post-abortion depression.

54. **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, 444-451.**

The purpose of this study was to prospectively examine the links between pregnancy outcomes and mental health outcomes. Data were gathered on the pregnancy and mental health history of a birth cohort of over 500 women in New Zealand, who were studied to age 30. After significant adjustment for confounding, abortion was associated with an increase in the risk of mental disorder. Specifically, women who had abortions had 30% increased rates of mental disorders. There were no consistent associations between other pregnancy outcomes and mental health. Attributable risk estimates indicated that exposure to abortion accounted for 1.5% to 5.5% of the overall rate of mental disorders.

55. **Fergusson, D. M., Horwood, L. J., & Boden, J. M. (2009). Reactions to abortion and subsequent mental health. *The British Journal of Psychiatry: The Journal of Mental Science*, *195*(5), 420–426.**

Examined data on the pregnancy and mental health history of over 500 women studied to the age of 30. Abortion was associated with high rates of both positive and negative emotional reactions. Nearly 90% of respondents believed that abortion was the right decision. Analyses showed that the number of negative responses to abortion predicted increased levels of subsequent mental health disorders. After adjustment for confounding, those having an abortion and reporting negative reactions had rates of mental health disorders that were approximately 1.4-1.8 times higher than those not undergoing an abortion.

56. **Fielding, S. L., & Schaff, E. A. (2004). Social context and the experience of a sample of U.S. women taking RU-486 (mifepristone) for early abortion. *Qualitative health research*, *14*(5), 612–627.**

Of 50 women seeking an abortion in Rochester, New York, 35 went on to complete an in-depth interview from 1 to 6 weeks after their follow-up visit. More women who defined their pregnancy as a baby indicated emotional distress during their in-depth interview compared to those who saw their pregnancy as only having the potential to become a baby. The authors concluded that it might be important for abortion counselors to first ask a woman how she defines her pregnancy.

57. **Franco, K. N., Tamburrino, M. B., Campbell, N. B., Pentz, J. E., & Jurs, S. G. (1989). Psychological profile of dysphoric women postabortion.** ***Journal of the American Medical Women's Association (1972)*****,** ***44*****(4), 113–115.**

Women who felt they had poorly assimilated an abortion experience were surveyed using a demographic questionnaire, the Beck Depression Inventory (BDI), and the Million Clinical Multiaxial Inventory (MCMI). Eighty-one surveys were returned from the sample of 150 women. Seventeen percent (N = 12) of the women had experienced multiple abortions. Women with multiple abortions scored significantly higher on the BDI, and also scored higher on the Borderline Personality subscales of the MCMI. Besides multiple abortions, other risk factors for postabortion dysphoria were premorbid psychiatric illness, lack of family support, ambivalence, and feeling coerced into having an abortion.

58. **Franz, W., & Reardon, D. (1992). Differential impact of abortion on adolescents and adults.** ***Adolescence*****,** ***27*****(105), 161–172.**

Adolescent and adult reactions to abortion were compared using a sample of 252 women from 42 states. Data were secured via organizations serving as support groups for women who have had negative reactions to abortion. Results indicated that the adolescents were significantly more likely to be dissatisfied with an abortion choice compared to older participants. Adolescents also tended to have later abortions, to be dissatisfied with abortion services, to feel forced by circumstances to abort, to report being misinformed at the time of the abortion, and to report greater psychological stress.

59. **Frederico, M., Michielsen, K., Arnaldo, C., & Decat, P. (2018). Factors Influencing Abortion Decision-Making Processes among Young Women. International journal of environmental research and public health, 15(2), 329.**

Decision making regarding whether or not and how to terminate a pregnancy is a complicated issue for women experiencing an unwanted pregnancy. They are often subject to barriers limiting their autonomy and making them vulnerable to pressures that can influence a woman’s decision-making process regarding abortion or lead to forced abortion. This study’s aim was to explore the individual, interpersonal, and environmental factors behind the decision-making process among young Mozambican women. As for the methods employed, a qualitative study was conducted in Maputo and Quelimane. Participants were identified during a cross-sectional survey with women in the reproductive age (15-49). In total 15 women aged 15 to 24 who had had an abortion participated in in-depth interviews. A thematic analysis was used. Results for the surveying showed determinants at different levels, including the low degree of autonomy for women, the limited availability of health facilities providing abortion and pregnancy services,

and a lack of patient-centered care. Much needs to be done to help women have the autonomy and resources to help women make healthy decisions relating to their pregnancy.

60. **Freeman, E. W. (1978). Abortion: Subjective attitudes and feelings. Fam Plann Perspect., 10(3),150-5.**

According to the authors, the decision to terminate a pregnancy is perceived by most women as neither casual nor easy. Most see abortion as a difficult, yet necessary alternative to an unintended birth. The authors make the claim that ambivalence is no reason to counsel against abortion as most women resolve their problems soon after the procedure. Lack of support by partners is identified as a major source of distress.

61. **Freeman E. W. (1977). Influence of personality attributes on abortion experiences. The American Journal of Orthopsychiatry, 47(3), 503–513.**

This study suggested that both the resolution of negative feelings after abortion and the motivation to use contraception are related to individual personality characteristics. Implications are offered for therapeutic intervention and for contraceptive counseling with young, unmarried women.

62. **Freeman, E. W., Rickels, K., Huggins, G. R., Garcia, C. R., & Polin, J. (1980). Emotional distress patterns among women having first or repeat abortions. Obstetrics and gynecology, 55(5), 630–636.**

In a sample of 413 women undergoing first-trimester abortions, 35% were repeat abortions. All patients rated their emotional symptoms on an SCL-90 scale and completed a brief demographic questionnaire. Elevated distress levels were similar in both groups (first and repeat) prior to abortion procedures, particularly depression, anxiety, and somatization. After abortion, those who had repeat abortions continued to have significantly higher emotional distress scores in dimensions related to interpersonal relationships. The variables that discriminated most between first and repeat abortion groups were the number of living children, race, and phobic anxiety.

63. **Gebeyehu, N. A., Tegegne, K. D., Abebe, K., Asefa, Y., Assfaw, B. B., Adella, G. A., Alemu, B. W., & Sewyew, D. A. (2023). Global prevalence of post-abortion depression: systematic review and Meta-analysis. *BMC psychiatry*, *23*(1), 786.**

Depression after abortion is a common problem for women around the world, but no prior data for post-abortion depression on a global level exists. Because of that, the purpose of this study was to find out the prevalence of post-abortion depression globally. The method the authors took was a comprehensive search of several databases, analyzed using “STATA” software. Analysis included 15 papers with a total of 657 articles. The results of this analysis found that overall pooled prevalence of post-abortion depression was found to be 34.5%. The study authors conclude that occurrence of post-abortion depression is found to be influenced by many factors.

64. **Gilchrist, A. C., Hannaford, P. C., Frank, P., & Kay, C. R. (1995). Termination of pregnancy and psychiatric morbidity.** ***The British Journal of Psychiatry: The Journal of Mental Science*****,** ***167*****(2), 243–248.**

Examined whether psychiatric morbidity was greater after termination of pregnancy compared with other outcomes of an unplanned pregnancy using data from a prospective cohort study of 13,261 women. Psychiatric morbidity was reported by GPs after the conclusion of the pregnancy. Four groups were compared: women who had a termination of pregnancy (6410), women who did not request a termination (6151), women who were refused a termination (379), and women who changed their minds before the termination was performed (321). Psychiatric disorder were not higher after termination of pregnancy compared to childbirth. Women with a previous history of psychiatric illness were the most at risk for a disorder after their pregnancy, regardless of outcome. Women without a previous history of psychosis had a lower risk of psychosis after termination than postpartum, but rates of psychosis leading to hospital admission were similar. In women with no previous history of psychiatric illness, deliberate self-harm (DSH) was more common in those who had a termination, or who were refused a termination.

65. **Gissler, M., Hemminki, E., & Lönnqvist, J. (1996). Suicides after pregnancy in Finland, 1987-94: register linkage study.** ***BMJ (Clinical research ed.)*****,** ***313*****(7070), 1431–1434.**

This study was designed to determine rates of suicide associated with pregnancy by the type of pregnancy using nationwide data from Finland. There were 73 suicides associated with pregnancy, representing 5.4% of all suicides in women in this age group. 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. Suicide risk associated with birth was higher among teenagers and the rate associated with abortion was increased in all age groups. Among those who completed a pregnancy, suicide was higher in women belonging to the lower social classes and in the unmarried.

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

Information on deaths from external causes among women aged 15-49 years in Finland in 1987-2000 (n = 5299) was linked to three national health registers to identify pregnancy-associated deaths (n = 212). Results indicated that the mortality rate for women during pregnancy and within 1 year of pregnancy termination from external causes was lower than mortality from external causes among non-pregnant women. Based on elevated suicide and homicide rates, an increased risk was observed for women after abortions, especially in the age group of 15-24 years. The authors concluded that the low rate of deaths from external causes suggest a protective effect of childbirth and the elevated risk after abortion needs to be recognized in the provision of health care and social services.

67. **Gissler, M., Karalis, E., & Ulander, V. M. (2015). Decreased suicide rate after induced abortion, after the Current Care Guidelines in Finland 1987-2012. Scandinavian journal of public health, 43(1), 99–101.**

Based one former register-based study using data from Finland revealed that risk for suicide decreases after a birth, compared to nonpregnant women, but increases after a miscarriage and after an induced abortion. Risks associated with induced abortion went up in all age groups and women who attempted suicide tended to come from a lower socio-economic position. The study authors stated that, "this result has been interpreted to mean that induced abortion in itself causes deteriorated mental health and increased suicide risk". The results found from this new study showed a 1/5 decline in excess risk, but that the deviation did not reach statistical significance. However, the results were still very much consistent with the original study, with women under the age of 25 being at the highest risk. The study recommends post abortion checkups and increasing the availability of emotional support structures for women experiencing pregnancy loss.

68. **Greenglass E. R. (1975). Therapeutic abortion and its psychological implications: the Canadian experience. *Canadian Medical Association journal*, *113*(8), 754–757.**

Approximately 9 months after a legal therapeutic abortion, 188 Canadian women were interviewed. One half were single and the rest were married, separated or divorced. They were matched closely for a number of demographic variables with control women who had not had abortions. Neurotic disturbance in several areas of personality functioning was assessed from questionnaire responses. Out of 27 psychological scales, differences between the abortion and control groups were found on only 3: in general, women who had had abortions were more rebellious than control women, abortion tended to be associated with somewhat greater depression in married women, and single women who had had abortions scored higher on the shallow-affect scale. However, all the personality scores were well within the normal range. Perceived social support was strongly associated with favourable psychological reactions after abortion. Use of contraceptives improved greatly after the abortion, when over 90% of women reported using contraceptives regularly.

69. **Greer, H. S., Lal, S., Lewis, S. C., Belsey, E. M., & Beard, R. W. (1976). Psychosocial consequences of therapeutic abortion King's termination study III. The British Journal of Psychiatry: The Journal of Mental Science, 128, 74–79.**

A follow-up study is reported of a consecutive series of 360 women who underwent termination of first trimester pregnancies by vacuum aspiration. Each patient received brief counselling before termination. Follow-up examinations were carried out by means of detailed, structured interviews at three months and between 15 months and two years (mean: 18 months) after termination. Outcome was assessed in terms of psychiatric symptoms, guilt feelings, and adjustment in marital and other interpersonal relationships, sexual responsiveness and work record. Compared with ratings of psychosocial adjustment before termination, significant improvement had occurred at follow-up in respect of psychiatric symptoms, guilt feelings and interpersonal and sexual adjustment; there was no significant change in marital adjustment. Adverse psychiatric and social sequelae were rare.

70. **Halldén, B. M., Christensson, K., & Olsson, P. (2009). Early abortion as narrated by young Swedish women. Scandinavian Journal of Caring Sciences, 23(2), 243–250.**

The authors stated the aim of this study to be to. “Illuminate meanings of having an induced abortion among young Swedish women.” Narrative interviews were conducted with 18–20-year-old women two to six weeks after a medical or surgical abortion. In the sixth to twelfth week of pregnancy data were analyzed. According to a phenomenological hermeneutic method review of the study, results indicated a multitude of complex meanings in the lived experiences of induced abortion for the participants. Four main themes were presented: “Having cared for the and protected the unplanned pregnancy, taking the life of the child to be with pain, being sensitive to the approval of others, and imagining the loss of the child”. Results are discussed in light of Nussbaum’s Theory of Development Ethics. The young women’s ability to be responsible for their choices regarding their own welfare and others’ well-being in a “life cycle perspective” was disclosed despite the pain caused by the responsibility they have for taking the life of their unborn child. The authors were able to conclude that young women’s narratives were replete with ethical reasoning regarding existential matters related to their responsibility of choosing between induced abortion and parenthood and how to live with their lives after the experience. The authors suggested that health care professionals could promote capability in young women to be more responsible and develop trust in their own fertility as well as building constructive relationships with their significant others.

71. **Hamama, L., Rauch, S. A., Sperlich, M., Defever, E., & Seng, J. S. (2010). Previous experience of spontaneous or elective abortion and risk for posttraumatic stress and depression during subsequent pregnancy. *Depression and anxiety*, *27*(8), 699–707.**

This study examined the impact of EAB/SAB on mental health during subsequent pregnancy in a sample of women involved in a larger prospective study of posttraumatic stress disorder (PTSD) (n=1,581). Fourteen percent (n=221) experienced a prior elective abortion (EAB), 13.1% (n=206) experienced a prior spontaneous abortion (SAB), and 1.4% (n=22) experienced both. Of those women who experienced either an EAB or SAB, 13.9% (n=220) appraised the EAB or SAB experience as having been "a hard time" (i.e., potentially traumatic) and 32.6% (n=132) rated it as their index trauma (i.e., their worst or second worst lifetime exposure). Among the 405 women with prior EAB or SAB, the rate of PTSD during the subsequent pregnancy was 12.6% (n-51), the rate of depression was 16.8% (n=68), and 5.4% (n-22) met criteria for both disorders. A history of sexual trauma was associated with appraising the experience of EAB or SAB as "a hard time." Wanting to be pregnant earlier was predictive of appraising the EAB or SAB as the worst or second worst (index) trauma.

72. **Hamark, B., Uddenberg, N., & Forssman, L. (1995). The influence of social class on parity and psychological reactions in women coming for induced abortion. *Acta obstetricia et gynecologica Scandinavica*, *74*(4), 302–306.**

The participants included 444 women living in the city of Gothenburg, who applied for legal termination of pregnancy in the first trimester. Irrespective of age, previous experience of induced abortion was more common among women in the lower social class. Discontinuation of

oral contraception during the previous six months was twice as common among teenagers (40.0%) as among other women. Further, 15.4% of the poorest women compared to only 2.2% of the wealthiest women had undergone another abortion within two years of the index abortion. There were no significant differences along social class lines relative to emotional responses to the need for abortion or feelings of support from significant others.

73. **Harlow, B.L., Cohen, L.S., Otto, M.W., Spiegelman, D., & Cramer, D.W. (2004). Early life menstrual characteristics and pregnancy experiences among women with and without major depression: The Harvard study of moods and cycles. Journal of Affective Disorders, 79, 167-176.**

From a population-based sample of over 4000 premenopausal women between the ages of 36 and 45, the authors identified 332 women who met DSM criteria for past or current major depression and a sample of 644 women without a depression history. Women with a history of multiple abortions were 2-3-times more inclined to develop major depression. Longer duration of breastfeeding was associated with a decreased risk of depression after adjustment for education, marital status, and number of livebirths.

74. **Hemmerling, A., Siedentopf, F., & Kentenich, H. (2005). Emotional impact and acceptability of medical abortion with mifepristone: a German experience.** ***Journal of psychosomatic obstetrics and gynaecology*****,** ***26*****(1), 23–31.**

The authors noted that in Germany, four years of experience with mifepristone as an alternative procedure to surgical abortion revealed reluctant use of the new method. The greater participatory role of the women in the abortion procedure is often believed to have negative consequences for the emotional processing of the event. This study compared women's criteria for selecting a method and the psychological responses before and four weeks after medical or surgical abortion. Two hundred and nineteen women were examined and there were no differences regarding sociodemographic and reproductive characteristics between groups. A significant decline of anxiety and depression was observed for both abortion methods. The medical group had significantly lower entrance levels of anxiety than the surgical group. The medical regimen caused significantly more sequelae such as prolonged bleeding, pain and other side effects. A vast majority of the women sampled in both groups evaluated choosing between different abortion methods as being highly important to them.

75. **Hill, R. P., Patterson, M. J., & Maloy, K. (1994). Women and abortion: a phenomenological analysis.** ***Advances in consumer research. Association for Consumer Research (U.S.)*****,** ***21*****, 13–14.**

This article provides a brief history of abortion law in the US and reports some findings from a study of individual abortion and birth decisions among 92 pregnant mothers. The authors note that private decision making involves a moral standard that is absent from the public debate. Social adjustment to a birth or abortion outcome was better among women who made their own decisions and retained their right to choose during the decision-making process. Women in the study reported that they experienced some conflict during the decision-making process. The feeling of lack of choice or that partners or health officials were making the decision for them

exacerbated women's conflicting emotional responses. Women who chose abortion voiced a desire a return to their original emotional state. Women who experienced more conflict during decision making experienced greater difficulty during the abortion procedure or had a negative reaction to the abortion procedure. Poor or neglectful abortion treatment was related to both physical and emotional negative reactions while undergoing the abortion. Long-term negative reactions tended to occur among women who had poor treatment during illegal abortions, conflict over the meaning of abortion, bonding with the fetus prior to abortion, and ambivalence about the degree to which the pregnancy was desired. Postabortion social support was identified as less important in reducing postabortion trauma than women's sense of their right to choose.

76. **Holmes, M. M., Resnick, H. S., Kilpatrick, D. G., & Best, C. L. (1996). Rape-related pregnancy: estimates and descriptive characteristics from a national sample of women. American Journal of Obstetrics and Gynecology, 175(2), 320–325.**

Researchers attempted to determine the national rape-related pregnancy rate and provide descriptive characteristics of pregnancies that result from rape. A national probability sample of 4008 adult American women participated in a 3-year longitudinal survey to assess the prevalence and incidence of rape and related physical and mental health outcomes. Results revealed that the national rape-related pregnancy rate was 5.0% among adult women. Among 34 cases of rape-related pregnancy, the majority occurred among adolescents and resulted from assault by a known, often related perpetrator. A total 32.4% of the victims did not discover they were pregnant until they entered the second trimester, with 32.2% opting to keep the infant and 50% undergoing an abortion. Finally, 5.9% placed the infant for adoption and an additional 11.8% had a miscarriage.

77. **Hope, T. L., Wilder, E. I., & Terling Watt, T. (2003). The relationships among adolescent pregnancy, pregnancy resolution, and juvenile delinquency. Sociological Quarterly, 44, 555-576.**

Data for this study were pulled from the National Longitudinal Study of Adolescent Health (Add Health), a large, school-based, nationally representative study of health-related behaviors of adolescents in grades seven to twelve. The authors noted that while most ever-pregnant girls have especially high rates of delinquent behavior, adolescent mothers in their study exhibited delinquency levels that were no higher than those of their never-pregnant peers. Unlike adolescent females who end their pregnancies through abortion, those who kept their babies experienced a dramatic reduction in both smoking and marijuana use. The authors concluded with the observation that childbirth serves as a mechanism of social control, substantially reducing the likelihood of delinquent behavior.

78. **Huang, Z., Hoa, J., Su, P., Huang, K., Xing, X., Cheng, D., et al. (2012). The impact of prior abortion on anxiety and depression symptoms during a subsequent pregnancy: Data from a population-based cohort study in China. Bulletin of Clinical Pschopharmacology, 22 (1), 51-58.**

Assessed anxiety and depression in women with history of spontaneous abortion or induced abortion during a subsequent pregnancy. Pregnant women who were in the first trimester of their

pregnancy reported significantly higher scores than those in the second trimester. The women with a history of induced abortion were significantly more likely to report more "cases" of depression and more "cases" of anxiety during the first trimester than those with no history of abortion. Controlling for confounding variables yielded similar results. Cases of depression and anxiety were equally common in women with history of spontaneous abortions and in those with no abortion history.

79. **Jacob, L., Kostev, K., Gerhard, C., & Kalder, M. (2019). Relationship between induced abortion and the incidence of depression, anxiety disorder, adjustment disorder, and somatoform disorder in Germany. Journal of psychiatric research, 114, 75–79.**

A retrospective cohort study was performed, analyzing the relationship between induced abortion and incidence of depression, anxiety disorder, adjustment disorder, and somatoform disorder in Germany. Examined women with a first abortion in 281 gynecological practices in Germany. Included 17,581 women with an abortion experience and 17,581 matched controls who had a live birth. Induced abortion predicted depression (HR=1.34), adjustment disorder (HR=1.45), and somatoform disorder (HR=1.56) across the 10-year study period. The study authors concluded that there was a positive association between induced abortion and severe psychiatric disorders in Germany.

80. **Jacob, L., Gerhard, C., Kostev, K., & Kalder, M. (2019). Association between induced abortion, spontaneous abortion, and infertility respectively and the risk of psychiatric disorders in 57,770 women followed in gynecological practices in Germany. *Journal of affective disorders*, *251*, 107–113.**

The goal of this study was to analyze the association between induced abortion, spontaneous abortion, and infertility and the risk of psychiatric disorders among 57,770 women followed in gynecological practices in Germany based on data from the Disease Analyzer Database (IQVIA). A total of 57,744 women were included in the study, with a first documentation of depression, anxiety, adjustment disorder, or somatoform disorder in one of 281 gynecological practices in Germany. The mean age for participants was 29.2 years. Induced abortion was positively associated with the elevated risk of psychiatric disorders (ORs ranging from 1.75 to 2.01).

81. **Kaltreider, N. B., Goldsmith, S., & Margolis, A. J. (1979). The impact of midtrimester abortion techniques on patients and staff. *American journal of obstetrics and gynecology*, *135*(2), 235–238.**

Examined 250 mid-trimester abortions by D & E under general anesthesia and compared them with abortions by the intra-amniotic injection of prostaglandin (amnio) in order to assess the physical and emotional changes experienced by patients and staff under each procedure. Undergoing D & E abortions had fewer physical complications. The patients who had amnio abortions had more pain and reacted with more post-abortion anger and depression. Nurses were more disturbed by amnio abortions in which they played major roles in supporting the patient as well as in her abortion. Physicians reported the D & E procedures to be emotionally difficult.

82. **Kara, B., Unalan, P., Cifcili, S.,Cebeci, D. S., & Sarper, N. (2008). Is there a role for the family and close community to help reduce the risk of postpartum depression in new mothers? A cross-sectional study of Turkish women. Maternal and Child Health Journal, 12, 155-161.**

This study compared the prevalence of depressive symptomology in Turkish mothers who were 1-3 months postpartum to the prevalence of depressive symptoms among mothers who had not been pregnant for at least 1 year, in addition to identifying risk factors associated with depression in both groups. The participants included 326 women (163 were 1-3 months postpartum, and 163 had not been pregnant in the previous year). Premenstrual tension and a depression history were risk factors for depressive symptomology in both groups. Three or more births and history of induced abortion were risk factors for depressive symptoms in only the non-postpartum group.

83. **Kero, A., & Lalos, A. (2000). Ambivalence--a logical response to legal abortion: a prospective study among women and men. *Journal of psychosomatic obstetrics and gynaecology, 21*(2), 81–91.**

Ambivalence in relation to legal abortion was examined by considering emotions, attitudes, motives for abortion and ethical reasoning among women and men who expressed both positive and painful feelings in relation to an abortion performed one year prior. Social perspectives legitimized the decision to have an abortion and ethical perspectives complicated the decision. Nearly all participants described having the abortion as an expression of responsibility. Almost one-half also had feelings of guilt, as they regarded the abortion as a violation of their ethical values. Most expressed relief while simultaneously experiencing the termination of the pregnancy as a loss with feelings of grief/emptiness. For the vast majority, the abortion had led to increased maturity and deepened self-knowledge. The authors noted that ambivalence might be regarded as problematic and as an indicator of openness to the complexity of the abortion issue. They further explained that because incompatible values clash in connection with abortion, ambivalence becomes both logical and understandable.

84. **Kero, A., Högberg, U., Jacobsson, L., & Lalos, A. (2001). Legal abortion: a painful necessity. Social Science & Medicine, 53(11), 1481–1490.**

The authors stated goal for this study was "to increase knowledge about the psychosocial background and current living conditions of Swedish women seeking abortion, along with their motives for abortion and their feelings towards pregnancy and abortion." For their methodology, 211 women answered a questionnaire when they consulted a gynecologist for the first time. Results from these questionnaires indicated that legal abortion may be sought by women in many circumstances, and it is not confined to special risk groups. Most women who participated were in stable relationships with adequate financing at the time of their decision to abort. Motives for postponing childrearing or limiting the number of children they have through abortion included a wish to have children with the "right partner" and having a child at the right time in their professional career. Expectations for lifestyle were found to be a major factor. Findings also uncovered that 1/3 of women had previous abortion(s) and 12% became pregnant in a situation in which they were forced or pressured to abort. Two thirds of participants characterized their

initial feelings towards their pregnancy as painful and nearly all had conflicting feelings. Overall, this study serves to highlight that contradictory and negative feelings in relation to both pregnancy and abortion rarely are associated with doubts about the decision to abort despite the prevalence of these feelings.

85. **Kero, A., Högberg, U., & Lalos, A. (2004). Wellbeing and mental growth-long-term effects of legal abortion. *Social science & medicine (1982)*, *58*(12), 2559–2569.**

The focus of this study was on women's coping with abortion by studying their reasoning, reactions and emotions. The study was comprised of interviews related to the experiences and effects of abortion in 58 women, 4 and 12 months after the abortion. Questionnaire were also completed before the abortion concerning their living conditions, decision-making process and feelings about the pregnancy and the abortion. The majority did not experience any emotional distress post-abortion and almost all the woman reported that they had coped well at the 1-year follow-up, although 12 had had severe emotional distress directly post-abortion. Almost all the participants described abortion as a relief or a form of taking responsibility and more than half reported only positive experiences such as mental growth and maturity of the abortion process. Those without emotional distress post-abortion stated before the abortion that they did not want to give birth due to prioritizing work, studies, and/or existing children.

86. **Kieler, H., et al. (2014). Use of antidepressants and association with elective termination of pregnancy: population based case-control study. BJOG An International Journal of Obstetrics and Gynecology, published online.**

The purpose of this study was to assess whether the use of selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, mirtazapine, venlafaxine or other antidepressants is associated with late elective termination of pregnancy. They design was a case-control study using data from national registers from Denmark, Finland, and Norway between 1996 and 2007. A total of 14,902 women were identified as cases and 148,929 women served as controls. The use of any type of antidepressants was associated with elective termination of pregnancy at 12–23 weeks, but not with terminations for fetal anomalies.

87. **Kjelsvik, M., & Gjengedal, E. (2011). First-time pregnant women's experience of the decision-making process related to completing or terminating pregnancy--a phenomenological study. Scandinavian journal of caring sciences, 25(1), 169–175.**

This study focused on the "decision-making-process" related to pregnancy resolution. For the purpose of the study, this was defined as the time spanning from when the woman realizes she is pregnant until the decision is made to carry to term or abort. Mentioned in relation, Scandinavian studies show that 25-30% experience ambivalence and find the decision difficult to make. Ambivalence was experienced by 25% for those that chose to complete the pregnancy. Ambivalence ws defined as "simultaneous and contrary feelings about the potential abortion". Norway's publicly funded health service performs 10k consultations with women regarding unplanned pregnancies each year. A woman is offered information and counseling if she wishes to terminate a pregnancy and must first contact a doctor. This ensures that relevant information is given to the woman in each case. Despite these consultations, not many studies have focused on

the “decision-making process” that each woman experiences. This study revealed that women often described feeling a “divided body”, with a caring attention directed inwards towards their pregnant bodies, while at the same time struggling for a “non-pregnant appearance”. Women reported feeling high levels of stress and despair while making a decision in regard to their pregnancy. The authors concluded that ensuring women who wish to abort have access to information and consultations will reduce the suffering of pregnant women and help them make the best decision for themselves.

88. **Lauzon, P., Roger-Achim, D., Achim, A., & Boyer, R. (2000). Emotional distress among couples involved in first-trimester induced abortions.** ***Canadian family physician Medecin de famille canadien*****,** ***46*****, 2033–2040.**

This Canadian study was conducted to establish the prevalence of clinically significant psychological distress in women and men involved in first-trimester abortions and to identify related risk factors. The prospective cohort study included 197 women and 113 men involved in first-trimester abortions. Comparisons were made with control groups of 728 women and 630 men 15 to 35 years old, who had taken part in a previous public health survey. One hundred twenty-seven women and 69 men completed the follow-up questionnaire.
Prior to the abortion, 56.9% of women and 39.6% of men were much more distressed than controls. Three weeks post-abortion, 41.7% of women and 30.9% of men were still highly distressed. Predictors of distress for women were fear of negative effects on the relationship, unsatisfactory relationships, relationships of under a year, ambivalence about the decision to abort, not having a previous child, and suicidal ideation. Predictors for men were fear of negative effects on the relationship, relationships of under 1 year, preoccupation with the abortion and anxiety about related pain, negative perceptions of their own health, suicidal gestures in the past, and suicidal ideation in the past year. The authors concluded that being involved in a first-trimester abortion can be highly distressing for both women and men.

89. **Lazarus, A. (1985). Psychiatric sequelae of legalized elective first trimester abortion.** ***Journal of Psychosomatic Obstetrics & Gynecology*****,** ***4*****(3), 141–150.**

The study provides results of a survey conducted 2 weeks after elective termination of first trimester pregnancies in a sample of 292 patients. A variety of emotional responses were discerned, but the predominant reaction was relief, which was reported by three-fourths of the patients. Only 10% described the overall experience as negative. The authors noted that provision of additional counseling may be beneficial for patients who are at risk of developing negative reactions, particularly women who delay their decision, have a severe pre-abortion psychiatric disorder, or those with medical or genetic indications for termination.

90. **Lewis C. C. (1980). A comparison of minors' and adults' pregnancy decisions.** ***The American journal of orthopsychiatry*****,** ***50*****(3), 446–453.**

The sample was comprised of 26 single females, aged 18 or over, and 16 single females, aged 13-17. They were chosen to be interviewed from among patients who were waiting to receive pregnancy test results at 3 urban clinics in California. The 2 groups of patients were questioned concerning 1) their knowledge of pregnancy related laws; 2) the types of persons they would

seek advice from if they were pregnant; 3) the factors they would take into account in deciding whether to terminate or continue a pregnancy; and 4) the factors which they felt determined their contraceptive decisions. The clients in both groups had varied socioeconomic backgrounds. The results revealed that the 2 groups differed little regarding their knowledge of 1) abortion laws; 2) eligibility standards for public assistance; and 3) the legal rights of fathers. With regard to decision-making, minors were less likely than adults to consider their ability to raise a child and more likely to consider the effect of their pregnancy on their parents. Among minors who expected to have an abortion, most believed they had no choice. They felt external factors, such as family pressure, would preclude pregnancy continuation. Adults felt they made their decisions based on their own assessment of the situation rather than being pressured into it.

91. **Linares, L. O., Leadbeater, B. J., Jaffe, L., Kato, P. M., & Diaz, A. (1992). Predictors of repeat pregnancy outcome among black and Puerto Rican adolescent mothers. *Journal of developmental and behavioral pediatrics : JDBP, 13*(2), 89–94.**

This prospective study investigated predictors of repeat pregnancies within 12 months after the delivery of a first child among adolescent inner-city mothers. The sample included four groups: those who had therapeutic abortions, miscarriages, full-term deliveries, and no repeat pregnancy. The therapeutic abortion group had more pregnancies before their first delivery than did full term and no repeat. More delayed grade placement was found in the therapeutic abortion than in the no repeat pregnancy group. Reading achievement scores were higher in no repeat than in the full-term group. School attendance was higher in the no repeat than in the therapeutic abortion and full-term groups. Depressive symptoms at baseline were higher among the therapeutic abortion group than the full-term and no repeat pregnancy groups. Delayed grade placement was the most significant predictor of pregnancy outcome.

92. **Lindeman, R., Hakko, H., Riipinen, P., Riala, K., & Kantojärvi, L. (2021). Reproductive health outcomes among eating disordered females: a register-based follow-up study among former adolescent psychiatric inpatients. Journal of Psychosomatic Obstetrics and Gynaecology, 42(4), 279–285.**

This was a follow-up study focusing on a sample of female former adolescent psychiatric inpatients aged 13-17, and the objective was to analyze an association between eating disorders and reproductive health outcomes. Information about psychiatric comorbidity and addictive psychotropic medication use was also explored. The initial sample consisted of 300 female adolescents and from that sample a total of 31 (10.3%) women with a diagnosed ED by the psychiatric care facility between 2001 and 2006. The researchers found that anorexia nervosa accounted for 58.1% of eating disorders. Of all other eating disorders, the majority (69.1%) were bulimia. The results showed that none of the women with anorexia, but 53% of women with other eating disorders had undergone medical abortions by early adulthood. Eating disorders other than anorexia may expose affected women to unfavorable reproductive outcomes, particularly women with a history of psychiatric illness.

93. **Lowenstein, L., Deutcsh, M., Gruberg, R., Solt, I., Yagil, Y., Nevo, O., & Bloch, M. (2006). Psychological distress symptoms in women undergoing medical vs. surgical termination of pregnancy. *General hospital psychiatry*, *28*(1), 43–47.**

This study compared the baseline psychological distress and symptom profile of women undergoing either medical (with mifepristone) or surgical abortion and the psychological outcome 2 weeks post- procedure. Women (n = 200) given free choice of pregnancy termination method, either medical or surgical, were assessed and the results revealed that women with a smaller number of past pregnancies tended to choose the medical procedure. Reasons for choosing the medical procedure were fear of surgery, anesthesia and of future fertility difficulties. Before the abortion, the "medical group" had significantly higher levels of obsessive-compulsive symptoms, guilt and BSI general symptom index score, and a trend for higher interpersonal sensitivity and paranoid ideation. After termination, both groups showed significant decline in anxiety levels and did not differ on most symptom parameters.

94. **Luo, M., Jiang, X., Wang, Y., Wang, Z., Shen, Q., Li, R., & Cai, Y. (2018). Association between induced abortion and suicidal ideation among unmarried female migrant workers in three metropolitan cities in China: A cross-sectional study. *BMC public health*, *18*(1), 625.**

The association between induced abortion and suicidal ideation has not been studied among unmarried migrant working women in China, and this study aimed to begin to look into the association within that population. Unmarried female migrant workers were given questionnaires to collect information regarding their demographic, psychosocial, reproductive, and mental health. In the sample of 5,115, abortion was associated with nearly double the odds of suicidal ideation after adjustment for numerous controls. The association was strongest in those aged > 25 (OR = 3.37), among women with > 5 years in the work force (OR = 2.98), in the non-anxiety group (OR = 2.28), and in the non-depression group (OR = 2.94). Induced abortion was associated with nearly twice the odds of past year suicidal ideation. The authors stated that more attention should be paid to the mental health of this population.

95. **Lydon, J., Dunkel-Schetter, C., Cohan, C. L., & Pierce, T. (1996). Pregnancy decision making as a significant life event: a commitment approach. *Journal of personality and social psychology*, *71*(1), 141–151.**

Fifty-seven women who were interviewed during a clinic visit for a pregnancy test (Time 1 [T1]) subsequently received positive test results and were then interviewed 2 days later (Time 2 [T2]) and a month later (Time 3 [T3]). The intentionality and the meaning of the pregnancy were correlated with self-reported commitment to the pregnancy at T1. Commitment predicted affective states both prior to (T1) and shortly after (T2) test results were received. Initial commitment also predicted decisions to continue versus terminate the pregnancy. Those who continued the pregnancy reported smoking fewer cigarettes at T3 than at T1. Among those who aborted the pregnancy, commitment at T1 was negatively related to adjustment at T3. Initial commitment predicted subsequent depression, guilt, hostility among those who aborted, whereas commitment predicted anxiety among those who continued the pregnancy.

96. **Lyon, R., & Botha, K. (2021). The experience of and coping with an induced abortion: A rapid review. Health SA = SA Gesondheid, 26, 1543.**

This rapid review addressed abortion experiences and coping responses, with the objective of systematically exploring and synthesizing scientific data. The guidelines of the National Institute for Health and Clinical Excellence served as the framework for reviewing current international and national literature. The researchers made use of Ebsco Discovery Service to search for relevant studies and 11 were located. As noted by the authors, because the study was exploratory and covered a small selection of studies with heterogeneous methodologies and cultural factors. only a few general trends were derived. Specifically, not many studies were found for women in the South African context. Socio-economic disadvantages and premorbid relationships were found to be factors meriting more research. Despite the availability of many international studies women's experiences of abortion, the review revealed the need for research on specific challenges and experiences of South African women.

97. **Major, B., Cozzarelli, C., Cooper, M. L., Zubek, J., Richards, C., Wilhite, M., & Gramzow, R. H. (2000). Psychological responses of women after first-trimester abortion. *Archives of general psychiatry*, *57*(8), 777–784.**

This study was undertaken to examine women's emotions, evaluations, and mental health after an abortion, in addition to changes over time in responses and their predictor. Women arriving at 1 of 3 sites for first-trimester unintended pregnancy termination 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 post-abortion. Eight hundred eighty-two (85%) of 1043 eligible women approached agreed; 442 (50%) of 882 were followed for 2 years. Two years following the procedure, 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 the abortion; and 308 (80%) of 386 were not depressed. Six (1%) of 442 reported posttraumatic stress disorder. Depression decreased and self-esteem increased from pre-abortion to post-abortion. Negative emotions increased and decision satisfaction decreased over time. Pre-pregnancy history of depression was a risk factor for depression, lower self-esteem, and more negative abortion-specific outcomes at the 2-year point. Younger age and having more children pre-abortion predicted more negative abortion evaluations.

98. **Major, B., Cozzarelli, C., Sciacchitano, A. M., Cooper, M. L., Testa, M., & Mueller, P. M. (1990). Perceived social support, self-efficacy, and adjustment to abortion. *Journal of personality and social psychology*, *59*(3), 452–463.**

Before a 1st trimester abortion, women's perceptions of social support from their partner, family, and friends, and self-efficacy for coping were measured. Depression, mood, physical complaints, and anticipation of negative consequences were assessed after the 30-min recovery period. As hypothesized, perceived social support enhanced adjustment indirectly through its effects on self-efficacy. Women who perceived high support from their family, friends, and partners had higher self-efficacy for coping. Higher self-efficacy predicted better adjustment on the psychological measures, but not relative to physical complaints. No direct path between social support and adjustment was detected. Women who told people close to them about their abortion but

perceived them as less than completely supportive had poorer post-abortion psychological adjustment compared to women who did not tell people or women who told others and perceived complete support.

99. **Major, B., & Gramzow, R. H. (1999). Abortion as stigma: Cognitive and emotional implications of concealment.** ***Journal of personality and social psychology*****,** ***77*****(4), 735–745.**

This study examined the stigma of abortion and psychological implications of concealment among 442 women followed for 2 years after the abortion. Women who felt stigmatized by abortion were more likely to feel a need to keep it a secret from family and friends. Secrecy was positively associated with suppressing thoughts of one's abortion and negatively to disclosing abortion-related emotions to others. Greater thought suppression was associated with experiencing more intrusive thoughts. Both suppression and intrusive thoughts were positively related to psychological distress increasing over time. Emotional disclosure moderated the association between intrusive thoughts and distress. Disclosure was associated with decreases in distress among women who had intrusive thoughts but was unrelated to distress among women not reporting intrusive thoughts.

100. **Major, B., Mueller, P., & Hildebrandt, K. (1985). Attributions, expectations, and coping with abortion.** ***Journal of personality and social psychology*****,** ***48*****(3), 585–599. https://doi.org/10.1037//0022-3514.48.3.585**

Women undergoing 1st-trimester abortion were surveyed before the procedure regarding their attributions for their pregnancy, expectations for coping, the meaningfulness of the pregnancy, in addition to the level of pregnancy intention. Participants were 247 women who underwent vacuum aspiration at a free-standing, private abortion clinic in a large metropolitan area in New York State. After the abortion, and at a later follow-up visit, affective state, physical complaints, anticipated negative consequences, and depression were measured. As predicted, women who blamed their pregnancy on their character coped less well than low self-character blamers, but counter to predictions, self-behavior blame was unrelated to coping. Results revealed that 65% blamed no other person for their pregnancy; 43% blamed no aspect of their character; 34% blamed no aspect of their situation, and 21% blamed no aspect of chance. High situation blamers were significantly more depressed than low situation blamers. Those who blamed others anticipated more severe negative consequences than those who did not blame others. High chance blamers tended to experience a worse affective state than low chance blamers. External blame was generally unrelated to coping. Partner presence or absence at the abortion clinic had a significant impact on immediate coping responses. Women accompanied by their partners were significantly more depressed and reported more physical complaints than those unaccompanied by their partners; however, women accompanied by their partner were younger and had expected to cope less well with the abortion than those unaccompanied by their partners.

101. **Major, B., Richards, C., Cooper, M. L., Cozzarelli, C., & Zubek, J. (1998). Personal resilience, cognitive appraisals, and coping: an integrative model of adjustment to abortion.** ***Journal of personality and social psychology*****,** ***74*****(3), 735–752.**

An integrative model of psychological adjustment to abortion, derived from existing cognitive-phenomenological models of coping with stressful life events, was tested in a longitudinal study of 527 women (mean age, 23.9 years) who underwent first-trimester abortion in Buffalo, New York (US), in 1993. It was hypothesized that the effects of personality (self-esteem, control, and optimism) on postabortion adaptation (distress, well-being, and decision satisfaction) would be mediated by pre-abortion cognitive appraisals of stress and self-efficacy. As hypothesized, women with more resilient personalities appraised their abortion as less stressful and had higher self-efficacy for coping with the event. The lower women's stress appraisals, the more they used acceptance/positive reframing for coping and the less they relied on avoidance/denial. Acceptance/reframing predicted better adjustment on all measures, while avoidance/denial and venting predicted poorer adjustment. Greater support seeking was associated with reduced postabortion distress, and greater religious coping was linked with less decision satisfaction. Collectively, the analyses suggested that the hypothesized model provided a parsimonious and theoretically grounded explanation of the pattern of associations in the data. These findings suggest a need for clinical interventions that help women learn to use more beneficial forms of coping with abortion.

102. **Major, B., Zubek, J. M., Cooper, M. L., Cozzarelli, C., & Richards, C. (1997). Mixed messages: implications of social conflict and social support within close relationships for adjustment to a stressful life event.** ***Journal of personality and social psychology, 72*****(6), 1349–1363.**

The authors examined the association between women's perceptions of negative (conflict) and positive (support) exchanges with their mothers, partners, and friends before having an abortion on negative (distress) and positive (well-being) indexes of post-abortion adjustment. Pre-abortion conflict and support from the partner predicted post-abortion adjustment in the same affective domain. Specifically, conflict uniquely predicted distress; whereas support uniquely predicted well-being. Women who felt high support from their mothers or friends were more distressed if they also perceived them as sources of high conflict than if they perceived them as sources of low conflict. Among women who perceived their mothers or friends as non-supportive, no relationship was detected between conflict and distress.

103. **Mccarthy, F.P., Moss-Morris, R., Khashan, A.S., et al. (2015). Previous pregnancy loss has an adverse impact on distress and behaviour in subsequent pregnancy. BJOG An Int J Obstet Gynaecol., 122, 1757-1764.**

This was a retrospective analysis of 5575 healthy multiparous women recruited into the Screening for Pregnancy Endpoints (SCOPE) study, a prospective cohort study with data collection in Auckland, New Zealand, Adelaide, Australia, Cork, Ireland, and Manchester, Leeds, and London, UK. Investigated women with previous pregnancy losses for higher levels of anxiety, depression, stress, and altered behaviors in a subsequent pregnancy. Stress scores were significantly elevated at 15 weeks of gestation in women with both 1 and 2 abortions. Elevated depression was observed in women with one and two prior abortions at 15 and 20 weeks of gestation. Women with two prior abortions displayed increased limiting/resting responses to pregnancy scores at 15 and 20 weeks. No differences were observed in stress or depression scores at 15 weeks between abortion and miscarriage groups; however, anxiety was

higher in the miscarriage group.

104. **Miller, W. B. (1992). An empirical study of the psychological antecedents and consequences of induced abortion. Journal of Social Issues, 48(3), 67-93.**

On the basis of previously published studies, the author of this article developed a theoretical model of the psychological antecedents of abortion and a series of related theoretical models of the long-term psychological consequences of abortion. Using data from a longitudinal study of 967 women living in the San Francisco Bay area, the models were tested and the results provided considerable support for the model of psychological antecedents and for several of the models of psychological consequences.

105. **Moseley, D.T., Follingstad, D. R., Harley, H., & Heckel, R.V. (1981). Psychological factors that predict reaction to abortion. J Clin Psychol., 37(2), 276-9.**

The value of demographic, social, and psychological variables in predicting women's reactions to legal abortions were examined. The participants included 62 women between the ages of 14 and 35 residing in an urban southern area of the U. S. All underwent a first trimester suction curettage, outpatient abortion. Overall, the social context and the degree of emotional support received from a series of significant persons were more predictive of reactions to abortion than demographic factors. Higher levels of anxiety, depression, and hostility were associated with others' opposition to abortion. Yet support one significant person mitigated the effect of opposition from another. Although they had higher scores on pre- and postabortion hostility, women who made their own decision to abort experienced less difficulty in making the decision. The authors suggested that the use of hostility may have served as a defense against guilt.

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

Examined associations among abortion, mental disorders, and suicidality using a US nationally representative sample, the National Comorbidity Survey Replication (n = 3310 women, aged 18 years and older). The World Health Organization-Composite International Diagnostic Interview was used to assess mental disorders based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, criteria and lifetime abortion in women. After adjusting for socio-demographics, abortion was significantly related to an increased likelihood of several mental disorders--mood disorders, anxiety disorders, substance use disorders, as well as suicidal ideation and suicide attempts. Adjusting for violence weakened some associations. For all disorders, less than half of the women sampled reported that their mental disorder had begun after the first abortion. Population attributable fractions ranged from 5.8% (suicidal ideation) to 24.7% (drug abuse).

107. **Mueller, P., & Major, B. (1989). Self-blame, self-efficacy, and adjustment to abortion. Journal of personality and social psychology, 57(6), 1059–1068.**

The impact of attributions and coping self-efficacy on post-abortion adjustment was examined

among 283 women who were randomly assigned prior to their abortion to 1 of 3 counseling intervention (to alter attributions for unwanted pregnancy, to raise coping expectations, or standard counseling (control group). Depression, mood, anticipated consequences, and physical complaints were assessed postabortion. Women in both intervention groups were better adjusted immediately following compared to those in the control group. The expectations group was also less depressed than the attributions group. High coping self-efficacy, low self-character blame, and low other-blame were also correlated with post abortion adjustment. Self-efficacy also predicted adjustment 3 weeks postabortion.

108. **Mufel, N., Speckhard, A., & Sivuha, S. (2002). Predictors of posttraumatic stress disorder following abortion in a former Soviet Union country. Journal of Prenatal & Perinatal Psychology & Health, 17(1), 41–61.**

One hundred and fifty women who had abortions in Belarus (former Soviet Republic) were interviewed regarding reproductive history, decision making, and psychological outcomes. Positive and negative responses (including PTSD, guilt, grief, depression, anxiety/panic, and emotional numbness) were assessed during the interview with the Impact of Events-R Scale to objectively measure aspects of PTSD. It was hypothesized that a portion of the sample would evidence PTSD with recognition of life, attachment, time, number of weeks pregnant, coercion, supported decision-making, wantedness, and age all predictive of negative outcomes. Fory-six percent of the sample suffered PTSD the best predictors recognition of the life of the fetus, attachment, time since the abortion, and the number of weeks pregnant.

109. **Munk-Olsen, T., Laursen, T. M., Pedersen, C. B., Lidegaard, Ø., & Mortensen, P. B. (2011). Induced first-trimester abortion and risk of mental disorder. The New England journal of medicine, 364(4), 332–339.**

A population-based cohort study was conducted wherein information from the Danish Civil Registration system was linked to the Danish Psychiatric Central Register and the Danish National Register of Patients. Data on girls and women with no record of mental disorders from 1995 to 2007 who had a first-trimester induced abortion or a first childbirth during the time period were the focus of the analyses. The incidence rates of first psychiatric contact per 1000 person-years among girls and women who had a first abortion were 14.6 before abortion and 15.2 after abortion. The corresponding rates among girls and women who had a first childbirth were 3.9 before delivery and 6.7 after delivery. The relative risk for psychiatric contact did not differ significantly after abortion as compared with before abortion but did increase after childbirth as compared with before childbirth. This study had very few controls, most notably, the authors failed to control for prior pregnancy loss.

110. **Ney, P. G., Fung, T., Wickett, A. R., & Beaman-Dodd, C. (1994). The effects of pregnancy loss on women's health. Social science & medicine (1982), 38(9), 1193–1200.**

Female patients in the practices of family physicians in Victoria, B.C. were studied to identify factors associated with pregnancy losses and their effects on women's health. Questionnaires returned by 1428 women with 2961 pregnancies revealed that higher more losses, particularly

abortions, correlated both with poor health and the need to obtain professional help in dealing with the loss(es). Partner support was one of the most crucial factors in maintaining a pregnancy.

111. **Niinimäki, M., Suhonen, S., Mentula, M., Hemminki, E., Heikinheimo, O., & Gissler, M. (2011). Comparison of rates of adverse events in adolescent and adult women undergoing medical abortion: population register based study. *BMJ (Clinical research ed.), 342,* d2111.**

A Finnish population based retrospective cohort study conducted to determine the risks of short-term adverse events in adolescent and older women undergoing medical abortion. All women (n = 27,030) undergoing medical abortion during between 2000 and 2006. Only the first induced abortion was analyzed per woman. The rate of chlamydia infections was higher in the adolescent cohort; however, the adolescent incidence of adverse events was similar or lower than that of the adults. The risks of hemorrhage, incomplete abortion, and surgical evacuation were lower among the adolescents. In subgroup analysis of primigravid women, the risks of incomplete abortion and surgical evacuation were lower in the adolescents. Duration of gestation was the most important risk factor for infection, incomplete abortion, and surgical evacuation.

112. **O'Brien, K. M., Whelan, D. R., Sandler, D. P., Hall, J. E., & Weinberg, C. R. (2017). Predictors and long-term health outcomes of eating disorders. Plos One, 12, (7) e0181104**

Studied predictors of self-reported eating disorders among 47,759 participants from the Sister Study. Two percent (n = 967) of participants identified a history of an eating disorder. As adults, women who had experienced eating disorders were more likely to have had a later first birth, bleeding or nausea during pregnancy, or to have had a miscarriage or induced abortion.

113. **Olsson, C.A., et al. (2014). Social and emotional adjustment following early pregnancy in young Australian women: A comparison of those who terminate, miscarry, or complete pregnancy. Journal of Adolescent Health, 54, 698-703.**

Study participants were from a population-based longitudinal study of the health and well-being of 1,943 young Australians (Victorian Adolescent Health Cohort Study). The participants were followed from age 15 to 24. Analyses were adjusted for potential confounding variables (early teenage depressive symptoms, cigarette smoking, alcohol use, cannabis use, and parent socioeconomic context). A total of 208 pregnancies (in 170 women) were identified from a sample of 824 women. Compared with those who had never been pregnant, those who had a child had lower tertiary education completion and a higher risk of nicotine dependence; women who terminated a pregnancy were more likely single and had a higher risk of smoking and alcohol use as well as nicotine and alcohol dependence; and finally, those who had a miscarriage had a higher risk of depressive symptomatology and binge drinking as well as nicotine and cannabis dependence.

114. **Osler, M., David, H. P., & Morgall, J. M. (1997). Multiple induced abortions: Danish experience. *Patient education and counseling, 31*(1), 83–89.**

Interviews were conducted with 50 first-time abortion patients and 100 repeat abortion patients (50 2nd and 50 3rd abortions) who had their pregnancies terminated in 1990-93 at the University Hospital in Copenhagen, Denmark. Women with repeat abortions did not differ generally from those experiencing a first abortion relative to demographic factors, socioeconomic status, and stated reasons for choosing abortion. Economic factors and family considerations motivated the request for abortion across all 3 groups. Contraception was not used among 32% of first-time, 38% of second-time, and 41% of third-time abortion patients at conception. Forty-three percent of first-time abortion patients reported having no stable partner, while 71% of second-time patients were unmarried and living alone. Finally, although 50% of third-time abortion patients lived alone, most had a steady partner. None of the eligible first-time abortion seekers and only 3% of second-time abortion seekers refused to be interviewed. However, the refusal rate was 30% among those undergoing a third abortion. In the third group (not in the other two groups) there was also a general unwillingness to discuss reasons related to the failure to use contraception effectively. Finally, women undergoing a third abortion recalled more minor somatic complications and short-term psychological problems (e.g., sadness and regret) associated with their second abortion than second-time abortion patients reported for their first termination. The authors noted that third-time abortion patients may be a select group of more fecund women who become pregnant easily when contraceptive behavior is less effective.

115. **Østbye, T., Wenghofer, E. F., Woodward, C. A., Gold, G., & Craighead, J. (2001). Health services utilization after induced abortions in Ontario: a comparison between community clinics and hospitals.** ***American journal of medical quality : the official journal of the American College of Medical Quality*****,** ***16*****(3), 99–106.**

Compared postabortion health services utilization of hospital abortion patients with community clinic abortion patients using administrative databases. In this retrospective cohort study, the focal group consisted of patients with induced abortions (n = 41,039) performed in hospitals or community clinics recorded in the 1995 Ontario Health Insurance Plan claims (OHIP) database. An age-matched cohort of 39,220 women without induced abortion experience was selected from the same data source to serve as controls. The main outcome measures were health services utilization indicators constructed from OHIP data within 3 months postabortion from office consultations, emergency room consultations, and hospital admissions. Postabortion health services utilization and hospitalization were higher in the patient population than in the age-matched cohort. Within the abortion patient population, hospital day-surgery patients had higher rates of postabortion utilization and hospitalization than community clinic patients. Hospital day surgery patients had a higher risk of subsequent post-abortion hospitalizations for infections, surgical events, and psychiatric problems compared to community clinic patients. The rates of postabortion health services utilization and risk of hospitalization were lower among the community clinic abortion patients than in hospital day-surgery patients.

116. **Payne, E. C., Kravitz, A. R., Notman, M. T., & Anderson, J. V. (1976). Outcome following therapeutic abortion.** ***Archives of general psychiatry*****,** ***33*****(6), 725–733.**

Psychological outcomes following abortion were studied among 102 patients. Multiple variables were measured over four different time intervals. Anxiety, depression, anger, guilt, and shame-

were significantly lower six months after the pre-abortion period. The following variables differentiated subgroups of patients with distinct patterns of responses as indicated by changes in affect: marital status, personality diagnosis, character of object relations, past psychopathologic factors, relationship to husband or lover, relationship to mother, ambivalence about abortion, religion, and previous parity. Results indicated that the women most vulnerable to conflict were those who were single and nulliparous, those with previous history of serious emotional problems, conflictual relationships to lovers, past negative relationships to mother, strong ambivalence toward abortion, or negative religious or cultural attitudes about abortion.

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

The objective of this study was to investigate whether induced abortion was a risk factor for subsequent depression by employing a representative sample of women from a normative population (n=768) of women between from age 15 to 27. Young women who reported having had an abortion in their twenties were more likely to score above the cut-off point for depression. Controlling for third variables attenuated the association, yet it remained significant. There was no association between teenage abortion and subsequent depression.

118. **Pedersen W. (2007). Childbirth, abortion and subsequent substance use in young women: a population-based longitudinal study. Addiction (Abingdon, England), 102(12), 1971–1978.**

This study involved an investigation of associations between both deliveries and abortions and subsequent nicotine dependence, alcohol problems, and use of cannabis and other illegal drugs among young women between the ages of 15 and 27. Data were gathered as part of the Young in Norway Longitudinal Study, an 11-year examination of a representative sample of Norwegian adolescents and young adults. Socio-demographic, family and individual confounding factors were incorporated into the analyses. Abortion experience was associated with elevated rates of substance use and problems; whereas those who gave birth had reduced rates of alcohol problems and cannabis use. These associations persisted after employing controls for potential confounding factors. Women who still lived with the father of the aborted fetus were not at increased risk.

119. **Peppers, L. G. (1987-1988). Grief and elective abortion: Breaking the emotional bond? *Omega: Journal of Death and Dying, 18*(1), 1–12.**

Used maternal-infant bonding as a theoretical framework to examine grief following elective abortion among 80 women (aged 14–39 years) who terminated their pregnancies. Found grief associated with elective abortion to be similar to grief experienced following involuntary fetal/infant loss in terms of the symptoms. The researchers reported that the grief may have been initiated when the decision to terminate the pregnancy was made.

120. **Perry, R., Zimmerman, L., Al-Saden, I., Fatima, A., Cowett, A., & Patel, A. (2015). Prevalence of rape-related pregnancy as an indication for abortion at two urban family planning clinics. *Contraception, 91*(5), 393–397.**

Estimated the prevalence of rape-related pregnancy as an indication for abortion at two public Chicago clinic and described both demographic and clinical predictors of women who terminated rape-related pregnancies. Results indicated there were 19,465 abortions. Most patients were Black (85.6%). Prevalence of abortion for rape-related pregnancy was 1.9%. Later gestational age was associated with abortion for rape-related pregnancy. Younger age and Black race were associated with abortion for rape-related pregnancy at only one clinic.

121. **Pinheiro, R. T., et al. (2012). Suicidal behavior in pregnant teenagers in southern Brazil: Social, obstetric, and psychiatric correlates Journal of Affective Disorders, 136, 520-525.**

This was a cross-sectional study with a consecutive sample of 871 pregnant teen recipients of prenatal medical assistance by the national public health system in Pelotas, Brazil. Forty-three (4.94%) refused to participate, resulting in 828 participants. Prevalence of suicidal behavior was 13.3%; lifetime suicide attempts were referred by 7.4%, with 1.3% reporting attempting suicide within the last month. A prior history of abortion was associated with a 2.6 times greater risk of suicidal behavior among teenagers.

122. **Pope, L.M., Adler, N.E., & Tschann, J.M. (2001). Postabortion psychological adjustment: Are minors at increased risk? Journal of Adolescent Health, 29, 2-11.**

This study was conducted at four clinics in San Francisco, CA. The sample included 96 young women. Adolescents under age 18 reported being less comfortable with their abortion decision, compared with those aged 18-21 years, but no other differences were observed. Both groups showed significant improvement in post-abortion psychological responses. Post-abortion scores did not differ significantly from those of other adolescent samples reported in the literature. Pre-abortion emotional state and perception of partner pressure predicted postabortion response.

123. **Price, E., Sharman, L. S., Douglas, H. A., Sheeran, N., & Dingle, G. A. (2022). Experiences of Reproductive Coercion in Queensland Women. *Journal of interpersonal violence*, *37*(5-6), NP2823–NP2843.**

Reproductive coercion is defined by the authors of this study as, "any interference with a person's reproductive autonomy that seeks to control if and when they become pregnant, and whether the pregnancy is maintained or terminated". This definition includes sabotage of contraceptive methods and intervention in a woman's access to health care. The researchers looked to explore the prevalence and associations with reproductive coercion in Queensland, Australia, where state-level legislation addressing domestic violence and abortion are currently undergoing a period of legal reform. For the study's methodology, a retrospective analysis of 3117 women living in Queensland who had contacted a telephone counseling and information service regarding an unplanned pregnancy. The data were collected by counselors of women seeking help regarding a pregnancy between January 2015 and July 2017. The authors found that overall, the experience of domestic violence was significantly more likely to co-occur with reproductive coercion (21.1%), compared with reproductive coercion identified in the absence of other domestic violence (3.1%). In addition, mental health issues were reported at 36.6% for women affected by reproductive coercion, compared to 14.1% of women with no reproductive

coercion experience. Those subject to this coercion were more likely to make repeat contact with counselors about their pregnancy (17.8%), compared to those that don't experience coercion (5.9%). These findings highlight the need for adequate health services and addition screening for issues such as coercion.

124. **Prommanart, N., Phatharayuttawat, S., Boriboonhirunsarn, D., & Sunsaneevithayakul, P. (2004). Maternal grief after abortion and related factors. *Journal of the Medical Association of Thailand = Chotmaihet thangphaet, 87*(11), 1275–1280.**

Investigated maternal grief after abortion and the variables associated with the intensity of maternal grief using a cross-sectional design. Participants were 132 women who attended the abortion clinic, Department of Obstetrics and Gynecology, Faculty of Medicine, Siriraj Hospital, Thailand. There were 7 women with severe grief intensity (5.3%), 50 with moderately grief intensity (37.9%) and 75 with mild grief intensity (56.8%). The factors associated grief scores were low income, ultrasonography, gestational age of > 16 weeks, and methods of treatment. The authors concluded, "Grief is worldwide among women who have recently aborted. The related factors with grief intensity can be used for screening psychological problems of the women who experience abortion."

125. **Quinton, W. J., Major, B., & Richards, C. (2001). Adolescents and adjustment to abortion: are minors at greater risk?. *Psychology, public policy, and law : an official law review of the University of Arizona College of Law and the University of Miami School of Law, 7*(3), 491–514.**

The authors tested the Supreme Court's assumption that minors are more susceptible to psychological distress following abortion compared to their older counterparts. The psychological responses of 38 minors (age < 18 years) were compared with those of 402 adults, 1 month and 2 years after a 1st-trimester abortion. The results revealed that minors were less satisfied with their abortion decisions and felt less benefit from the abortion than adults 1 month following abortion. However, the adolescents did not differ from adults in adjustment 2 years postabortion. Age group differences in adjustment at 1 month postabortion were explained by minors' reduced self-efficacy appraisals for coping, more active use of avoidant coping strategies, and greater perceived parental conflict.

126. **Rafferty, K. A. & Longbons, T. (2021) #AbortionChangesYou: A case study to understand the communicative tensions in women's medication abortion narratives, Health Communication, 36:12, 1485-1494, DOI: 10.1080/10410236.2020.1770507**

The goal of this study was to analyze women's narratives after medication abortion. Using Relational Dialectics Theory, the authors performed a case study of the nonpartisan website *Abortion Changes You*. A contrapuntal analysis rendered four sites of dialectical tension found across women's blog posts. The authors concluded that medication abortion is often accompanied by contradicting emotions and thoughts and tensions. Many women noted that it was not a flippant decision, while some women remained unscathed. Silence that women often keep regarding their abortion causes them to view the act in a more binary way aligning it to one

movement or another. The authors noted, “Choice movements impact the liminality of women who are contemplating a medication abortion and affect their own narrative reconstruction and sense-making after their private medication abortion”.

127. **Raisanen, S., et al. (2013). Fear of childbirth predicts postpartum depression: a population-based analysis of 511,422 singleton births in Finland. BMJ Open; 3:e004047.**

This was a retrospective population-based case-control study, with data gathered from three national health registers for the years 2002-2010. Among women with postpartum depression and a history of depression, increased prevalence of postpartum depression was associated with prior terminations among other variables.

128. **Reardon, D. C., Coleman, P. K., & Cougle, J. (2004). Substance Use Associated with Unintended Pregnancy Outcomes in the National Longitudinal Survey of Youth. American Journal of Drug and Alcohol Abuse, 26, 369-383.**

This study provides an analysis of data on women in the National Longitudinal Survey of Youth whose first pregnancy was unintended. Women with no pregnancies served as a control group. Use of alcohol, marijuana, and cocaine, as well as behaviors suggestive of alcohol abuse were examined an average of four years following the target pregnancy among women with prior histories of an unintended pregnancy delivered (n = 535) or aborted (n = 213). Controls were instituted for age, race, marital status, income, education, and pre-pregnancy self-esteem and locus of control. Compared to women who carried an unintended first pregnancy to term, those who aborted were more likely to report use of marijuana. Women with a history of abortion also reported more frequent drinking than those with a history of unintended birth.

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

The authors note prior work has revealed that psychological adjustment problems following abortion are associated with a history of depression. The authors tested the frequently cited suggestion that pre-abortion psychological state predicts subsequent depression among women with unintended pregnancies regardless of the reproductive outcome. To test this hypothesis, the authors examined data from the National Longitudinal Study of Youth that began in 1979 with a nationwide cohort of 12,686 American youths aged 14-21. After inclusion of control variables, among married women, those who aborted an unintended pregnancy were significantly more likely to be at “high risk” for clinical depression compared to those who delivered unintended pregnancies. However, the difference was not significant among unmarried women aborting or carrying an unintended pregnancy to term.

130. **Reardon, D. C., & Longbons, T. (2023). Effects of Pressure to Abort on Women's Emotional Responses and Mental Health. Cureus, 15(1),**

When women feel pressured to abort, they are more likely to experience emotional and mental health problems, however little research has been done to explore the types and degree of pressure that women face and their associated effects. This retrospective study was distributed through a marketing research firm and was completed by 1000 females aged 41 to 45 living in the United States. The women were asked demographic questions and used analog scales to rate the pressure to abort coming from their male partners, family members, and others. They also rated any financial concerns, and other circumstances pertaining to the pregnancy and the women's health after it is terminated. Additionally, 10 Variables were also examined related to positive and negative outcomes. Among 226 respondents with a history of abortion, perceived pressure to abort was significantly associated with more negative emotions, disruptions in daily life, work, and relationships, flashbacks to the abortion, declining mental health, and unhealthy coping. Further, 61% of respondents with a history of abortion reported high levels of pressure on at least one scale. Having had a prior abortion made participants 4 times more likely to not complete the survey as well. The study authors conclude that these perceived pressures to abort need to be factored into the decision-making process and considered by health personnel involved. Counseling and other services that can help women avoid unwanted abortions should be expanded and better prioritized.

131. **Reardon, D. C., & Ney, P. G. (2000). Abortion and subsequent substance abuse. American Journal of Drug and Alcohol Abuse, 26, 61-75.**

A subset of data from a reproductive history survey that included a self-assessment of past substance abuse was distributed to a random sample of American women, with 700 returned for analysis. 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 (miscarriage, ectopic pregnancy, or stillbirth).

132. **Reardon, D. C., Ney, P. G., Scheuren, F., Cougle, 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), 834–841.**

California Medicaid records for 173,279 women who had an induced abortion or a delivery in 1989 were linked to death certificates from 1989 to 1997. The results revealed that compared to women who delivered, those who aborted had a significantly higher age-adjusted risk of death from all causes (1.62), suicide (2.54), and 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 were stratified by both age and time since abortion. Higher death rates associated with abortion were demonstrated to persist over time. The authors theorized the increased risk of death might be explained by self-destructive tendencies, depression, and other unhealthy behavior triggered by the abortion experience.

133. **Rees, D. I., & Sabia, J. J. (2007). The relationship between abortion and depression: New evidence from the fragile families and wellbeing study. Medical Science Monitor, 13, CR430-436.**

This study employed data from the Fragile Families and Child Wellbeing Study. Women (n=2844) who had an abortion between the first and second follow-up interviews were almost twice as likely to have symptoms of major depression compared to women who hadn't been pregnant. Abortion remained associated with a more than two-fold increase in the likelihood of having depressive symptoms at the second follow-up. Giving birth was associated with a statistically comparable increase in the likelihood of having the symptoms of major depression.

134. **Remennick L, Segal R. Lie, M. L., Robson, S. C., & May, C. R. (2008). Experiences of abortion: a narrative review of qualitative studies. BMC health services research, 8, 150. Culture, Health & Sexuality 2001; 3(1), p49-66.**

This study focused on induced abortion experiences and emotional responses to the procedure. Native Israeli women and recent immigrants from the former Soviet Union were compared. The dataset includes 48 interviews with women recruited through post-abortion counselling services. Although dramatic emotional reactions were uncommon; however, where present they were found to be shaped by social context and life circumstance variables. Abortion-related stress was greater among recently resettled immigrants compared to local women. The authors concluded that postabortion distress can possibly be induced or reinforced by social gatekeepers (service providers, the media, etc.) disapproving of women's reproductive choices.

135. **Robbins, J. M., & DeLamater, J. D. (1985). Support from significant others and loneliness following induced abortion. *Social psychiatry. Sozialpsychiatrie. Psychiatrie sociale*, *20*(2), 92–99.**

The relationship between social support and feelings of loneliness was examined with a sample of 228 women one week after an induced abortion. Support from the male partner before, during, and after the procedure was associated with less frequent feelings of loneliness. Parental involvement/support before and during the procedure was not related to loneliness. However, among women whose relationships with their mothers became closer post-abortion, less loneliness was reported.

136. **Røseth, I., Sommerseth, E., Lyberg, A., Sandvik, B. M., & Dahl, B. (2024). No one needs to know! Medical abortion: Secrecy, shame, and emotional distancing. *Health care for women international*, *45*(1), 67–85.**

This was a phenomenological study that used data from Norway. The authors noted that in 2021, 10,841 abortions were carried out nationally (95.3% were medical abortions). The focus of the study was on women's experiences with medical abortions that took place at home. For this study, 1161 women between the ages of 41 to 45 were surveyed regarding their abortions, and the results revealed that women who felt pressure to abort were more likely to report more negative post-abortion reactions. In addition, the women who felt pressured to abort also had more difficulty completing the survey. The authors concluded from the data collected that women frequently choose abortion due to perceived pressure, which then negatively impacts many of their lives.

137. **Rousset, C., Brulfert, C., Sejourne, N., Goutaudier, N., & Chabrol, H. (2011). Posttraumatic stress disorder and psychological distress following medical and surgical abortion. Journal of Reproductive and Infant Psychology, 29 (5), 506-517.**

This prospective, longitudinal study was undertaken to assess and to predict Posttraumatic Stress Disorder (PTSD) symptoms following abortion. Also examined was the potential impact of the type of abortion on women's experiences. Eighty-six women were approached a few hours after the abortion and then 6 weeks later. Six weeks after the abortion, 38% of women reported a potential PTSD and a significant decrease of the anxiety symptoms. Compared to surgical abortion, medical abortion was associated with an increased risk of developing PTSD.

138. **Rue, V. M., Coleman, P. K., Rue, J. J., & Reardon, D.C. (2004). Induced abortion and traumatic stress: a preliminary comparison of American and Russian Women. Medical Science Monitor, 10 (10); SR5-16.**

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. Overall, American women were more negatively influenced by their abortion experiences than Russian women. While 65% of American women and 13.1% of Russian women reported multiple symptoms of increased arousal, re-experiencing and avoidance associated with posttraumatic stress disorder (PTSD), 14.3% of American women and 0.9% of Russian women met the full PTSD diagnostic criteria. Russian women had higher scores on the TSI Belief Scale than American women, indicating more disruption of cognitive schemas.

139. **Russo, N. F., & Dabul, A. J. (1997). The relationship of abortion to well-being: do race and religion make a difference? Professional Psychology, Research and Practice, 28(1), 23–31.**

Abortion and childbearing were examined as predictors of well-being in a sample of 1,189 Black and 3,147 White women. Education, income, and having a work role were positively and independently related to well-being for all women. Abortion did not have an independent relationship to well-being when pre-pregnancy well-being was controlled regardless of race or religion. The authors recommended that professional psychologists explore the origins of women's mental health problems prior to the experience of an abortion.

140. **Russo, N. F., & Zierk, K. L. (1992). Abortion, childbearing, and women's well-being. Professional Psychology: Research and Practice, 23(4), 269–280.**

Women's well-being relative to childbearing experiences and coping resources were explored over an 8-year period with a national sample of 5,295 women from the United States. The experience of 1 abortion was positively associated with higher global self-esteem, particularly feelings of self-worth, capableness, and not feeling one is a failure. When childbearing and resource variables were controlled, neither having 1 abortion nor having repeat abortions had an independent relationship to well-being, suggesting that the relationship of abortion to well-being reflects abortion's role in controlling fertility and its relationship to coping resources. Women

who had repeat abortions were more likely to agree with the statement, “I do not have much to be proud of” compared to women who had 1 abortion.

141. **Sarkar N. N. (2008). The impact of intimate partner violence on women's reproductive health and pregnancy outcome. Journal of Obstetrics and Gynaecology: The Journal of the Institute of Obstetrics and Gynaecology, 28(3), 266–271.**

The goal for this study was to evaluate and elucidate the impact of intimate partner violence (IPV) on women’s reproductive health and autonomy/pregnancy outcomes. Using data from various countries and the MEDLINE database for the years, 2002-2008. Lifetime physical or sexual abuse IPV or both varied from 15% to 71%. IPV affected women’s physical and mental health, reduced sexual autonomy, increased risk for unintended pregnancy and multiple abortions. Risk for sexual assault decreased by 59% or 70% for women contacting police or applying for a protective order, respectively. The authors found that quality of life for IPV victims was significantly impaired. Women battered by IPA reported high levels of anxiety and depression that often led to alcohol and drug abuse. The authors indicate that educating and empowering women and upgrading their socioeconomic status may abate the incidence of IPV.

142. **Sheeran, N., Vallury, K., Sharman, L. S., Corbin, B., Douglas, H., Bernardino, B., Hach, M., Coombe, L., Keramidopoulos, S., Torres-Quiazon, R., & Tarzia, L. (2022). Reproductive coercion and abuse among pregnancy counselling clients in Australia: trends and directions. Reproductive health, 19(1), 170.**

Reproductive coercion and abuse (RCA) interfere with a person’s autonomy during reproductive decisions and can be classified into behaviors that are pregnancy promoting or pregnancy preventing (including coerced abortion). Despite this being known prevalence data are still lacking. Data were collected from 5107 clients seeking counseling support for their pregnancy between January 2018 and December 2020 from two leading counseling providers of pregnancy counselling and sexual and reproductive health services in Australia. Demographic factors included age and whether the person identified as being from a migrant or refugee community or as an Aboriginal and/or Torres Strait Islander person. The results showed that RCA was identified in 15.4% of clients, with similar proportions indicating RCA towards pregnancy (6%), and pregnancy prevention or abortion (7.5%), and 1.9% experiencing RCA towards pregnancy and abortion concurrently. No differences were found based on age or whether the person identified as being from a migrant or refugee background, but people who identified as Aboriginal and/or Torres Strait Islander experienced RCA that was significantly more likely to promote pregnancy. The study concludes that RCA is a common problem and recommends sensitive and culturally respectful enquiry around institutions where RCA can be embedded.

143. **Shusterman L. R. (1979). Predicting the psychological consequences of abortion. Social science & medicine. Medical Psychology & Medical Sociology, 13A (6), 683–689.**

The study examined the abortion experience from conception to three weeks post- abortion. A sample of 393 women were randomly selected from patients of two abortion clinics. The majority of the patients were involved in positive relationships with their male partners, confided in them about the abortion, and received support from their partners for the abortion. Two major types of women were identified in the sample, younger, single, primigravidae women and older, married, multiparous women. The former group tended to attribute the pregnancy to their irresponsibility and to abort because they did not feel able to care for a child. On the other hand, the latter group tended to attribute the pregnancy to birth control failure, and to choose abortion because they felt they had completed their families. The three variables which account for the variance in emotional reactions were the following: (1) satisfaction with the decision to abort, (2) the degree of intimacy between the woman and her partner and (3) how anxious or angry the woman became when she first suspected she was pregnant. These variables had predictive validity in both groups.

144. **Slade, P., Heke, S., Fletcher, J., & Stewart, P. (1998). A comparison of medical and surgical termination of pregnancy: choice, emotional impact and satisfaction with care. British Journal of Obstetrics and Gynaecology, 105 (12), 1288–1295.**

The objective of this study was to investigate the extent to which women having medical and surgical abortions differed in their levels of emotional stress before or after the procedure. Also investigated were the influencing factors in the decision and the effect of the choice on emotional responses and satisfaction with care received. A prospective comparative method was employed and interviews concerning choice and measures of emotional states were conducted with 275 women prior to their abortion. Results showed that women having a surgical abortion waited longer for the procedure than those having a medical abortion. Differences in emotional responses were not found based on the type of abortion. A quarter of the medical group reported having no choice in the type of procedure and 67% of the surgical group reported the same. Only 53% of the medical group would choose the same type of procedure again compared to 77% of the surgical group. The authors concluded that the method of abortion did not influence the emotional adjustment of the women surveyed, but that many women did not have a choice in the manner of abortion. Having a choice seemed to be very important but wasn’t related to emotional distress or satisfaction with medical care.

145. **Slade, P., Heke, S., Fletcher, J., & Stewart, P. (2001). Termination of pregnancy: patients' perceptions of care. The Journal of Family Planning and Reproductive Health Care, 27(2), 72–77.**

Women undergoing either a medical or surgical termination of pregnancy (n=208) reported on their experiences and perceptions of the care received. The most stressful aspects for the medical group pertained to physical and emotional components; for the surgical group, waiting in the hospital was identified as the most stressful component. Little was unexpected for the surgical group; however, many aspects came as a surprise to the medical group, with seeing the fetus reported as being particularly difficult. All information provided was reported as helpful; however, the need for more information post-termination was verbalized by the respondents. Care from staff was rated positively, with areas for improvement including the opportunity to ask

questions and ensuring concerns were dealt with. The authors recommended more adequate preparation for those having medical terminations, to specifically provide realistic expectations of what will occur, including the possibility of seeing the fetus. Finally, they suggested more attention to information provided following termination, including possible emotional responses.

146. **Sit, D., Rothschild, A. J., Creinin, M. D., Hanusa, B. H., & Wisner, K. L. (2007). Psychiatric outcomes following medical and surgical abortion. Human reproduction (Oxford, England), 22(3), 878–884.**

This study included 47 surgical and 31 medical abortion patients. Women were assessed pre-abortion and 1-month post-abortion. Pre-abortion, 36% (17/47) of surgical and 35% (11/31) of medical patients had high depression risk. At follow-up, 17% (7/42) of surgical and 21% (5/24) of medical abortion patients had high depression risk. Women with past psychiatric history or anxiety disorders had elevated risk for post-abortion depression.

147. **Söderberg, H., Andersson, C., Janzon, L., & Sjöberg, N. O. (1998). Selection bias in a study on how women experienced induced abortion. *European journal of obstetrics, gynecology, and reproductive biology*, *77*(1), 67–70.**

Data were collected at the Department of Obstetrics and Gynecology, Lund University, University Hospital, Malmö Sweden. All 1285 women who underwent an induced abortion at the department in 1989 participated in the study. Young, unmarried women of low educational status and without full-time employment were overrepresented in the non-participant group. Within 12 months after the abortion 7.7% of the participants in the follow-up interview and 12% of the non-participants conceived again but elected to continue the pregnancy to term. Among the participants, 9.5% and 10.2% of non-participants applied for abortion within 12 months. Results indicated that one third of the women who had an abortion did not wish to be interviewed about their experience 1 year later. Non-participation was associated with socio-demographic factors which have been shown to be related to increased vulnerability and morbidity. Non-participation was also associated with an increased childbirth rate within 2 years following the abortion

148. **Söderberg, H., Janzon, L. & Sjöberg, N.O. (1998). Emotional distress following induced abortion. A study of its incidence and determinants among abortees in Malmö, Sweden. European Journal of Obstetrics and Gynecology and Reproductive Biology 79, 173-8.**

In this retrospective study, the researchers analyzed data from a semi-structured interview 1 year post-abortion. Risk factors for emotional distress were determined in a "case" subgroup (n = 139) of women who met the inclusion criteria (i.e., postabortion emotional distress, doubts about abortion decision, would not consider abortion again) and compared them with a control group (n = 114) that did not satisfy any of the inclusion criteria. In the emotional distress group (duration ranging from 1 month to still present at 12-month follow-up), several risk factors were identified: living alone, poor emotional support from family and friends, adverse postabortion change in relations with partner, underlying ambivalence or adverse attitude to abortion, and

being actively religious. Results further revealed 50–60% of women undergoing induced abortion experienced some measure of emotional distress, classified as severe in 30% of cases.

149. **Stalhandske, M. L., Makenzius, M., Tyden, T., & Larsson, M. (2012). Existential experiences and needs related to induced abortion in a group of Swedish women: a quantitative investigation. Journal of Psychosomatic Obstetrics & Gynecology, 33 (2), 53-61.**

Questionnaires were used to collect data from 499 women who had requested an induced abortion. Factor analysis resulted in identification of three components of existential experiences and needs: existential thoughts, existential practices, and humanisation of the foetus. These components were examined in relation to questionnaire data. Results revealed that existential experiences and needs were common. For 61% of women existential thoughts about life and death, meaning and morality were related to the abortion experience. Almost 50% of women reported a need for special acts in relation to the abortion; 67% of women thought of the pregnancy in terms of a child. A higher presence of existential components correlated to difficulty with abortion decision making and poor post-abortion psychological wellbeing. Notably, the authors commented, "This presents a challenge for abortion personnel, as the situation involves complex aspects over and above medical procedures and routines."

150. **Steinberg, J. R., Becker, D., & Henderson, J. T. (2011). Does the outcome of a first pregnancy predict depression, suicidal ideation, or lower self-esteem? Data from the National Comorbidity Survey. The American journal of orthopsychiatry, 81(2), 193–201.**

This study examined risk for depression, suicidal ideation, and lower self-esteem following an abortion versus a delivery using the National Comorbidity Survey. When no risk factors were entered in the model, women who had abortions were more likely to have subsequent depression, and suicidal ideation, but they were not more likely to have lower self-esteem. When all risk factors were entered, pregnancy outcome was not significantly related to depression or suicidal ideation. Predictors of mental health following abortion and delivery included prepregnancy depression, suicidal ideation, and sexual violence.

151. **Steinberg, J. R., & Russo, N. F. (2008). Abortion and anxiety: what's the relationship? Social Science & Medicine, 67(2), 238–252.**

Using data from the United States National Survey of Family Growth (NSFG) and the National Comorbidity Survey (NCS), secondary data analyses were performed to explore the relationship between abortion and anxiety after first pregnancy outcome in two studies. In the NSFG, pre-pregnancy anxiety symptoms, rape history, age at first pregnancy outcome (abortion vs. delivery), race, marital status, income, education, subsequent abortions, and subsequent deliveries accounted for a significant association between first pregnancy outcome and experiencing subsequent anxiety symptoms. The relationship of abortion to clinically diagnosed generalized anxiety disorder (GAD), post-traumatic stress disorder (PTSD), and social anxiety disorder, using NCS data was also explored. In the NCS analyses, significant relationships between first pregnancy outcome and subsequent rates of GAD, social anxiety, or PTSD were

not observed. Multiple abortions, on the contrary, were found to be associated with much higher rates of PTSD and social anxiety. The authors noted that this relationship was largely explained by pre-pregnancy mental health disorders and their association with higher rates of violence.

152. **Studnicki, et al. (2023). A Cohort Study of Mental Health Services Utilization Following a First Pregnancy, Abortion or Birth. International journal of women's health, 15, 955–963.**

This study's objective was to determine whether exposure to an induced abortion during a first pregnancy, compared to live birth, could be associated with increased risk and likelihood of mental health morbidity. Participants aged 16 who were eligible Medicaid beneficiaries in 1999 were selected and assigned to either of two cohorts based on their first pregnancy outcome, either abortion or birth, and followed through to 2015. The authors found that women with first pregnancy abortions, compared to those that experience a birth, are more likely to end up utilizing mental health services such as outpatient visits, hospital inpatient admissions, and hospital stays of multiple days. The utilization rates for all of these were higher in the cohort of women who had had an abortion during their first pregnancy, and it was found that prior existing mental health conditions could not account for this difference as suggested in previous literature.

153. **Suliman et al. (2007) Comparison of pain, cortisol levels, and psychological distress in women undergoing surgical termination of pregnancy under local anaesthesia versus intravenous sedation. BMC Psychiatry, 7 (24), p.1-9.**

Researchers recruited 155 women from a private abortion clinic and state hospital (mean age: 25.4 +/- 6.1 years) and measured symptom domains, using both clinician-administered interviews and self-report measures right before termination, immediately after, 1 month, and 3 months post-procedure. The effects of local anaesthesia and intravenous sedation, administered for elective surgical termination were compared on various outcomes. The group who received local anaesthetic demonstrated higher baseline cortisol levels and more dissociative symptoms immediately post-termination. However, at 1 and 3 months, there were no significant differences in psychological outcomes (PTSD, depression, self-esteem, state anxiety) between the groups. More than 65% of the variance in PTSD symptoms at 3 months could be explained by baseline PTSD symptom severity and disability, and post-termination dissociative symptoms. The authors concluded that high rates of PTSD characterize women who have undergone surgical abortions (almost one fifth of the sample met criteria for PTSD), with women who receive local anaesthetic experiencing more severe acute reactions.

154. **Talan, K. H., & Kimball, C. P. (1972). Characterization of 100 women psychiatrically evaluated for therapeutic abortion. Archives of General Psychiatry, 26(6), 571–577.**

This study examined the emotional response of 22 of 100 women voluntarily undergoing therapeutic abortion. One hundred women completed a pre-abortion questionnaire on their reasons, expectations, and knowledge of abortion and were evaluated by a psychiatrist. Twenty-two patients participating completed follow-up questionnaires and interviews. Personal history,

emotional response (grief, sadness, relief, elation), willingness to repeat the experience in the future, and evaluation of treatment were the topics of the follow-up investigation. A composite description of typical patients in four categories were derived: single nulliparous, single multiparous, married multiparous, and divorced or separated multiparous. Two subgroups were identified in the post-abortion sample: those willing and unwilling to repeat the experience.

155. **Tarzia, L., Srinivasan, S., Marino, J., & Hegarty, K. (2020). Exploring the gray areas between "stealthing" and reproductive coercion and abuse. Women & health, 60(10), 1174–1184.**

The authors conducted a qualitative study with the aim of understanding and differentiating between women's experiences of "stealthing" (non-consensual condom removal) and reproductive coercion and abuse (RCA). They recruited female participants from a large Australian metropolitan hospital who self-identified as having experienced a partner interfering with contraception or trying to force them to get pregnant or end a pregnancy. Analysis revealed that stories about stealthing were characterized by disrespect and selfishness, whereas RCA stories highlighted control with intent. Stealthing is often characterized as a form of sexual violence that without the concepts of intent or control being as present as with RCA. The findings highlight that there are important implications for how stealthing and RCA are addressed and measured in research and handled in practice.

156. **Tamburrino, M. B., Franco, K. N., Campbell, N. B., Pentz, J. E., Evans, C. L., & Jurs, S. G. (1990). Postabortion dysphoria and religion. Southern Medical Journal, 83(7), 736–738.**

This study examined psychosocial factors, notably religion among women identified as dysphoric 1 to 15 years post-abortion. The Millon Clinical Multiaxial Inventory (MCMI) and a demographic questionnaire were mailed to patient-led support groups for women who had experienced difficulty with a previous abortion experience. Of the 150 surveys mailed, 71 (47%) were returned. Thirty-three women (46%) had changed to a Fundamentalist or Evangelical church. On the MCMI, members of these conservative denominations scored significantly lower on the subscales for passive-aggressive behavior, ethanol abuse, and avoidance. Religion was strongly viewed as playing a healing role. The authors noted that conservative personal values may be more central in understanding abortion attitudes than other demographic variables. They further noted that treatment of postabortion dysphoria should include sensitivity to patients' religious beliefs, with support for the notion of religion having healing properties.

157. **Taft, A.J., & Watson, L. (2008). Depression and termination of pregnancy (induced abortion) in a national cohort of young Australian women: the confounding effect of women's experience of violence. *BMC Public Health, 8,* 75 - 75.**

The objective of this study was to examine associations among depression, experience of violence, pregnancy termination, births and socio-demographic characteristics, in a population-based sample of young Australian women The younger cohort of the Australian Longitudinal Study on Women's Health was comprised of 14,776 women between the ages of 18 and 23 in

Survey I (1996) of whom 9683 responded to Survey 2 (2000) when between the ages of 22 and 27. The results indicated 30% of young women were depressed. Eleven percent (n = 1076) reported a termination by 2000. A first termination before 1996 and between 1996 and 2000 were both associated with depression in a univariate model, However, after adjustment for violence, numbers of births and sociodemographic variables, the magnitude of the significant effect was attenuated. Any form of violence in 1996 or 2000, was significantly associated with depression: in univariate and multivariate models. The authors noted that violence, particularly partner violence, made a greater contribution to women's depression compared with pregnancy termination or births. They further emphasized that strategies to reduce depression should include prevention or reduction of violence against women and ensuring regnancies are planned and wanted.

158. **Teichman, Y., Shenhar, S., & Segal, S. (1993). Emotional distress in Israeli women before and after abortion. The American journal of orthopsychiatry, 63(2), 277–288.**

The focus of this study was on the impact of social support on the extent to which Israeli women experience post-abortion negative emotional consequences after and determines identify factors that related to pre-abortion distress. The investigation included 77 women planning an abortion, 32 women who were in their 40th week of pregnancy, and 45 nonpregnant controls. Women were recruited from an urban hospital. Of the 77 women are participated in the pre-test, only 17 agreed to the post-abortion assessment. The assumption is that personal and contextual factors are key to emotional adjustment. The highest levels of anxiety states, anxiety traits, and depression were among women pre-abortion. Statistically significant differences were observed among the 3 groups. The lowest levels of anxiety and depression were reported by women with low anxiety trait and positive couple relationships. Further, the quality of the couple relationship was identified as the most important factor in determining the stress level of pre-abortion married women.

159. **Thomas, T., & Tori, C. D. (1999). Sequelae of abortion and relinquishment of child custody among women with major psychiatric disorders. Psychological Reports, 84(3 Pt 1), 773–790.**

Background literature has demonstrated that many women with major psychiatric disorders frequently consider the choice of abortion or relinquishment of custody. As hypothesized, reported sequelae of relinquishments of custody were rated as more severe than sequelae of abortion. Dissatisfaction with choice, negative attitudes, religious affiliation, and involuntary removal of a child from custody predicted distress after abortion or relinquishment. The authors noted that findings show increased efforts are needed to help women with psychiatric difficulties cope with reproductive planning and losses.

160. **Törnbom, M., Ingelhammar, E., Lilja, H., Möller, A., & Svanberg, B. (1996). Repeat abortion: a comparative study. Journal of Psychosomatic Obstetrics and Gynaecology, 17(4), 208–214.**

In a simple random sample of 404 women (20-29 years of age), 201 women (group A) applying for abortion and 203 women (group B) continuing pregnancies were given a questionnaire and

interviewed. The objective was to compare women who applied for repeat abortion with women having their first abortion and with women carrying to term. Variables measured were socio-economic, psychological and social problems, relationships with the partner, earlier pregnancies, how the current pregnancy was experienced and decision-making. Results were presented for four subgroups: pregnant women applying for their first abortion (A1, n = 137), women applying for repeat abortion (A2, n = 64), women continuing their pregnancies who never applied for abortion (B1, n = 142), and women continuing their pregnancies who had applied for one or more prior abortions (B2, n = 58). Results revealed that women who had previous abortion(s) had reported more psychological problems during their lifetime than the other groups. They had more contact with social welfare services and evaluated their relationship with the partners less favorably than women having a first abortion, and in comparison with those continuing their pregnancies with no earlier applications for abortion.

161. **Urquhart, D. R., & Templeton, A. A. (1991). Psychiatric morbidity and acceptability following medical and surgical methods of induced abortion. British Journal of Obstetrics and Gynaecology, *98*(4), 396–399.**

In this study, 91 women were screened for anxiety and depression before and after an early medical (n=54) or surgical abortion (n=37). Prior to abortion, over 60% in both groups had high scores, but after abortion under 10% of each group had high scores. There were no differences between the 2 groups. Both abortion methods were acceptable to most women, although only 75% of the medical group indicated they would use the same method again compared with 94% of the surgical group.

162. **Van Emmerik, A.A.P., Kamphuis, J. H., & Emmelkamp, P.M.G. (2008). Prevalence and prediction of re- experiencing and avoidance after elective surgical abortion: A prospective study. Clinical Psychology and Psychotherapy, 15, 378-385.**

In a prospective observational design, Dutch-speaking women (n=140) who presented for first trimester surgical abortions completed self-report measures. Participants reported moderately elevated levels of re-experiencing and avoidance that were above a clinical cut-off point for 19.4% of the participants. Peritraumatic dissociation predicted intrusion and avoidance at 2 months. Finally, the alexithymic aspect of difficulty describing feelings predicted avoidance.

163. **Vukelić, J., Kapamadzija, A., & Kondić, B. (2010). Medicinski Pregled, 63(5-6), 399–403.**

A prospective study was performed for the purpose of predicting acute stress disorder (ASD) and post-traumatic stress disorder (PTSD) following abortion. Seven days after the induced abortion, 52.5% women had ASD and 32.5% women had PTSD. Further, women with ASD compared to those without the disorder developed more guilt, irritability, shame, self-judgment, fear from God, and self-hatred. They also tended to be less educated, had lower income, were more religious, did not approve of abortion, and had worse relationships with their partners compared to women without ASD. Age, number of previous abortions and decision to abort did not differ between the two groups.

164. **Wallace, M., Gillispie-Bell, V., Cruz, K., Davis, K., & Vilda, D. (2021). Homicide During Pregnancy and the Postpartum Period in the United States, 2018-2019. Obstetrics and gynecology, 138(5), 762–769.**

The aim of this study was to estimate the national pregnancy-associated homicide mortality ratio, characterize pregnancy-associated homicide victims, and compare the risk of homicide in the prenatal period with risk among non-pregnant postpartum females aged 10-44 years old. The authors used data from the National Center for Health Statistics 2018 and 2019 mortality files to identify all female decedents aged 10-44 in the US. The results showed that there were 3.62 homicides per 100,000 live births among females who were pregnant or within 1 year postpartum, 16% higher than homicide prevalence among nonpregnant and nonpostpartum females of reproductive age (3.12 per 100,000). Homicide during pregnancy was more prevalent than all other maternal mortality by twofold. The study concludes that homicide is a leading cause of death during pregnancy and the postpartum period in the US. All females of reproductive age are shown to be at an elevated risk during pregnancy and the postpartum period.

165. **Wu, J., Guo, S., & Qu, C. (2005). Domestic violence against women seeking induced abortion in China. Contraception, 72(2), 117–121.**

A cross-sectional study was conducted to investigate the prevalence, type, and severity of domestic violence (DV) and determine the factors relating to it among women seeking induced abortion in women seeking induced abortion in China. 1215 women seeking induced abortion were interviewed. Results showed prevalence of DV among participants was 22.6%. Violence included 18.1% sexual abuse, 7.8% physical abuse, and 3% emotional abuse. Among abused women, 46 (16.8%) experienced violence frequently, 4.4% experienced three forms of violence (sexual, physical, and emotional, and induced abortion was found to be much more common among women that were subject to abuse. In addition, 59.9% of women were subject to abuse more than once. The authors conclude that it is vital to screen for DV among women seeking abortion.

166. **Yilmaz, N., Kanat-Pektas, M., Kilic, S., & Gulerman, C. (2010). Medical and surgical abortion and psychiatric outcomes. The Journal of Maternal-Fetal and Neonatal Medicine, 23, 6, 541-544.**

This was a retrospective study of 367 women who underwent surgical abortion and 458 women who had a medical abortion between January 2006 and January 2007 in Dr. Zekai Tahir Burak Women's Health Hospital. Assessments were performed by clinical psychologists one week after the procedure. Results revealed that 27.1% (34.3% in surgical abortion patients and 22.8% in medical abortion) were diagnosed with post-abortion depression. The women who underwent surgical abortions experienced a significantly elevated risk of post-abortion depression. The women at the highest risk of post-abortion depression were younger and had a more frequent history of psychiatric and depressive disorders.

167. **Zareba, K., et al. (2020). Psychological effects of abortion. An updated narrative review. Eastern J Med., 25(3), 477-483.**

The inconclusive nature of studies regarding the psychological consequences experienced by women after termination was the primary motivating factor for this review. While some studies do not confirm an increased prevalence of psychological complications, the experience of abortion can lead to the development of PTSD, depression, and problems with interpersonal relations. The primary factors that influence psychological effects include, the reason for abortion, the type of medical procedure, the term of pregnancy, and personal, social, economic, religious, and cultural factors that shape the woman's attitude towards abortion. It was found that it was often the case that while terminating pregnancy women are not aware that they will need psychological later due to the psychological effects they experience in the aftermath. In addition, the first symptoms usually appear after four months up to a year after. The authors conclude it is important to identify the women at high-risk for psychological complications.

168. **Wallerstein, J. S., Kurtz, P., & Bar-Din, M. (1972). Psychosocial sequelae of therapeutic abortion in young unmarried women. Archives of General Psychiatry, 27(6), 828–832.**

This study examined post-abortion courses of 22 unmarried pregnant women in middle and late adolescence, who successfully obtained therapeutic abortions under newly liberalized abortion laws. They were intensively studied at 5 and 7-months post-abortion. Nine were interviewed again at 12 to 14 months. They exhibited a wide range of postabortion courses. Half were doing well without psychologically. Seven showed a decline in psychological functioning from previous levels; One woman (aborted for physical reasons) suffered from moderate depression; and three with histories of poor psychosocial functioning continued in exhibit problematic functioning, unable to get beyond the abortion.

169. **van Ditzhuijzen, J., Brauer, M., Boeije, H., & van Nijnatten, C. H. C. J. (2019). Dimensions of decision difficulty in women's decision-making about abortion: A mixed methods longitudinal study. PloS one, 14(2), e0212611.**

The level of difficulties women faced when deciding to have an abortion is not something that has been well researched. For this study, a mixed methods approach combined data from the Dutch Abortion and Mental Health Study with data from a qualitative study about the decision-making process for abortion. Analysis revealed four dimensions of decision difficulty, unrealistic fears about abortion and fantasies about pregnancy, decision conflict, negative abortion attitudes, and general indecisiveness. The authors stated that the findings suggested decision making processes are multidimensional. They further emphasized the importance of clinical assistance in separating more general fears from actual strong conflict with the decision.

170. **van Ditzhuijzen, J., Ten Have, M., de Graaf, R., van Nijnatten, C. H., & Vollebergh, W. A. (2015). The impact of psychiatric history on women's pre- and postabortion experiences. Contraception, 92(3), 246–253.**

The authors' objective in this study was to look into the extent to which psychiatric history impacts abortion decision-making, burdens felt, and emotions after the abortion as well as coping. Two groups were studied and compared regarding pre-abortion doubt, post-abortion decision regret or uncertainty, pressures experienced, burden associated with unwanted

pregnancy or abortion, emotions after aborting, self-efficacy, and coping. Results seemed to indicate that women with a psychiatric history experience more stress both before and after the procedure. The implications put forward by the authors of the study are that women who report negative abortion experiences may have an underlying condition that the negative conditions stem from.

171. **Warren, J. T., Harvey, S. M., & Henderson, J. T. (2010). Do depression and low self-esteem follow abortion among adolescents? Evidence from a national study. Perspectives on Sexual and Reproductive Health, 42(4), 230–235.**

In this study, data from the National Longitudinal Study of Adolescent Health were used to examine the extent to which abortion in adolescence was associated with subsequent depression and low self-esteem. Female respondents who reported an abortion between Wave 1 (1994-1995) and Wave 2 (1996) of the survey (n=69) were studied. Abortion was not associated with depression or low self-esteem within a year of abortion or 5-years later. Socioeconomic and demographic characteristics did not substantially modify the relationships between abortion and the outcomes.

172. **Wiebe, E. R., & Adams, L. C. (2009). Women's experience of viewing the products of conception after an abortion. Contraception, 80(6), 575–577.**

This study was implemented to assess perceptions of women viewing the products of conception after abortion and to assess the feasibility of offering this choice. More specifically, women presenting for abortion at two abortion clinics were given a questionnaire asking if they wished to view the products of conception. A second questionnaire was administered to women who had viewed products of conception. Clinic staff members were interviewed after completion of the study. The study results revealed that 28.7% of women who had abortions chose to view the products of conception and 83.1% found that viewing did not make it harder emotionally. Older women and women with children were less likely to choose to view products of conception and **were more likely to find it harder if they did. All 11 clinic staff members were positive about** offering this opportunity.

173. **Wiebe, E. R., Trouton, K. J., Fielding, S. L., Grant, H., & Henderson, A. (2004). Anxieties and attitudes towards abortion in women presenting for medical and surgical abortions. *Journal of Obstetrics and Gynaecology Canada: JOGC = Journal D'Obstetrique et Gynecologie du Canada : JOGC, 26*(10), 881–885.**

The purpose of the study is to examine differences in anxiety levels and attitudes towards abortion between women who had an early medical abortion and women who had an early surgical abortion at an urban, free-standing clinic, Fifty-nine women who underwent a medical abortion and 43 women who had a surgical abortion answered questionnaires pre-abortion and again 2 to 4 weeks post-abortion. Thirty women were interviewed about their answers. Results revealed anxiety levels were similar in both groups before the abortion procedure. Anti-abortion views were observed in 60.5% of women who had a medical abortion and in 37.3% of women who had a surgical abortion. Women who were pro-choice had a mean anxiety score of 5.0 (range, 0-10) before and 2.7 after the abortion; whereas women who were anti-abortion had a

mean anxiety score of 5.2 before and 4.4 after the abortion.

174. **Wells N. (1991). Pain and distress during abortion. Health Care for Women International, 12(3), 293–302.**

The focus of this study was on reported pain and distress experienced by 35 women undergoing first-trimester abortions. The women reported elevated levels of state anxiety pre-abortion and pain and distress during the procedure. The pattern of verbal descriptors on the pain scale was comparable to previously reported pain from abortion, labor, and the menstrual cycle. Pain scores did not differ by the type of anesthesia received. The researchers concluded that first-trimester abortion is a painful and distressing medical procedure.

175. **Williams G. B. (2001). Short-term grief after an elective abortion. Journal of Obstetric, Gynecologic, and Neonatal Nursing: JOGNN, 30(2), 174–183.**

The purpose of this study was to identify possible short-term grief responses after elective abortion. Ninety-three women, 45 who had a history of elective abortion within the past 1 to 14 months and 48 who never had an abortion served as participants. Inclusion criteria were no perinatal losses within the past 5 years, no documented psychiatric history, and the ability to read, write, and comprehend English. Women with a history of abortion experienced grief manifested as loss of control, death anxiety, and dependency. There were no statistically significant differences in the intensity of grief among women who had a history of elective abortion and the comparison group; however, there was an overall trend toward higher grief intensities in the abortion group. The presence of living children, perceived pressure to abort, and the number of abortions intensified the short-term grief response.