Original Article

Effect of group couseling on mental health of women with unsuccessful pregnancy

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ABSTRACT

In all types of pregnancies women experience changes in their mental health and perceived social support. The aim of the present study was to determine the effect of counseling on mental health following on pregnancy loss. This quasi-experimental study with control group was conducted in 2019 in tehran. A total of 70 women with pregnancy loss participated in the study. Sampling was done by block random allocation method. The intervention group received 6 sessions of education. Data were collected using demographic information, Goldberg Mental Health Questionnaire and the Perceived Social support Questionnaire-Family Scale were completed by both group in 3 stages andanalyzed by SPSS-16 software and statistical tests with significance level of 0.05. The two groups did not show significant differences in terms of socio-demographic characteristics and mental health before the intervention. The mean score of the total mental health of women was the intervention group and in the control group (P=0.18). group counseling did not have an effect on the mental health of women with a history of unsuccessful pregnancy. The Islamic and Iranian culture and values governing the Iranian society might have been effective in the s, which needs further investigations.

Keywords: Group counseling, Mental health, Perceived social support, Unsuccessful pregnancy.

Introduction

Pregnancy and puerperium are one of the most important events in life. Pregnancy loss is a stressful experience and is often associated with psychological outcomes [1]. Annually, 12-15% of known clinical pregnancies are lost due to factors such as abortions, stillbirths, miscarriages, and molar pregnancies [2]. 20 to 50 percent of pregnancies terminate due to abortion before 20 weeks of pregnancy [3]. Annually, 80000 abortions occur in Iran, about 20% of which are spontaneous abortions, 2.6% are intentional abortions, and 0.2% of abortions for medical reasons [4]. Abortion changes women's mental health and is associated with increased levels of anxiety, depression, and psychological symptoms [5]. The rate of depression in the first two weeks after abortion is 42.1% that decreases to 26.8% after three months and 9.8% after one year [6]. Psychological changes after the loss of a fetus or baby [7] and pregnancy loss is a negative experience in pregnant women and can lead to severe anxiety and depression in subsequent pregnancies. It even causes psychological resistance to accepting a new pregnancy in some women [8]. The rate of depression is 4 times and post-traumatic stress disorder is 7 times higher in women with a history of pregnancy loss compared to women with live births [9].

Pregnancy loss in long term results in increased stress in life and personal relationships, marital problems. It is also associated with reduced quality of life, impaired relationships with relatives and friends and children, or pregnancy [8]. Problems of all aspects of mental health in women with a history of abortion and infertility are more severe in these women and

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disorders of nine psychological dimensions (somatization, sensitivity in interpersonal relationships, depression, paranoid attitude, anxiety, aggression, obsession and compulsion, phobia, psychotic thoughts) are more common in these women [10]. Perceived social support is one of the most important factors influencing mental health [11]. Support is an essential component of good mental health and helps women strengthen their role and ability to adapt and cope with stressors.

Maternal social support during this period can reduce the effects of stress and enable her to cope with stressful situations and prevent the complications of anxiety, preterm delivery, low birth weight, and fetal brain development disorders [12]. Receiving social support from others reduces the psychological complications of stress and improves the conditions [13].

There is a positive association between postpartum depression and social support, so providing social-behavioral interventions to teach kinship communication to provide optimal social support is necessary [14]. The results of a study conducted by Badaghi *et al*. showed that family support has the largest share in predicting postpartum depression [15]. With increasing the level of social support, the level of health increases. The study conducted by Nazari *et al*. showed that 43.6% of pregnant women had mental health disorders and the highest mean score related to social dysfunction with 7.81% and the lowest was related to depression with 2.86% [16]. Lack of mutual understanding and conflicts and tensions between family members are the main reasons for the lack of family support [17]. Counseling programs can help reduce the psychological effects of women with lost pregnancy to reduce the symptoms of mental disorders [18]. Providing care for women with risk factors for anxiety and counseling and referring them for more advanced diagnosis and treatment can improve their quality of life and reduce maternal and neonatal complications [19]. Establishing a dynamic and purposeful relationship helps to plan and continue a successful life.

Group counseling is a type of counseling that is performed in the presence of one or sometimes two counselors with about 8 to 10 participants. This method focuses on problems at the conscious level of clients [20]. Although counseling can be done individually, group counseling is cost-effective and can provide the necessary sense of security for spontaneous and free interaction with group members and reduce the fear and anxiety caused by lack of awareness so that the person gains enough information on the illness process. Support and counseling improve physical condition, reduce anxiety, enhance the perception of life, reduce mood disorders, improve adaptability and adaptive behaviors in a person. Paying attention to mental health-threatening factors in women is an important social issue [21]. Midwifery plays a major role in providing the necessary care during pregnancy, labor, and postpartum and reproductive health. She plays the role of counseling, education, support, and implementation. Providing specialized counseling can help women with a history of pregnancy loss to adapt. No valid and reliable educational content has been designed so far. This study aimed to evaluate the effect of group counseling on the social support and mental health of women with a history of unsuccessful pregnancy.

Materials and Methods

The present study is a quasi-experimental study with a pretest-posttest with control and follow-up group. The statistical population of the study included all non-pregnant women with a history of unsuccessful pregnancy (15-45 years) who referred to the comprehensive health centers of Qods city and obtained a score above 23 in the mental health test. The inclusion criteria of the study included lack of known physical or psychological illness, lack of taking drugs that affected the psyche and the exclusion criterion of the study included being absent in more than one session of group counseling. After obtaining the code of ethics from Iran University of Medical Sciences with the code of IR.IUMS.REC1397.521 and obtaining a letter of introduction for conducting research, the researcher first received a letter of introduction with the number of 98/D/105,2578 from Iran University of Medical Sciences of Qods city and explained the research objectives and procedure and accordingly obtained the consent of authorities. Then, using electronic files in 15 centers and the community health center, women aged 15-45 years and with unsuccessful pregnancy history were identified and if they met the inclusion criteria of the study, they were invited to participate in the study.

Necessary explanations on the objectives of the research, procedure, confidentiality of the information, and the possibility of leaving the study at each stage were provided to participants. If they were willing to participate in the research, written and informed consent form, demographic information form, mental health questionnaire, and social support questionnaire were completed by participants for initial evaluation. Then, their mental health score was determined, and if they scored 23 or higher, they were selected as the research subjects. Eligible individuals were assigned to the intervention and control groups using a block random allocation method. The required sample size was determined to be 31 people in each group at 95% confidence level and 80% test power, assuming that the effect of group counseling on perceived social support and mental health of women with a history of unsuccessful pregnancy is 4 points compared to the control group to be statistically significant. Given the probability of 10% of dropout in samples, the sample size in each group considered to be 35 people. This standard deviation was obtained based on a study conducted by Golshani *et al*. under the title of "The effectiveness of life skills training during pregnancy on the mental health of pregnant mothers" [22]. The data were collected through the General Health Questionnaire -GHQ, designed by Goldberg and Hiller in 1979 to screen for mental disorders. This questionnaire includes 30 questions scored on the 7-Likert scale. It included 4 subscales of physical symptoms, anxiety, social dysfunction, and depression. Cronbach's alpha coefficient of this tool was reported at 0.93

[23]. In the study conducted by Yosefi, it was also reported at 0.91. Another tool used to collect the data was the scale of perceived social support from friends and family, which is used to measure the level of perceived social support from friends and family. This tool is divided into two sections by Heller and Procidano. Each section has 20 questions. Alpha Cronbach has been reported at 0.88 and 0.90 for the dimensions of social support of family and friends, respectively. This questionnaire is used separately or together. For each item, there are three answers: yes, no, and I don't know. The answer of I don't know takes the zero score, the answer no in questions 3, 4, 16, 19, and 20 takes to score 1 and the answer yes takes the zero score and in other questions, the answer no takes zero scores and answer yes takes score 1. The total score of the questions is between zero and 20, and the higher score indicates more social support [24, 25]. In the present study, the content validity of the tool and the scientific validity of the educational booklet was corrected and approved by 5 faculty members of the School of Nursing and Midwifery of Iran. The reliability of the tool was assessed by the retest test method with a 2-week interval. Its correlation coefficient was obtained at 0.84. After obtaining their informed consent and assigning them to one of the intervention and control groups, all eligible individuals who met the inclusion criteria of the study completed the data collection tools. Then, the test group was contacted to participate in the study. In an introductory session, they became familiar with the subject of research and the work process, and a summary of the topics was introduced for them. The interventions were performed by the researcher in 6 sessions of 60 minutes once per week. Sessions were held in 8-member groups based on educational content.

At the beginning of each session, the researcher asked a question about the subject of the session and then the desired subject was discussed in the session. During the open-ended questions sessions, members expressed their views and experiences, and based on the contents of the booklet, the education process was guided and people were encouraged to participate in the discussion. The subjects discussed in the first session included the nature of unsuccessful pregnancy, complications, treatment, and the importance of mental health. The second session focused on anxiety and ways to cope with it. The third session focused on the importance of thoughts, defining thought and mood, and its role in behavior and body and breathing exercise and mental imagination. The fourth session focused on discussing problem-solving skills and their role in life and the problem-solving process. The fifth session focused on the need to being understood and the importance of interpersonal and social relationship skills. The sixth session focused on nutrition, exercise, a healthy lifestyle, and the factors affecting it as physical methods to cope with anxiety. To prevent information exchange between the control and intervention group, educational interventions were held on even days of the week, and participants in the control group received the necessary education on breast and cervix screening. At the end of the sixth session, the questionnaires were re-completed by the intervention and control groups. Six weeks later, in the follow-up period, both groups re-completed the mental health questionnaires and the perceived social support scale. The booklet of educational contents was provided to the control group and for those who were not able to complete the questionnaire in person and completed it via phone call. SPSS version 16 software was used to analyze the data. In this study, descriptive statistics (frequency, percentage of frequency, mean and standard deviation) and inferential statistics (Chi-square, Fisher's exact test, independent T-test, repeated measures ANOVA, and Bonferroni test were used to analyze the data.

Results and Discussion

The mean age of women in the control and intervention groups was 28.94 ± 5.30 and 27.29 ±5.39 years, respectively. The highest frequency of age in the intervention group was 26-30 years (41.2%) and it was 30 years old (37.2%) in the control group. The mean age of the two groups did not show a significant difference (P=0.20). The highest frequency of pregnancy loss type in the intervention group (82.4%) and control group (7.7 85%) was abortion and the two groups were homogeneous in this regard (P=0.93). Pregnancy age at the time of fetal loss in most women in the intervention group (55.9%) and control group (62.9%) was 10 weeks or less. The mean gestational age at the time of fetal loss in the control and intervention groups was 12.26 ± 8.93 and 13.44 ± 8.43, respectively, and the two groups were homogeneous in this regard (P=0.057). The education of most women in the intervention group (61.8%) and control group (51.4%) were diploma and less, and two groups did not have a statistically significant difference in this regard (P=0.38).

Table 1 presents women's perceived social support with a history of unsuccessful pregnancy immediately and 6 weeks after the intervention in the intervention and control groups. Perceived social support before the intervention was not significantly different between the two groups (P=0.12) and despite an increase in perceived social support immediately after the intervention (P=0.46 immediately after intervention and p=0.75 six weeks after the intervention, control, and intervention groups did not show a statistically significant difference in this regard (P >0.05).

Table 1. Comparison of women perceived social support with a history of unsuccessful pregnancy, immediately and 6 weeks after intervention in intervention and control groups

time	before				immediately after intervention				6 weeks after intervention			
	intervention		control		intervention		control		intervention		control	
perceived social support	f	%	f	%	f	%	f	%	f	%	f	%
low (0-7)	1	2.9	4	11.4	0	0	1	2.9	0	0	1	2.9
moderate (8-14)	7	20.6	4	11.4	5	14.7	5	14.3	6	17.6	3	8.6
high (over 14)	26	76.5	27	77.1	29	85.3	29	82.9	28	82.4	31	88.6
total	34	100	35	100	34	100	35	100	34	100	35	100
SD±mean	16.63±3.28		15.21±4.30		16.85±2.64		16.32±3.22		17.04±2.85		16.82±2.82	
independent t test result	t=1.54 df=67 p=0.12				t=0.73 df=67 p=0.46				t=0.31 df=67 p=0.75			

Mental health and its subscales in dimensions of mental health (p=0.69) physical health (P=0.05962), anxiety (P=0.35), social dysfunction (P=0.42) and depression (P=0.88) in two groups did not have a significant difference before the intervention (P >0.05).

Table 2. Comparison of mental health and its subscales in women with a history of unsuccessful pregnancy before intervention in the intervention and control groups

group		intervention		control	
mental health and its subscales		n	%	n	%
physical	no	17	50	14	40
	mild	14	41.2	18	51.4
	moderate	3	8/8	2	5.7
	severe	0	0	1	2.9
SD±mean		7.06±2.61		7.43±3.07	
independent t test result		t=-0.53 df=67 P=0.59			
anxiety	no	11	32.4	6	17.1
	mild	17	50	23	65.7
	moderate	6	17.6	6	17.1
	severe	0	0	0	0
SD±mean		8.15±3		8.77±2.53	
independent t test result		t=-0.93 df=67 P=0.35			
social dysfunction	no	3	8.8	6	17.1
	mild	29	85.3	27	77.1
	moderate	2	5.9	2	5.7
	severe	0	0	0	0
SD±mean		8.26±1.81		7.91±1.80	
independent t test result		t=0.80 df=67 P=0.42			
depression	no	27	479	29	85.3
	mild	7	20.6	3	8.8
	moderate	0	0	1	2.9
	severe	0	0	1	2.9
SD±mean		4.32±2.68		4.44±3.93	
independent t test result		t=-0/14 df=67 P=0/88			
mental health	no	0	0	0	0
	mild	32	94.1	31	91.2
	moderate	2	5.9	2	5.9
	severe	0	0	1	2.9
SD±mean		27.82±5.90		28.53±8.62	
independent t test result		t=-0.39 df=67 P=0.69			

There was no significant difference between two groups immediately after intervention and 6 weeks after the intervention (P >0.05) in terms of mental health (p=0.18), and its subscales in dimensions of physical health (P=0.62), anxiety (P=0.10), social dysfunction (P=0.39), and depression (0.31) **(Tables 2-4).**

Table 3. Comparison of mental health and its subscales in women with a history of unsuccessful pregnancy immediately after intervention in the intervention and control groups

group		intervention		control	
mental health and its subscales		n	%	n	%
physical	no	27	79.4	20	57.1

	mild	7	20/6	14	40		
	moderate	0	0	1	2.9		
	severe	0	0	0	0		
mean±SD		4.79±2.21		5.54±3.15			
independent t test result		t=-1.13 df=67 P=0.25					
anxiety	no	25	73.5	15	42.9		
	mild	7	20.6	18	51.4		
	moderate	2	5.9	2	5.7		
	severe	0	0	0	0		
mean±SD		5.91±2.81		6.51±3.45			
independent t test result		t=-0.79 df=67 P=0.43					
social dysfunction	no	19	55.9	17	48.6		
	mild	14	41.2	18	51.4		
	moderate	1	2.9	0	0		
	severe	0	0	0	0		
mean±SD		5.79±2.78		5.94±2.93			
independent t test result		t=-0.21 df=67 P=0.83					
depression	no	33	97.1	30	85.7		
	mild	1	2.9	5	14.3		
	moderate	0	0	0	0		
	severe	0	0	0	0		
mean±SD		2.29±2.26		3.23±2.70			
independent t test result		t=-1.55 df=67 P=0.12					
mental health	no	24	70.6	15	42.9		
	mild	10	29/4	20	57.1		
	moderate	0	0	0	0		
	severe	0	0	0	0		
mean±SD		18.79±7.08		21.23±9.75			
independent t test result		t=-1.18 df=67 P=0.24					

Table 4. Comparison of mental health and its subscales in women with a history of unsuccessful pregnancy 6 weeks after intervention in the intervention and control groups

group		intervention		control	
mental health and its subscales		n	%	n	%
physical	no	23	67.6	24	70.6
	mild	11	32.4	7	20.6
	moderate	0	0	3	8.8
	severe	0	0	0	0
SD±mean		5.06±2.66		5.44±3.72	
independent t test result		t=-0.48 df=66 P=0.62			
anxiety	no	20	58.8	11	32.4
	mild	11	32.4	20	58.8
	moderate	3	8.8	3	8.8
	severe	0	0	0	0
SD±mean		6.09±3.90		7.50±3.08	
independent t test result		t=-1.65 df=66 P=0.10			
social dysfunction	no	12	35/3	8	23.5
	mild	19	55/9	25	73.5
	moderate	3	8/8	1	2.9
	severe	0	0	0	0
SD±mean		7.29±2.71		7.79±2.10	
independent t test result		t=-0.85 df=66 P=0.39			
depression	no	27	79.4	26	77.9
	mild	7	20.6	6	19.1
	moderate	0	0	1	1.5
	severe	0	0	1	1.5
SD±mean		3.38±3.37		4.29±4.07	
independent t test result		t=-1.005 df=66 P=0.31			
mental health	no	18	85.9	17	50
	mild	15	44.1	13	38.2
	moderate	1	2.9	4	11.8
	severe	0	0	0	0

SD±mean	21/82±9/04	25.03±10.77
independent t test result	t=-1.32 df=66 P=0.18	

Conclusion

Comparing women in terms of perceived social support with a history of unsuccessful pregnancy immediately and 6 weeks after the intervention in the control and intervention groups showed that the perceived social support did not differ before the intervention in the two groups (P=0.12) and social support was greater immediately after the intervention (P=0.46) and 6 weeks after the intervention in the intervention group than that in the control group, but the difference was not statistically significant (P=0.75). Although group counseling increased social support in the intervention group, the difference between the two groups in the perceived social support was not significant. It could be due to the Islamic beliefs and values governing Iranian society. Regardless of the outcome of pregnancy, a woman in this society is often supported by her husband, family, and others. This culture is rooted in Islamic Iranian beliefs and is one of the values that every Iranian is proud of it.

The results of this study indicate the impact of education and counseling. As the provided social support is based on the old beliefs and values of Iranian-Islamic culture, family members provide support from during pregnancy to the end of pregnancy. The present study was conducted in one of the cities near Tehran. Similar studies in other provinces can show better and clearer results of social support of family and those around the mothers with a history of a lost pregnancy. Similar studies are recommended in other regions with different cultures, economic, social, and cultural levels.

The results of a study conducted by Mohaddesi *et al*. (2009) under the title of "Investigating the effect of individual counseling on the level of perceived social support by families in mothers with pregnancy loss" show that individual counseling in women with a history of pregnancy loss increases the perceived social support from family. The observed difference can be due to differences in the way of providing counseling. In coping with crises, providing individual counseling is likely to be more effective than group counseling. In another study conducted by Mohammadpour *et al*. under the title of "The effect of counseling with men on social support and perceived stress of their pregnant wives", results showed that counseling with men is effective on perceived social support and stress of women. Social support is a multidimensional concept influenced by environmental cultural issues. To provide more support for pregnant women with a history of unsuccessful pregnancies, spouses must receive the necessary counseling to provide more support for their wives [26]. Results of a study conducted by Neisani Samani *et al*. (2016) under the title of "Investigating the relationship between anxiety and perceived social support in pregnant women with assisted reproductive methods" showed no significant relationship between anxiety and perceived social support, which is consistent with results of the present study [19].

The results of a study conducted by Kheirkhah *et al*. (2014) under the title of "Investigating the effect of group counseling on infertility adaptation in infertile women" showed that group counseling is effective in increasing the adaptability of infertile women undergoing IVF or ICSI treatment and can be used as a complementary method along with other methods in an adaptation of infertile women [27]. Group counseling can be effective in increasing adaptation to life events, but social support is rooted in culture, and strong family ties, based on kindness and attention to others cause individuals to fulfill their responsibilities in social and interpersonal relationships and help each other. It could be the most important reason for the high level of perceived social support in the recent study. Investigating and comparing women's mental health with a history of unsuccessful pregnancy immediately and 6 weeks after the intervention showed that the control and intervention groups were homogeneous before the intervention and no significant difference was found between them. The mean score of the physical symptom (P=0.25), anxiety symptom (P=0.43), social dysfunction symptom (P=0.83), social dysfunction symptom (p=0.12) was not different between two groups of intervention and control immediately after the intervention. The mean of mental health disorder immediately after the intervention was 18.79±7.08 in the intervention group and it was 21.23 ± 9.75 in the control group (p=0.24). It means that mental health immediately after the intervention in two groups of intervention and control was not significantly different. The two groups of intervention and control did not differ significantly in the variable of mental health and its subscales after group counseling, and group counseling intervention did not have a significant effect on mental health and its dimensions. Also, the results did not differ significantly between two groups 6 weeks after the intervention. This result was almost predictable because mental health, physical disorder, depression, anxiety, and social dysfunction are not developed in one day, but are developed and intensified over time. An unsuccessful pregnancy can cause complications and physical problems, depression, anxiety, and ultimately social dysfunction. A few studies are available to evaluate the effects of these complications in the short term and assess the role of educational interventions in improving these complications. This intervention was performed in a period close to unsuccessful pregnancy. Due to time constraints during the study period, the researcher could not assess the process of adaptation to the occurrence of unsuccessful pregnancies and its effects on mental health and perceived social support longitudinally.

Thus, conducting a longitudinally study over 6 months to 2 years to evaluate the effects of unsuccessful pregnancies on mental health, anxiety, depression, and social dysfunction and

the design of interventional educational studies is recommended. The results of a study conducted by Karami *et al*. (2015) [28] under the title of "Investigating the effectiveness of the educated behavioral program on the mental health of pregnant women in Ahvaz in 2015", are not in line with the results of a recent study, since the mental health score increased in the intervention group after the intervention compared to control group and intervention had an impact on dimensions of anxiety (p=0.01) and depression (p=0.02) and physical symptoms (p=0.01) and did not affect social function in mental health in their research. Its reason might be a difference in the statistical population. A pregnant woman, despite having anxiety about the outcome of pregnancy, is hopeful and happy and is generally supported by family, spouse, and others. Sense of becoming mother and pregnancy enhances their hope for life and happiness, and the mental health of a pregnant woman cannot be compared to the mental health of a woman who has had an unsuccessful pregnancy. Other similar studies are being conducted, but the results have not yet been published, so we avoided reporting their results. However, Nasiri Ziba *et al*. (2018) conducted a study entitled "The effect of self-care education program on mental health and self-esteem of patients with type 2 diabetes and results consistent with those of our study were obtained" [29]. Self-care education did not make a difference between the intervention group and the control group in terms of self-esteem (p=0.054) and mental health (p=0.076) and the statistical difference between them was not significant [29]. It indicates people learn coping strategies and adapt to chronic illnesses over time, and cross-sectional interventions cannot affect self-esteem, mental health, and dimensions. In a recent study, the fetal loss was an acute adverse event, especially in those with had no child or had a history of miscarriage and repeated child loss, which can affect their mental health. In general, the results of the present study indicate implementation of group counseling program caused significant differences in the variables of physical, social dysfunction, depression and mental health symptoms in the intervention group before and after the intervention, but intervention group did not show a significant difference with the control group. The group counseling program did not affect mental health and its subscales and social support in the short term. One of the reasons is the hope of pre-pregnancy in mothers and if pregnancy does not occur over a long time, anxiety, depression, social dysfunction, and physical symptoms will occur, and if spouse and family are frustrated with the re-pregnancy and having a child is an important issue for them, it can affect their support and reduce its severity, which can lead to long-term complications. Since group counseling program has a significant effect on some components of mental health in physical symptoms and depression and anxiety symptoms, it is recommended that reliable and valid educational content be provided to health care staff to empower them for providing counseling and services to women with a history of unsuccessful pregnancies and improving the quality and quantity of services provided. Based on the results of this study, it is recommended that a study be designed and conducted on the effect of group counseling on mental health and social support of women with unsuccessful pregnancies over a long period to examine the long-term effects of this complication on mothers and families. It is recommended to conduct a qualitative study to examine the dimensions of the complication of unsuccessful pregnancy on mental health and social support of women and their families for careful planning to increase women's adaptation and resilience and increase mental health and social support.

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