



# The Effectiveness of Healing Interventions for Post-Abortion Grief: A Systematic Review and Meta-Analysis

Leila BAGHERI<sup>1</sup>, Ali Mohammad NAZARI<sup>2</sup>, Reza CHAMAN<sup>3</sup>, Ashraf GHIASI<sup>1</sup>,  
\*Zahra MOTAGHI<sup>4</sup>

1. Department of Reproductive Health, Student Research Committee, School of Nursing and Midwifery, Shabroud University of Medical Sciences, Shabroud, Iran
2. Department of Reproductive Health, School of Nursing and Midwifery, Shabroud University of Medical Sciences, Shabroud, Iran
3. Department of Epidemiology, School of Health, Shiraz University of Medical Sciences, Shiraz, Iran
4. Reproductive Studies and Women's Health Research Center, School of Nursing and Midwifery, Shabroud University of Medical Sciences, Shabroud, Iran

\*Corresponding Author: Email: zhrmotaghi@yahoo.com

(Received 17 May 2019; accepted 27 Jul 2019)

## Abstract

**Background:** Abortion is the ending of pregnancy due to removing an embryo or fetus before it can survive outside the uterus. Some women suffer from psychological disorders such as anxiety, depression and grief after abortion. Early detection of high-risk women after abortion and psychological intervention is one of the healing methods that can lead to improving outcomes but its effectiveness is not clear. The present meta-analysis evaluated the efficacy of this approach.

**Methods:** The international and national electronic databases were searched from Jan 1998 until Aug 2018 including Medline, Web of Knowledge, Ovid, Embase, PubMed, Scopus, Cochrane, ScienceDirect, PsycINFO, ProQuest, Google Scholar, Iranmedex, Scientific Information Database (SID), and Magiran. The pooled mean difference with the random-effects model was used for meta-analyses. The preferred reporting items for systematic reviews and meta-analyses guidelines adhered in this study.

**Results:** We enrolled 7 relevant studies involving 918 subjects into the meta-analysis process. The meta-analysis of the interventions aiming at prevention of post-abortion grief yielded a pooled standardized mean difference (SMD) of -0.03 (95% CI: -0.40-0.34; Z=0.16; P=0.87) at post-test and of -0.21 (95% CI:-0.53-0.10; Z=1.32; P=0.19) at follow-up.

**Conclusion:** This systematic review found psychotherapy-based interventions are effective in post-abortion grief treatment but; we found psychotherapy-based interventions are somewhat effective in short-term post-abortion grief and it has a better effect on long-term grief.

**Keywords:** Clinical trial; Psychological intervention; Post-abortion grief

## Introduction

The World Health Organization (WHO) is defined abortion as the premature expulsion of a fetus from the uterus up to 23 wk of pregnancy and weighing up to 500 grams (1). Between 10%

and 25% of pregnancies may result in spontaneous abortion (miscarriage) before 20 weeks gestation (2). About 46 million induced abortions occur in the world annually (3) and the induced

abortion rate was estimated as 8.9 per 1000 women aged 15–44 yr, respectively in Iran (4). Abortion has many physical and psychological complications. More than half the women who suffer from a miscarriage would suffer from various psychological morbidities in the weeks and months following the event (5). Grief is a common response of parents to these losses, which sometimes might be complicated (6). The broad spectrum of grief symptoms exhibited after perinatal loss includes physical, psychosocial, emotional, and cognitive expressions (7). Physical expressions of grief often include head, stomach, and arm aches, changes in heart and breathing patterns, throat tightness, decreased appetite, difficulty sleeping, lack of energy, tiredness and crying. Psychological and Emotional expressions of grief are isolation, difficulty with activities of daily living, anger, denial, guilt, failure, sadness and self-blame (8, 9). The normal grieving process has four steps: accepting the reality of the loss, working through the pain of the grief, adapting to the new situation, and rearrangement (10). Abortion needs physical and psychological management. Physical management of abortion depends on the category of miscarriage and the woman's clinical condition; women may be offered the option of expectant, medical or surgical management. There is no preference between methods of abortion management (surgical, expectant, and medical) and women should be supported to make the right decision for their condition (11, 12). Unlike physical management, the evidence on psychological management is less well developed. Supportive care of women having abortions cannot help improve their psychosocial well-being (13) while other researchers demonstrated the efficacy of the psychological interventions (14). For example, a cross-sectional study was conducted of women who underwent second-trimester abortion for complications. In their study, good counseling quality was positively associated with lower grief and lower posttraumatic stress scores (15). This systematic review was conducted to evaluate the effectiveness of psychotherapy or psychosocial interventions in post-

abortion grief prevention. The result of this study can be used in professional practice. This review will focus on spontaneous and induced abortion and will not include ectopic pregnancy, molar pregnancy, and stillbirth.

The main objective of the current meta-analysis was therefore to determine the short-term (i.e., immediately after the intervention) and long-term (i.e., follow-up) effect of specific psychological grief interventions for women who undergo abortion.

## **Methods**

### *Type of study*

The present systematic review was performed according to Preferred Reporting Item for Systematic Review and Meta-analysis (PRISMA) statement.

### *Search strategy*

This article describes what has been written over the past 20 years on the topic of grief and abortion, therefore, the international and national electronic databases were searched from Jan 1998 until Aug 2018 including Medline, Web of Knowledge, Ovid, Embase, PubMed, Scopus, Cochrane, Science direct, PsycINFO, ProQuest, Google scholar, Iranmedex, Scientific Information Database (SID), and Magiran. We developed a search strategy including the following keywords used in Persian and English: ("miscarriage", "abortion, pregnancy loss) AND (bereave\*, mourning, grief, widow) AND (psychotherapy, therapy, intervention, treat\*, manage, counseling, support, help) and their equivalent in MeSH and a combination of these keywords were used for article extraction.

### *Inclusion criteria*

All published randomized controlled trials including trials that compare different psychological interventions methods and different methods of follow-up after miscarriage.

### *Exclusion criteria*

Some article have prospective cohort study design (5, 16-21) and others are review articles (22-

30), qualitative studies (31-36), correlational study(37-39) or case study (40) and some studies didn't evaluate the post-abortion grief (41-51).

**Risk of bias**

All review authors independently assessed the risk of bias for each study using the criteria outlined in the Cochrane Handbook for Systematic Reviews of Interventions (52). The quality of the studies was moderate to good. Some studies were unclear regarding blinding (Table 1).

As can be seen from the PRISMA flow chart (Fig. 1), the search of the databases yielded 189 titles of records and 12 records from searching reference lists. After duplicates were removed, 145 records were left. Titles were reviewed and 20 articles did not meet the inclusion criteria. Of

the 125 abstracts reviewed, 76 failed to meet the inclusion criteria.

Finally, full texts of the remaining 49 papers were read and 7 studies were identified as meeting the inclusion criteria.

**Statistical Analysis**

Review Manager 5 software was used to analyze the data. Statistical heterogeneity was determined using the Q test. Lack of consistency between studies was evaluated using I<sup>2</sup> index. We assessed statistical heterogeneity in meta-analysis using the T<sup>2</sup>, I<sup>2</sup> and Chi<sup>2</sup> statistics. We regarded heterogeneity as substantial if T<sup>2</sup> is greater than zero and either I<sup>2</sup> is greater than 30% or there is a low P-value (less than 0.10) in the Chi<sup>2</sup> test for heterogeneity (53).

**Table 1:** Risk of bias for included studies

<i>Reference</i>	<i>Random sequence generation</i>	<i>Allocation concealment</i>	<i>Blinding</i>	<i>Incomple outcome data</i>	<i>Selective reporting</i>	<i>Groups similar at Baseline</i>
(13)	Low risk	Low risk, Sealed envelopes	Low risk	Low risk	Low risk	Low risk
(55)	Low risk, randomly allocated	Low risk, sealed envelope	Unclear risk, Not mentioned	Unclear risk	Low risk	Low risk
(14)	Low risk, Cards shuffled	Low risk	Unclear risk, Not mentioned	Unclear risk	Low risk	Low risk
(56)	Low risk, randomly allocated	Low risk	Unclear risk, Not mentioned	Unclear risk	Low risk	Low risk
(57)	Low risk , randomly allocated	Low risk	Unclear risk	Unclear risk	Low risk	Low risk
(62)	N/A	N/A	N/A	Low risk	Low risk	Low risk
(63)	Experimental, posttest only, control group design	Low risk	N/A	Low risk	Low risk	Low risk

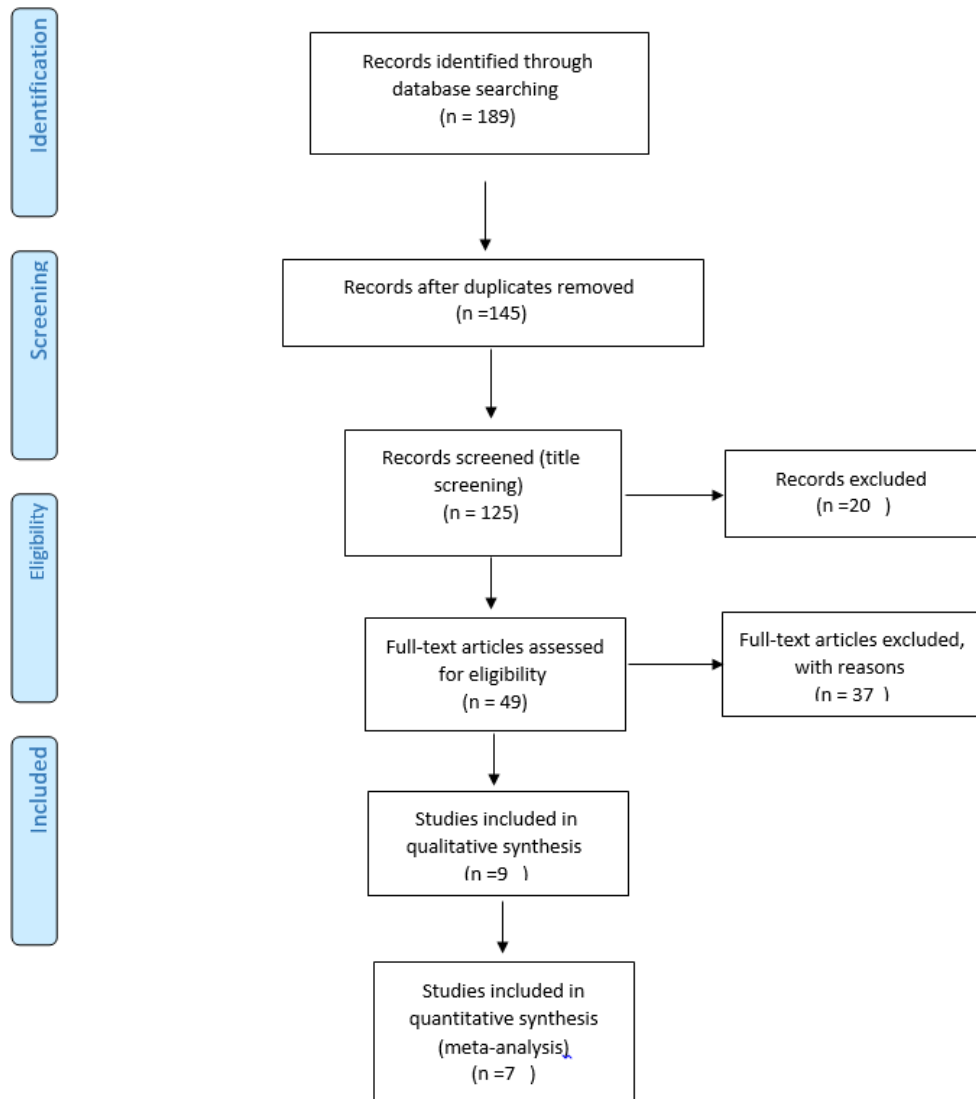


Fig. 1: PRISMA Flow Diagram

If studies have high heterogeneity, a random effect model was used for analysis in this study and if the studies were homogeneous a fixed method was used. "The standardized mean difference (SMD) measure of effect is used when studies report efficacy in terms of continuous measurement, such as a score on a pain-intensity rating scale" (54).

#### Ethical aspects

Two authors independently analyzed the titles and abstracts for relevant articles and if there was

any disagreement between researchers, the third researcher appraised the articles. Ethical issues such as plagiarism, misconduct, data fabrication and/or falsification, double publication, conflict of interest and financial support, etc have been checked by the authors.

## Results

#### Identification of studies

Table 2 provides an overview of included studies, according to the method of intervention, and

characteristics of participants, setting, outcomes and follow-up periods. Overall, 918 subjects ini-

tially participated in the included studies; 118 subjects were lost to follow-up.

**Table 2:** The characteristic of studies were included in the systematic review and meta-analysis

<i>Reference</i>	<i>Methods</i>	<i>Partici- pants</i>	<i>Interventions</i>	<i>Outcomes</i>	<i>Setting</i>
(13)	Randomized controlled trial	N = 116 commenced the study, 88 completed.	Intervention group 1: a structured conversation with 1 midwife for 60 min N = 43. Comparison group 2: met 1 of 5 midwives during a 30-minute visit N = 45	Reduction of women's grief as measured at 1 and 4 months post- The PGS has 3 subscales measuring grief, difficulty in coping and despair.	Gynecologic clinic, south west Sweden
(55)	Randomized controlled trial	N = 80 commenced the study, 66 completed.	Intervention group: 1 session of psychological counselling N = 39. Comparison group 2: no psychological counselling. N = 41	Post-miscarriage grief measured at 4, 7 and 16 weeks post-miscarriage by: Modified Texas Grief Inventory (TGI) subscales grief, self-blame and worry.	Harris Birthright Research Centre, UK
(14)	Randomized controlled trial	N = 341 women (682 in total).	Intervention 1: nurse caring (NC). N = 77. Intervention 2: self-caring (SC). N = 64. Intervention 3: combined caring (CC) N = 63. Intervention 4: control N = 79	Depression and grief measured at baseline, 3 months, 5 months and 13 months by: • CES-D, subscale depression. • Miscarriage Grief Inventory (adapted from the Texas Grief Inventory) subscales pure grief, grief-related emotions	Couples from the Puget Sound area of Washington, USA.
(56)	Randomized controlled trial	N = 83 women.	Intervention 1: 35 Randomized to receive waiting-list-control (WLC) Intervention 2: 48 Randomized to receive cognitive behavioral internet-based therapy (TG).	Grief was assessed using the Inventory of Complicated Grief. pre- and post-treatment and 3 months after completion of the internet-based therapy	Mothers after pregnancy loss in German-speaking country and having access to the internet
(57)	Randomized controlled trial	As above. N= 228	Intervention 1: 113 Randomized to receive waiting-list-control (WLC) Intervention 2: 115 Randomized to receive cognitive behavioral internet-based therapy (TG).	Posttraumatic stress, grief, depression, anxiety, somatization and overall mental health measured at pre- and post-treatment and 3 months and 12-month after completion of the internet-based therapy.	Mothers after pregnancy loss in German-speaking country and having access to the internet.
(62)	pre-test/post-test design	N=30	four phases after the TOP	Grief Questionnaire for Women after Pregnancy Termination (GQWPT)	university hospital in Chiang Mai, Thailand
(63)	Experimental, posttest only, control group design	N=40	Intervention group: received 1-hour bereavement intervention based N=20 control group: received routine care. N= 20	The PGS short version English and Spanish language was used to measure grief 2 weeks post miscarriage.	Obstetrics-gynecology clinic of United States.

Males were underrepresented in the study groups. Only one of the randomized controlled clinical trials examined the effects of three couples-focused interventions on women and men's resolution of depression and grief during the first year after miscarriage (14).

With respect to intervention aim, two studies with 154 women compared one counseling session versus no counseling (13, 55). The counseling sessions have lasted 50 min (55) or one hour (13). Both studies used different measures to assess prenatal grief at four months after the miscarriage, modified Texas grief Inventory which measured grief, self-blame, and worry (55) and the Swedish version of perinatal grief scale which measured difficulty in coping as well as grief and despair (13).

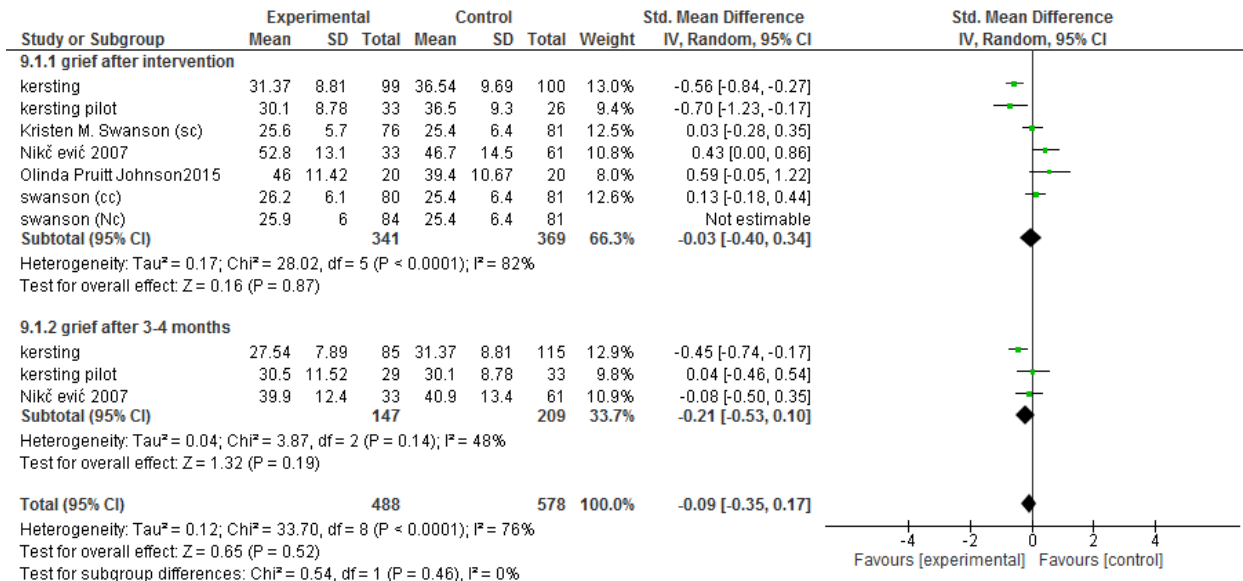
One study compared three method of intervention (nursing care: three one-hour counseling sessions, self-caring which contained 3 videos of Swanson coaching couples and couples speaking of their miscarriage experiences and his and hers workbooks which stimulated reflection by asking 7 daily questions, combined caring include 1-hour long counseling session plus 1 workbook

given and 2 workbooks mailed) with no counseling (14). The sessions were conducted at one, five and 11 wk with 242 women.

**Meta-analyses**

The meta-analysis of the interventions aiming at prevention of post-abortion grief yielded a pooled standardized mean difference (SMD) of -0.03 (95% CI: -0.40-0.34; Z=0.16; P=0.87) at post-test and of -0.21 (95% CI:-0.53-0.10; Z=1.32; P=0.19) at follow-up. With regard to the outcome variable, studies were heterogeneous in the post-test analysis (P<0.0001) and homogeneous in the follow-up analysis (P=0.14). The difference among the pooled SMD's of preventive interventions at post-test and at follow-up was not significant ( $\chi^2=0.54$ ; df=1; P=0.46) (Fig. 2).

Two studies with 168 women compared cognitive-behavioral internet-based therapy versus no counseling (56, 57) and grief was assessed using the Inventory of Complicated Grief. We found a significant association between cognitive behavioral internet-based therapy versus no counseling (MD= -5.46, 95% CI: -7.71 to -3.20) (Fig. 3).



**Fig. 2:** Short term and long term effect of preventive interventions on grief



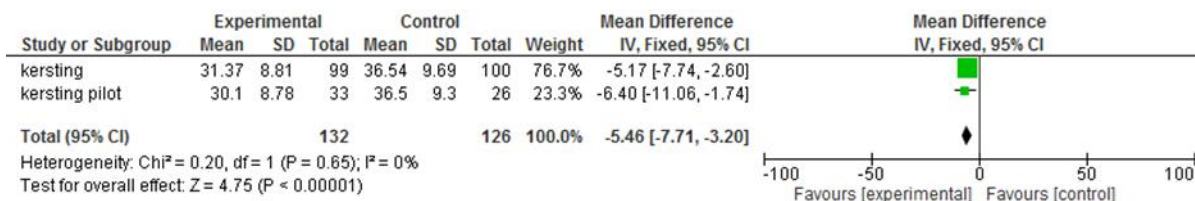


Fig. 3: Forest plot of effect of Internet-Based Intervention on post abortion grief

## Discussion

The psychological interventions after abortion varied from one study to another; mainly consisted of one or a number of counseling sessions. The timing of the interventions varied from one week following miscarriage up to 11 wk. The mean length of time since prenatal loss for clients beginning therapy in the studies included in this meta-analysis was about 5-8 wk after abortion. It is possible that clients in both the treatment and control groups had experienced normal recovery period even before starting treatment. Although the time for grief reactions is different in persons, grief recovery in most cases is relatively rapid within 3 to 6 months of the loss.

Researchers used different validate tools in their studies, for example, a Swedish version of the Perinatal grief scale (13) and others developed by the study authors such as Miscarriage Grief Inventory Swanson (14).

Psychological follow-up evaluation was not clear in many studies. Some of the studies did not state whether a high score indicated psychological ill health or wellbeing (14, 55). Some of studies did not have control groups. Control groups are essential for the valid evaluation of a bereavement intervention because grief has self-limited course (58).

All of these issues made it challenging to pool the result and compare findings. Therefore, it was not possible to compare different types of psychological follow-up via a meta-analysis given the heterogeneity between studies. To assess the effect of psychological interventions compared with usual antepartum, intrapartum, or postpartum care on postnatal depression Cindy-Lee Dennis evaluated 15 trials with 7697 women. Her

meta-analysis found no preventive effect with antenatal and postnatal classes (59) perhaps difference between targeted women in clinical trials (Seven trials targeted women with risk of postnatal depression, while the eight others enrolled women from the general population) is a reason for such conclusion. Several factors contribute to post-abortion grief: Length of gestational age, previous miscarriage or perinatal loss (60) active suppression of the memory of the event and lack of social support (29); Women who have an unintended pregnancy may be very different than women who have an intended pregnancy (61).

A review was conducted to evaluate the efficacy of the Cognitive-Behavioral Therapy (CBT), in the prevention of postnatal depression (PD) in pregnant women at risk. The efficacy of the CBT in the treatment of PD approved but to support the efficacy of psychotherapeutic preventive interventions requires further studies (28).

Computer- or web-based interventions are mental health interventions for women during the perinatal period; that it can be delivered offline or online via a computer, tablet, or smart phone. Computer- or web-based interventions can improve perinatal mental health, especially depression and complicated grief (27).

Treatment interventions of grief have more adequately effect than preventive intervention (26). The difference between specific risk groups, in their studies or different method used for treatment and prevention in articles may cause such result. Multiple participants were treated by different therapists. The benefit of the intervention may be affected by the therapists' competencies rather than the treatment techniques.

In addition, a systematic review found some evidence to support the effectiveness of psychother-

psy-based interventions on patients' with positive history of complicated grief (24). The result of our meta-analysis showed that psychosocial intervention has a small effect on grief after intervention and has better effect 3-4 months after psychological intervention.

### Limitations

Studies included in this meta-analysis have a different obstetrical history such as gestational age, previous miscarriage or perinatal loss, a different method of intervention and different instrument used to assess symptoms of grief. Additionally, only articles written in English and Persian were evaluated in this study.

Adequately powered randomized trials to evaluate the effectiveness of psychological follow-up for post-abortion women and is recommended and their satisfaction with psychological follow-up should be explored in future studies.

### Conclusion

This systematic review found psychotherapy-based interventions are effective in post-abortion grief treatment but, there is insufficient documentation to evaluate the efficacy of psychological intervention for post-abortion grief prevention; we found psychotherapy-based interventions are somewhat effective in short-term post-abortion grief and it has better effect on long-term grief.

### Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

### Funding/Support

This paper was a part of a Ph.D. thesis approved by Shahrood University of Medical Sciences with grant number (No. 97118). The authors wish to

thank the Research Deputy for their financial support.

### Conflict of Interest

No Conflict of Interest.

### References

1. WHO. Clinical practice handbook for Safe abortion (2014). [https://www.who.int/reproductivehealth/publications/unsafe\\_abortion/clinical-practice-safe-abortion/en/](https://www.who.int/reproductivehealth/publications/unsafe_abortion/clinical-practice-safe-abortion/en/)
2. Murphy FA, Lipp A, Powles DL (2012). Follow-up for improving psychological well being for women after a miscarriage. *Cochrane Database Syst Rev*, (3):CD008679.
3. Motaghi Z, Keramat A, Shariati M, Yunesian M (2013). Triangular assessment of the etiology of induced abortion in iran: a qualitative study. *Iran Red Crescent Med J*, 15(11):e9442.
4. Motaghi Z, Poorolajal J, Keramat A et al (2013). Induced abortion rate in Iran: a meta-analysis. *Arch Iran Med*, 16(10):594-8.
5. Wijesooriya's LRA, Palihawadana TS, Rajapaksha RNG (2015). A study of psychological impact on women undergoing miscarriage at a SriLankan hospital setting. *Sri Lanka J Obstet Gynaecol*, 37:10-13.
6. Capitulo KL (2005). Evidence for healing interventions with perinatal bereavement. *MCN Am J Matern Child Nurs*, 30(6):389-96.
7. Brier N (2008). Grief following miscarriage: a comprehensive review of the literature. *J Womens Health (Larchmt)*, 17(3):451-64.
8. Corless IB, Limbo R, Bouso RS et al (2014). Languages of Grief: a model for understanding the expressions of the bereaved. *Health Psychol Behav Med*, 2(1):132-43.
9. Badenhorst W, Hughes P (2007). Psychological aspects of perinatal loss. *Best Pract Res Clin Obstet Gynaecol*, 21(2):249-59.
10. MAPS CH(2011). Beyond Kübler-Ross: Recent developments in our understanding of grief and bereavement. <https://www.psychology.org.au/formembers/publications/inpsych/2011/dec/B>



- eyond-Kubler-Ross-Recent-developments-in-our-und
11. Nanda K, Lopez LM, Grimes DA et al (2012). Expectant care versus surgical treatment for miscarriage. *Cochrane Database Syst Rev*, (3):CD003518.
  12. Neilson JP, Gyte GM, Hickey M et al (2010). Medical treatments for incomplete miscarriage (less than 24 wk). *Cochrane Database Syst Rev*, (1):CD007223.
  13. Adolfsson A, Bertero C, Larsson PG (2006). Effect of a structured follow-up visit to a midwife on women with early miscarriage: a randomized study. *Acta Obstet Gynecol Scand*, 85:330-5.
  14. Swanson KM, Chen HT, Graham JC et al (2009). Resolution of depression and grief during the first year after miscarriage: a randomized controlled clinical trial of couples-focused interventions. *J Womens Health (Larchmt)*, 18(8):1245-57.
  15. Kerns JL, Mengesha B, McNamara BC et al (2018). Effect of counseling quality on anxiety, grief, and coping after second-trimester abortion for pregnancy complications. *Contraception*, 97(6):520-3.
  16. Tseng YF, Cheng HR, Chen YP, Yang SF, Cheng PT(2017). Grief reactions of couples to perinatal loss: A one-year prospective follow-up. *J Clin Nurs*, 26(23-24):5133-42.
  17. Wilson PA, Boyle FM, Ware RS(2015). Holding a stillborn baby: the view from a specialist perinatal bereavement service. *Aust N Z J Obstet Gynaecol*, 55(4):337-43.
  18. Broen AN, Moum T, Bodtker AS, Ekeberg O (2005). The course of mental health after miscarriage and induced abortion: a longitudinal, five-year follow-up study. *BMC Med*, 3:18.
  19. Jacob L, Polly I, Kalder M, Kostev K(2017). Prevalence of depression, anxiety, and adjustment disorders in women with spontaneous abortion in Germany – A retrospective cohort study. *Psychiatry Res*, 258:382-6.
  20. Volgsten H, Jansson C, Svanberg AS, Darj E, Stavreus-Evers A (2018). Longitudinal study of emotional experiences, grief and depressive symptoms in women and men after miscarriage. *Midwifery*, 64:23-8.
  21. Kulathilaka S, Hanwella R, de Silva VA(2016). Depressive disorder and grief following spontaneous abortion. *BMC Psychiatry*, 16:100.
  22. Hunter A, Tussis L, MacBeth A(2017). The presence of anxiety, depression and stress in women and their partners during pregnancies following perinatal loss: A meta-analysis. *J Affect Disord*, 223:153-64.
  23. Klier CM, Geller PA, Ritscher JB(2002). Affective disorders in the aftermath of miscarriage: a comprehensive review. *Arch Womens Ment Health*, 5(4):129-49.
  24. Enez Ö(2017). Effectiveness of Psychotherapy-Based Interventions for Complicated Grief: A Systematic Review. *Psikiyatriye Guncel Yaklasimlar*, 9(4):441-63.
  25. Currier J, Neimeyer R, Berman J(2008). The effectiveness of psychotherapeutic interventions for bereaved persons: a comprehensive quantitative review. *Psychol Bull*, 134(5):648-61.
  26. Wittouck C, Van Autreve S, De Jaegere E et al (2011). The prevention and treatment of complicated grief: A meta-analysis. *Clin Psychol Rev*, 31(1):69-78.
  27. Ashford MT, Olander EK, Ayers S (2016). Computer- or web-based interventions for perinatal mental health: A systematic review. *J Affect Disord*, 197:134-46.
  28. Nardi B, Laurenzi S, Di Nicolo M, Bellantuono C (2012). Is the cognitive-behavioral therapy an effective intervention to prevent the postnatal depression? A critical review. *Int J Psychiatry Med*, 43(3):211-25.
  29. Boulind M, Edwards D (2008). The Assessment and Treatment of Post-Abortion Syndrome: A Systematic Case Study From Southern Africa. *J Psychol Afr*, 18(4): 539-47.
  30. Charles VE, Polis CB, Sridhara SK, Blum RW(2008). Abortion and long-term mental health outcomes: a systematic review of the evidence. *Contraception*, 78(6):436-50.
  31. Van P, Meleis AI(2003). Coping With Grief After Involuntary Pregnancy Loss: Perspectives of African American Women. *J Obstet Gynecol Neonatal Nurs*, 32(1):28-39.
  32. Butler M(2000). Facilitating the grief process. The role of the midwife. *Pract Midwife*, 3(9):36-7.

33. Cohen J(2001). From grief to action: meeting the needs of bereaved families. *AWHONN Lifelines*, 5(1):11-3.
34. Geerincq-Vercammen CR, Kanhai HH(2003). Coping with termination of pregnancy for fetal abnormality in a supportive environment. *Prenat Diagn*, 23(7):543-8.
35. Glatfelter KS. Understanding and addressing the needs of women experiencing perinatal loss leading to hospital protocol change [D.S.W. thesis]. School of Public Service Leadership, Minnesota Capella's School of Social Work, United States ; 2017.
36. Whitaker C, Kavanaugh K, Klima C(2010). Perinatal Grief in Latino Parents. *MCN Am J Matern Child Nurs*, 35(6):341-5.
37. Golmakani N, Ahmadi M, Asgharipour N, Esmaeli H (2018). The Relationship of Emotional intelligence with Women's Post-abortion Grief and Bereavement. *J Midwifery Reprod Health*, 6 (1):1163-9.
38. Franche RL (2001). Psychologic and obstetric predictors of couples' grief during pregnancy after miscarriage or perinatal death. *Obstet Gynecol*, 97(4):597-602.
39. Huti MH, Armstrong DS, Myers J(2013). Evaluation of the perinatal grief intensity scale in the subsequent pregnancy after perinatal loss. *J Obstet Gynecol Neonatal Nurs*, 42(6):697-706.
40. Nardi A E(2011). Cognitive-behavioral therapy to miscarriage: results from the use of a grief therapy protocol. *Rev Psiquiatr Clin*, 38 (3):122-124.
41. Bryant RA, Kenny L, Joscelyne A et al (2014). Treating prolonged grief disorder: a randomized clinical trial. *JAMA Psychiatry*, 71(12):1332-9.
42. Rosner R, Pfoh G, Kotoucova M, Hagl M(2014). Efficacy of an outpatient treatment for prolonged grief disorder: a randomized controlled clinical trial. *J Affect Disord*, 167:56-63.
43. Johnson JE, Price AB, Kao JC et al (2016). Interpersonal psychotherapy (IPT) for major depression following perinatal loss: a pilot randomized controlled trial. *Arch Womens Ment Health*, 19(5):845-59.
44. Baron C, Cameron S, Johnstone A(2015). Do women seeking termination of pregnancy need pre-abortion counselling? *J Fam Plann Reprod Health Care*, 41(3):181-5.
45. Bhat A, Byatt N (2016). Infertility and Perinatal Loss: When the Bough Breaks. *Curr Psychiatry Rep*, 18(3):31.
46. Brandon AR, Ceccotti N, Hynan LS et al (2012). Proof of concept: Partner-Assisted Interpersonal Psychotherapy for perinatal depression. *Arch Womens Ment Health*, 15(6):469-80.
47. Cote-Arsenault D, Schwartz K, Krowchuk H, McCoy TP (2014). Evidence-based intervention with women pregnant after perinatal loss. *MCN Am J Matern Child Nurs*, 39(3):177-86.
48. Engelhard IM, van den Hout MA, Arntz A (2001). Posttraumatic stress disorder after pregnancy loss. *Gen Hosp Psychiatry*, 23(2):62-6.
49. Grote NK, Swartz HA, Geibel SL et al (2009). A randomized controlled trial of culturally relevant, brief interpersonal psychotherapy for perinatal depression. *Psychiatr Serv*, 60(3):313-21.
50. Simon W, Sliwka P (2012). Effectiveness of group psychotherapy for adult outpatients traumatized by abuse, neglect, and/or pregnancy loss: a multiple-site, pre-post-follow-up, naturalistic study. *Int J Group Psychother*, 62(2):283-308.
51. Roose RE, Blanford CR (2011). Perinatal grief and support spans the generations: parents' and grandparents' evaluations of an intergenerational perinatal bereavement program. *J Perinat Neonatal Nurs*, 25(1):77-85.
52. Higgins J, Green S (2011). Cochrane Handbook for Systematic Reviews of Interventions <https://training.cochrane.org/handbook>
53. Higgins JPT, Thompson SG, Deeks JJ, Altman DG (2003). Measuring inconsistency in meta-analyses. *BMJ*, 327(7414):557-60.
54. Faraone SV(2008). Interpreting estimates of treatment effects: implications for managed care. *P T*, 33 (12):700-11.
55. Nikcevic AV, Kuczmierczyk AR, Nicolaidis KH (2007). The influence of medical and psychological interventions on women's distress after miscarriage. *J Psychosom Res*, 63(3):283-90.

56. Kersting A, Kroker K, Schlicht S, Wagner B (2011). Internet-based treatment after pregnancy loss: concept and case study . *J Psychosom Obstet Gynaecol*, 32(2):72-8.
57. Kersting A, Dolemeyer R, Steinig J et al (2013). Brief Internet-based intervention reduces posttraumatic stress and prolonged grief in parents after the loss of a child during pregnancy: a randomized controlled trial . *Psychother Psychosom*, 82(6):372-81.
58. Zisook S, Shear K(2009). Grief and bereavement: what psychiatrists need to know. *World Psychiatry*, 8(2):67-74.
59. Dennis CL (2005). Psychosocial and psychological interventions for prevention of postnatal depression: systematic review . *BMJ*, 331(7507):15.
60. Daugirdait, V, van den Akker O, Purewal S (2015). Posttraumatic Stress and Posttraumatic Stress Disorder after Termination of Pregnancy and Reproductive Loss: A Systematic Review . *J Pregnancy*, 2015:646345.
61. Yazdkhasti M, Pourreza A, Pirak A, Abdi F (2015). Unintended Pregnancy and Its Adverse Social and Economic Consequences on Health System: A Narrative Review Article. *Iran J Public Health*, 44(1):12-21.
62. Sriarporn P , Turale S , Lordee N et al (2017). Support program for women suffering grief after termination of pregnancy: A pilot study. *Nurs Health Sci*, 19 (1): 75-80.
63. Johnson O P, Langford R. W (2015). A Randomized Trial of a Bereavement Intervention for Pregnancy Loss. *J Obstet Gynecol Neonatal Nurs*, 44 (4) : 492-9.