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The Effectiveness of Problem-Solving Group Counseling on Women's Mental Health after Spontaneous Abortion

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ABSTRACT

BACKGROUND AND OBJECTIVE: Spontaneous abortion is a psychologically devastating experience for women. Due to the high prevalence and psychological complications of abortion and the effective role of midwives in women's psychological support, this study was conducted to determine the effect of problem-solving group counseling on women's mental health after spontaneous abortion.

METHODS: This clinical trial was performed in 2019 on 46 women who experienced spontaneous abortion in their first pregnancy in Imam Khomeini and Razi hospitals in Ahvaz. Subjects were randomly divided into two groups of experimental and control (23 women in each group). In the pre-test stage, the two groups completed the mental health questionnaire with a score of 0-84 and demographic characteristics. The experimental group underwent 90-minute weekly counseling sessions based on problem-solving therapy for 8 weeks. Both groups completed the questionnaire again after the intervention and one month later during follow-up.

FINDINGS: The mean age of the experimental group was 27.95±3.92 and the control group was 28.04±3.78. Before the test, the mean score of mental health was 59.25±3.56 in the experimental group and 58.14±4.86 in the control group, indicating no statistically significant difference between the two groups. However, in the post-test stage, there was a significant difference in terms of mental health (38.45±3.03 in the experimental group vs. 58.95±4.87 in the control group) ($p<0.001$).

CONCLUSION: The results of the study showed that problem-solving therapy can be effective in improving the mental health of women after spontaneous abortion.

KEY WORDS: *Problem-Solving Therapy, Mental Health, Spontaneous Abortion.*

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Introduction

One of the most important problems in pregnancy is abortion. Abortion means spontaneous termination of pregnancy before the fetus reaches sufficient development to survive or termination of pregnancy before 20 weeks or weighing less than 500 grams at birth and is the most common complication during pregnancy (1). About 8-20% of known pregnancies end in spontaneous abortion (2). The estimated abortion rate in the world is 35 cases per 1000 women aged 15-44 years. This rate is 27 per 1000 in developed countries and 37 per 1000 in developing countries (3). The annual rate of abortion in Iran is 7.5 cases per 1000 married women (4). In a study conducted in Tehran, of 2970 women of childbearing age, 45.7% had experienced at least one abortion in their lifetime (5).

Women who experience abortions suffer both mentally and physically. About 48-51% of women who experience spontaneous abortion suffer from psychological complications (6). These problems include anxiety, depression, and sometimes severe emotional distress after abortion, substance abuse, suicide attempt, obsessive-compulsive disorder, marriage dispute, post-traumatic stress, and isolation (7). Women with a history of spontaneous abortion may be concerned whether or not they can successfully have subsequent pregnancies, and this worry and stress may persist throughout subsequent pregnancies (8).

High levels of stress, anxiety and depression of the mother in subsequent pregnancies can be associated with the risk of miscarriage, premature birth, low birth weight, neonatal abnormalities, small baby for gestational age, long-term neurodevelopmental adverse complications, hyperactivity, learning disability, schizophrenia and emotional disorders in the future (9, 10). Today, psychological problems are one of the challenges of modern societies and issues related to mental health, especially in recent years, have been considered by experts involved in this field (11).

Mental health in fact means a behavior consistent with the norms of the society, recognizing and accepting social realities and the power to adapt to them, satisfying one's needs in a balanced way and flourishing one's innate talents (11, 12). Researchers believe that psychological counseling, in addition to medical intervention and counseling, is beneficial in reducing women's distress after abortion (13). Problem - solving therapy is a structured psychological intervention and in fact a type of cognitive - behavioral therapy, which focuses on teaching problem- solving skills and attitudes and aims to reduce and prevent psychological pathology and increase health by helping individuals to adapt more effectively to stressful situations in life (14, 15). One also learns to use one's set of effective cognitive skills to cope with difficult situations (16). One study showed that cognitive - behavioral therapy has significantly improved post-traumatic stress, grief, depression, and mental health of mothers after abortion (17). Furthermore, in one study, a significant difference was observed between the scores of depression and anxiety before and after the intervention (18). Another study showed that cognitive - behavioral group therapy can be beneficial for mental health, disease perception, quality of life and clinical signs of psoriasis (19).

Given that fertility is highly valued in most cultures and the desire to have a child is one of the most important human stimuli, if the attempt to conceive fails, it may become a destructive feeling and a stressful event, and cause impaired mental health (20). Since no specific study has been conducted on the effect of problem - solving counseling on women with a history of miscarriage, this study was conducted to investigate the effectiveness of problem - solving group counseling on women's mental health after spontaneous abortion.

Methods

This clinical trial (IRCT20181129041792N1) with pretest-posttest design and a control group, after approval by the Research Ethics Committee of Ahvaz Jundishapur University with the code IR.AJUMS.REC.1397.616 was conducted in 2019. All women who had spontaneous abortion in their first pregnancy and had been referred to Razi and Imam Khomeini Hospitals for treatment, and a minimum of 4 weeks and a maximum of 6 months had passed since their abortion, with at least a basic literacy, informed consent to participate in the study and obtaining a score above 23 in the mental health questionnaire were included in the study.

In cases of missed miscarriage, drug and psychotropic use, history of chronic medical and mental illness, two sessions of absence in the experimental group and current pregnancy, use of psychiatric drugs such as antidepressants, antipsychotics, etc., experiences of traumatic events such as the death of first-degree relatives in the past six months, being under cognitive - behavioral therapy, and any type of psychological intervention over the past 12 weeks, the subjects were excluded from the study. The sample size

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was estimated 23 people for each group based on the outcome of depression in a similar article and considering the 95% confidence level and 90% power with 25% sample loss (21). Sampling was done based on availability method by referring to medical records and phone invitation, then a briefing session was held and explanations were given about the objectives of the study.

After obtaining written consent and ensuring the confidentiality of information, the demographic and mental health questionnaire was completed. The Goldberg Mental Health Questionnaire (GHQ-28) is one of the most well-known screening tools for mental disorders and includes four subscales of physical symptoms, anxiety, social dysfunction, and depression, each of which includes 7 questions (22). The questionnaire is based on 4-point Likert scale; "not at all" (score 0), "no more than usual" (score 1), "rather more than usual" (score 2) and "much more than usual" (score 3). The score of the questionnaire varies from 0 to 84. A lower score indicates better mental health (23). The cut-off point in this study is 23. Goldberg and Williams reported the mean validity of this questionnaire as 0.83 and its mean reliability as 0.87 (24).

The method of assigning individuals in control and experimental groups was random and based on quadrats (using a table related to random permutation). For the experimental group, eight 90-minute sessions counseling with problem-solving therapy were performed once a week by the researcher and under the supervision of the consultant professor in the classroom located in the gynecological surgery ward of Razi Hospital. Due to the large number of samples, the experimental group was divided into two groups of 10 people. After the sessions and one month after the end of the intervention, both groups completed the questionnaire. Table 1 summarizes the content of treatment sessions.

Statistical analysis was performed using SPSS software version 22 using independent t-test, chi-square, Kolmogorov-Smirnov and repeated measures ANOVA and $p<0.05$ was considered significant.

Table 1. Content of therapy sessions

Sessions	Objectives of each session
Session 1	Introduction of the therapist and group members to each other, statement of rules and expectations, briefly explaining the problem-solving approach. homework: Make a list of problems to work on and record these problems.
Session 2	Welcoming, reviewing the task of the first session, teaching logical problem solving and defining the problem clearly and objectively to solve the problem. Homework: Understanding and evaluating the causes of problems and prioritizing them.
Session 3	Reviewing the assignment of the second session, setting achievable and realistic goals to solve the problem, identifying the symptoms under the control of the individual, using practical exercises by members to find negative thoughts related to the problem and their disease Homework: Practicing to finding negative thoughts related to their problem and illness
Session 4	Reviewing the task of the third session, training and implementation of brainstorming strategy, teaching emotion-oriented and problem-oriented coping methods. Homework: Practicing brainstorming strategy and discovering emotion-oriented and problem-oriented coping strategies when faced with problems.
Session 5	Reviewing the assignment of the fourth session, learning functional ABC (stands for activators, beliefs and consequences of people's thoughts). Identifying poor self-efficacy beliefs and very negative problem orientation and teaching visualization techniques. Homework: Finding beliefs about their problem that have arisen after facing the problem and challenging them and practicing the visualization technique.
Session 6	Reviewing the task of the fifth session, training to solve problems effectively in real life by combining emotions and logical thinking (therapy with problem-solving approach), teaching how to evaluate and select the solution and identify its positive and negative points. Homework: Finding the pros and cons of choosing a solution.
Session 7	Reviewing the task of the sixth session, selection of the best solution by the members and implementation of the selected solution(s) and training of the subjects to continue in the implementation of the solutions. Homework: Applying selected solutions in real life and reviewing the results.
Session 8	Reviewing the assignment of the seventh session, evaluating and reviewing the next steps of progress, encouraging all progress and summarizing the topics.

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Results

In the experimental group, 3 people (2 due to withdrawal from the study and 1 due to pregnancy during the study) and 2 in the control group (due to withdrawal from the study) were excluded (Figure 1).

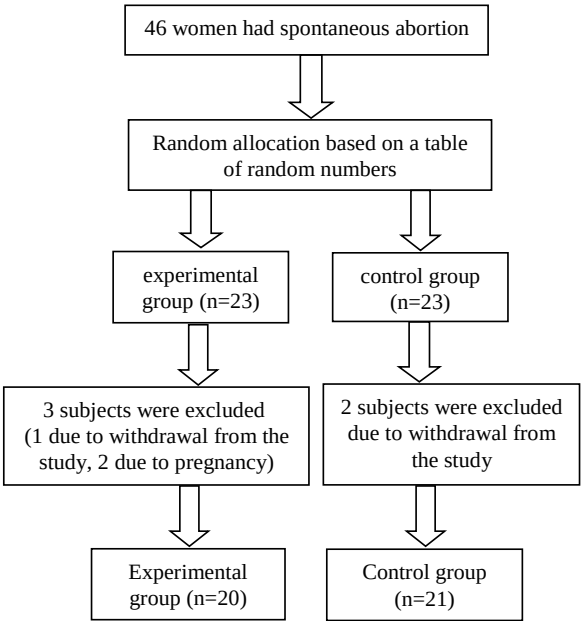

Figure 1. Study process

The mean age was 27.95±3.92 in the experimental group and 28.04±3.78 in the control group. The two groups did not differ significantly in other individual variables, such as education, economic status, employment, ethnicity and occupation of the spouse (Table 2). There was no significant difference between mental health and its subscales including physical symptoms, anxiety, social functioning and depression at the beginning of the study between the intervention and control groups, but at the end of the study, there was a significant difference in mental health in all subscales between the intervention and control groups ($p<0.001$), which shows the effect of problem - solving therapy on all subscales of mental health. Furthermore, using repeated measures test, in the experimental group, there was a significant difference between mental health before the intervention (59.25±3.56) compared to immediately after the intervention (41.30±2.55) ($p<0.001$), before the intervention compared to one month after the intervention (38.45±3.03) ($p<0.001$) and also immediately after the intervention compared to one month after the intervention ($p<0.001$). In the control group, however, no significant difference was observed between mental health before the intervention (58.14±4.16) compared to after the intervention (58±4.43) ($p=0.864$), before the intervention compared to one month after the intervention (58.95±4.87) ($p=0.385$) and also after the intervention compared to one month after the intervention (Table 3).

Table 2. Demographic characteristics of subjects in the experimental and control groups

Variable / Group	Experimental Number(%) Mean±SD	Control Number(%) Mean±SD	P-value
Level of Education			
Below High school diploma	13(65)	14(66.7)	
High school diploma	4(20)	5(23.8)	0.850
University education	3(15)	2(9.5)	
Spouse's education level			
Below High school diploma	14(70)	16(76.2)	
High school diploma	6(30)	3(14.3)	0.211
University education	0(0)	2(9.5)	
Job			
Housewife	19(95)	19(90.5)	0.578
Employed	1(5)	2(9.5)	
Economic situation			
Poor	4(20)	8(38.1)	
Average	7(35)	8(38.1)	0.284
Good	9(45)	5(23.8)	
Duration after abortion (weeks)	11.40±5.13	8.85±3.92	0.082
Age	27.95±3.92	28.04±3.78	0.936

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Table 3. Comparison of mean mental health scores and their subscales in experimental and control groups in pre-test, post-test and follow-up stages

Variable and group	Before intervention Mean±SD	After intervention Mean±SD	Follow-up Mean±SD	P-value
Physical symptoms				
Experimental group	16.35±1.13	11.50±1.14	10.30±0.80	<0.001
Control group	15.28±1.76	15.38±1.80	15.19±1.96	0.479
Anxiety				
Experimental group	16.05±1.66	11.50±1.13	10.15±1.42	<0.001
Control group	15.52±1.72	15.85±1.38	16.14±1.19	0.284
Social Performance				
Experimental group	15.35±1.42	10.30±1.08	9.75±1.06	<0.001
Control group	14.95±1.46	15±1.84	15±1.84	1.00
Depression				
Experimental group	12.75±1.51	7.95±1.60	7.70±1.41	<0.001
Control group	12±1.7	11.57±1.63	12.09±1.60	0.59
Mental health				
Experimental group	59.25±3.56	41.30±2.55	38.45±3.03	<0.001
Control group	58.14±4.16	58±4.43	58.95±4.87	0.385

Discussion

The results of the present study showed that group counseling with problem - solving approach is effective on women's mental health after spontaneous abortion. Haghparast et al. emphasize on the psychological support after spontaneous abortion, especially during the first year after abortion (25). Nakano et al. also reported that some types of psychological support, such as cognitive – behavioral therapy, are useful for patients with post-abortion mental disorders (26).

In the study by Parsa et al., the results showed that problem - solving group counseling can be used in combination with other treatment techniques to reduce postpartum depression (21). In the study of Taghadosi et al., it was shown that cognitive - behavioral therapy for eight sessions leads to the improvement of mental health in patients with heart failure and was suggested as a complementary treatment by nurses along with other care for these patients (27). The results of this study are consistent with the results of the present study.

Kersting et al. also stated that internet - based cognitive - behavioral therapy significantly improved post-traumatic stress, grief, depression, and overall mental health in participants in the treatment group, and that the implementation of this program could improve health care for post-traumatic mothers (17). Taeidi et al. also conducted a study to investigate the effect of problem - solving therapy on the psychological well-being of women with breast cancer. Problem - solving therapy was performed in eight 90-minute sessions per week for the intervention group. Finally, they concluded that therapy with problem-solving approach had a positive effect on improving psychological well-being in these patients ($p<0.05$) (28). Almost all studies have shown the existence of psychological complications after abortion, but the rate of reduction of psychological complications after abortion has been reported to vary over time and based on interventions. Some believe that these complications remain high for up to 6 months after abortion and disappear after 3 years (12) and others believe that it takes 5 years for all psychological complications of abortion to disappear (29). However, if health care providers intervene, it may be possible to shorten the duration of depression and anxiety in women. However, the results of the study by Coleman et al. proved this fact and showed that not receiving counseling and follow-up leads to anxiety disorder after abortion and the occurrence of more psychological problems (30).

People are taught how to solve problems in problem - solving group counseling. This approach helps the individual use his/her effective cognitive skills to cope with problematic interpersonal situations (31). Therefore, the application of this treatment has an effective role in a person's sense of life satisfaction and generally increases a person's mental health (32).

In general, the results of this study showed that problem - solving group counseling has a significant effect on improving women's mental health after spontaneous abortion and can be considered as an effective intervention. Among the limitations of this study were the individual differences and psychological status of the subjects in completing the questionnaires and doing homework.

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References

1.Cunnigham FG. leveno KJ, Bloom SL, Hauth JC, Gilstrap LC, Wenstrom KD. Williams Obstetrics, 22nd ed. NewYork: McGraw Hill; 2005.

2.Berek JS. Berek & Novak gynecology, 16th ed. Philadelphia: Lippincott Williams & Wilkins; 2019.p. 577-604.

3.Behjati Ardekani Z, Akhondi MM, Sadeghi MR, Sadri Ardekani H. The necessity of a comprehensive study on abortion in Iran. J Reprod Infertil. 2005;6(4):299-320. [In Persian]

4.Rastegari A, Baneshi MR, Haji-maghsoudi S, Nakhaee N, Eslami M, Malekafzali H, et al. Estimating the Annual Incidence of Abortions in Iran Applying a Network Scale-up Approach. Iran Red Crescent Med J. 2014;16(10):e15765.

5.Erfani A, McQuillan K. Rates of induced abortion in Iran: the roles of contraceptive use and religiosity. Stud Fam Plann. 2008;39(2):111-22.

6.Mosayeb Moradi M, Jahdi F, Naimeh SF, Montazeri A. The effect of counseling on anxiety levels of women with spontaneous abortion. Payesh. 2016;15(2):173-9. [In Persian]

7.Gamble J, Creedy D, Moyle W, Webster J, McAllister M, Dickson P. Effectiveness of a counseling intervention after a traumatic childbirth: a randomized controlled trial. Birth. 2005;32(1):11-9.

8.Gong X, Hao J, Tao F, Zhang J, Wang H, Xu R. Pregnancy loss and anxiety and depression during subsequent pregnancies: data from the C-ABC study. Eur J Obstet Gynecol Reprod Biol. 2013;166(1):30-6.

9.McCarthy FP, Moss-Morris R, Khashan AS, North RA, Baker PN, Dekker G, et al. Previous pregnancy loss has an adverse impact on distress and behaviour in subsequent pregnancy. BJOG. 2015;122(13):1757-64.

10.Mills TA, Ricklesford C, Cooke A, Heazell AE, Whitworth M, Lavender T. Parents' experiences and expectations of care in pregnancy after stillbirth or neonatal death: a metasynthesis. BJOG. 2014;121(8):943-50.

11.Dastgheib Z, Gharlipour Z, Ghobadi Dashdebi K, Hoseini F, Vafaee R. Association of between mental health and spiritual health among students in Shiraz University. 2015;24(84):53-9. [In Persian]

12.Munk-Olsen T, Laursen TM, Pedersen CB, Lidegaard Ø, Mortensen PB. Induced first-trimester abortion and risk of mental disorder. N Engl J Med 2011;364:332-9.

13.Nikčević AV, Kuczmierczyk AR, Nicolaides KH. The influence of medical and psychological interventions on women's distress after miscarriage. J Psychosom Res. 2007;63(3):283-90.

14.Eizadi Fard R. Effectiveness of cognitive-behavioral therapy with problem solving skills training on reduction of test anxiety symptoms. J Behav Sci. 2010;4(1):23-7. [In Persian]

15.Wolf NJ, Hopko DR. Psychosocial and pharmacological interventions for depressed adults in primary care: a critical review. Clin Psychol Rev. 2008;28(1):131-61.

16.Mynors-Wallis L. Problem-solving treatment in general psychiatric practice. Adv Psychiatr Treat. 2001;7(6):417-25.

17.Kersting A, Kroker K, Schlicht S, Baust K, Wagner B. Efficacy of cognitive behavioral internet-based therapy in parents after the loss of a child during pregnancy: pilot data from a randomized controlled trial. Arch Womens Ment Health. 2011;14(6):465-77.

18.Hirai K, Motooka H, Ito N, Wada N, Yoshizaki A, Shiozaki M, et al. Problem-solving therapy for psychological distress in Japanese early-stage breast cancer patients. Jpn J Clin Oncol. 2012;42(12):1168-74.

19.Fathi K, Mehrabizade Honarmand M, Zargar Y, Davoodi I, Shahba N. The Effect of Cognitive-Behavioral Stress Management on Illness Perceptions, Quality of Life, General Health and Clinical Symptoms of Women with Psoriasis. J Psychol Achievements. 2013;20(2):193-216. [In Persian]

20.Azizi M, Lamyian M, Faghihzade S, Nematollahzade M. The effect of counseling on anxiety after traumatic childbirth in nulliparous women; a single blind randomized clinical trial. J Kermanshah Med Sci Univ. 2010;14(3):e79475. [In Persian]

21.Parsa P, Ahangpour P, Shobeiri F, Soltanian A, Rahimi A. The Effect of Group Counseling Based on Problem Solving on Postpartum Depression in Mothers Attending to Health Care Centers in Hamadan City. J Urmia Nurs Midwifery Fac. 2017;15(6):440-8. [In Persian]

22.Taghavi SMR. The Normalization of General Health Questionnaire for Shiraz University Students (GHQ-28). Journal of Psychology. 2008;15(28):1-12. [In Persian]

[DOR: 20.1001.1.15614107.1400.23.1.22.1]
[DOI: 10.22088/jbums.23.1.142]

23.Zare N, Parvareh M, Noori B, Namdari M. Mental health status of Iranian university students using the GHQ-28: a meta-analysis. Sci J Kurdistan Univ Med Sci. 2016;21(4):1-16. [In Persian]
24.Goldberg D, Williams P. A user's guide to the General Health Questionnaire. Windsor: Nfer-Nelson; 1988.
25.Haghparast E, Faramarzi M, Hassanzadeh R. Psychiatric symptoms and pregnancy distress in subsequent pregnancy after spontaneous abortion history. Pak J Med Sci. 2016;32(5):1097-1101.
26.Nakano Y, Akechi T, Furukawa TA, Sugiura-Ogasawara M. Cognitive behavior therapy for psychological distress in patients with recurrent miscarriage. Psychol Res Behav Manag. 2013;6:37-43.
27.Taghadosi M, Rohollah F, Aghajani M, Raygan F. Effect of cognitive therapy on mental health in patients with heart failure. Feyz (J Kashan Univ Med Sci). 2014;18(1):52-9. [In Persian]
28.Taeidi E, Montazeri S, Behroozi N, Haghighy Zadeh MH, Ahmadzadeh Deilami A. The Effect of Problem Solving Therapy on Breast Cancer Women. Int J Cancer Manag. 2018;11(9):e69336.
29.Biggs MA, Neuhaus JM, Foster DG. Mental Health Diagnoses 3 Years After Receiving or Being Denied an Abortion in the United States. Am J Public Health. 2015;105(12):2557-63.
30.Coleman PK, Coyle CT, Rue VM. Late-term elective abortion and susceptibility to posttraumatic stress symptoms. J Pregnancy. 2010;2010:130519.
31.Nesu AM, Nesu CM, D'Zurrila TJ. Problem solving therapy [Translated by Seif AA]. Tehran: Dowran; 2013. [In Persian]
32.Malouff JM, Thorsteinsson EB, Schutte NS. The efficacy of problem solving therapy in reducing mental and physical health problems: a meta-analysis. Clin Psychol Rev. 2007;27(1):46-57.

[DOR: 20.1001.1.15614107.1400.23.1.22.1]
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