

# Comparison of the Effectiveness of Group Reality Therapy and Cognitive-behavioral Group Therapy on Coping Strategies in Post-abortion Women

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## Abstract

**Background:** One of the most common pregnancy complications is an abortion, causing various mental challenges for women and their families.

**Objectives:** This study aimed to compare the effectiveness of group reality therapy and cognitive behavioral therapy (CBT) on the coping strategies of women after abortion.

**Methods:** This semi-experimental study was performed based on a pretest-posttest design and a control group. In this study, 45 women with abortion practices were randomly assigned to the first test group, the second test group, and the intervention group (n=15 in each group). The data collection instrument was a coping strategies questionnaire. Educational interventions were implemented with pre-established targets for women, followed by a re-administration of the questionnaires, and data analysis was carried out 50 days later. Data were analyzed by mixed variance analysis and Bonferroni test using SPSS22 software.

**Results:** Findings showed a significant difference between reality therapy and CBT on coping strategies in all components ( $P < 0.05$ ) except for confrontive coping and distancing.

**Conclusion:** It can be concluded that CBT was more effective than reality therapy in improving coping strategies.

*Keywords:* Abortion, Cognitive behavioral therapy, Pregnancy, Reality therapy

## 1. Background

Today, fertility holds significant importance across many cultures, and the desire to become a parent is considered a crucial aspect of human behavior. When efforts to become pregnant are unsuccessful, it can result in overwhelming emotions and a challenging experience, ultimately disrupting one's mental well-being (1). Accordingly, abortion as a deliberate termination of pregnancy is the most common event of pregnancy loss (pregnancy with failure) (2), which is caused by several reasons, such as the mother's life preservation, maternal and fetal health, maternal mental health, sexual assaults, and socioeconomic reasons (3).

Accordingly, it is essential to note that women with depression need to maintain and strengthen their spirits, so coping strategies are vital for them. Lyon et al. believe that people with depressive disorder consider their concerns as a coping strategy and infer that their concerns cause them to Things to be done (4). This is also regarded as necessary in other ways, i.e., to reduce many depressions, they use practical strategies to reduce and control their depression effectively. In each case, coping strategies are essential (5). Accordingly, coping is a set of behavioral and cognitive activities and processes to prevent, manage, and reduce anxiety disorders and emotions, such as depression (6-8). Lazarus divides

coping strategies into problem-oriented and emotion-oriented coping categories (9). Problem-oriented coping represents a purposeful problem-solving effort, problem reorganization, or attempts to change position. Emotion-oriented coping describes self-oriented reactions to reduce stress (not logical problem-solving). These reactions include emotional responses directed toward the person instead of the problem (10). Problem-focused coping strategies are associated with better and emotion-focused coping strategies with weaker coping strategies (11). Therefore, coping strategies for women with abortion, despite the emotions in their souls and bodies, are cognitive-behavioral measures for managing themselves (women with abortion) in stressful and difficult situations (12).

According to this, group reality therapy is a counseling and psychotherapy method that Glasser, a psychiatrist, has founded for therapists, counselors, and other people to help people be aware of their needs, monitor behavior, and make appropriate choices to empower them (13). Reality therapy is a method based on doing, and it tries to meet the needs through the satisfaction of images of the qualitative world (14). The therapist and the client will create an attainable program with positive steps to help him satisfy his needs. The program is what clients can do (15). This type of therapy allows patients to transit from dysfunctional and destructive behaviors and

choices to efficient and constructive ones. As a result, it is expected that in this type of treatment, women are more prepared to understand the facts after abortion (16), recognize the issues and challenges they face, and actively work on resolving and coping with them to grow and improve themselves.

Another important treatment approach explored in this study is Cognitive-Behavioral Group Therapy (CBGT). The modern origins of cognitive behavior therapy can be traced back to the development of behavior therapy in the early 20th century, the development of cognitive therapy in the 1960s, and subsequently, the integration of the two (17). Cognitive-Behavioral Group Therapy developed by Himberg and Becker (18) is a circuit group intervention designed specifically for this disorder in which cognitive restructuring takes place in the context of sham exposure exercises (symbolic simulation) (19). The main goal of cognitive therapy in the group is to eliminate errors, distortions, and biases in thinking so that people can act more efficiently (20). In this method, behavioral techniques mainly include avoiding situations or changing responses to such an abyss and giving new answers (21). Numerous scientific, academic, and clinical researches have shown that cognitive behavioral therapy (CBT) in groups is effective in the treatment of depression and many mental and even physical diseases. Of course, the success and effectiveness of cognitive behavior therapy depend on the helpful cooperation of the counselor or psychotherapist with the patient or referrer. Moreover, this treatment method includes accurately identifying problems, creating accessible goals, empathetic communication, fact-checking, training, and doing different tasks. By doing these things, other people can make positive and constructive changes in their lives (22).

Scientific and field studies in this regard are scarce and need further consideration by researchers and custodians because society needs healthy people, especially women with nutritional, personal, and mental health, to deliver healthy children to society. On the other hand, the burden of health costs from the government and families is controlled and reduced, and negative consequences of women's disorders are affected. This study can lead to anger, anxiety, suicidal ideation, divorce, marital incompatibility, marital dissatisfaction, decreased pregnancy and fertility, and a low young population rate. Therefore, this study aimed to compare the effectiveness of group reality therapy and CBT on coping strategies in women after abortion.

## 2. Objectives

This study aimed to compare the effectiveness of group therapy and CBT on coping strategies of women after abortion.

## 3. Methods

This semi-experimental study was conducted based on a pretest-posttest control group design. Women referred to a gynecologist following an abortion in one of the obstetrics and gynecology clinics in Shahrak-e-Gur-e-Gynecology in West Tehran were included in the study's statistical population (receiving treatment inquiry). Forty-five patients were chosen using a convenient sampling technique. They were then randomly assigned to three groups of 15, each consisting of 15 individuals, and replaced with reality therapy (15), CBT (15), and control (15). Based on the effect size=0.40,  $\alpha=0.95$ ,  $1-\beta$  (err prob)=0.80 test power, and 10% loss for each group, the necessary total sample size was computed to be 45. The study included women aged between 20 and 35 who had undergone legal abortions, as well as those who had experienced a single abortion. The age range of 20 to 35 years in this study was selected because most of the patients referred to the clinic were in this age range. Women with serious mental illnesses and those with a history of taking psychiatric medications were excluded from the study.

The ethical considerations for the study included ensuring the confidentiality and privacy of the data were maintained when utilizing it for research purposes. This study considered the subjects' freedom, privacy, confidentiality, and respect for their rights and dignity. Other ethical guidelines followed in this study included explaining the goals of the research to the subjects, obtaining their informed consent, offering them the choice to withdraw from the study, providing acceptance and commitment-based reality therapy while ensuring their safety, and responding to their inquiries and sharing the findings if they wanted to be participants. The control group was similarly guided during treatment sessions to adhere to ethical principles. This study was approved by the Ethics Committee of Islamic Azad University, Tehran North Branch, Iran (IR.IAU.TNB.REC.1399.110).

**Coping Strategies Questionnaire:** This 66-item questionnaire, developed by Lazarus and Folkman (23), measures coping strategies in eight subscales. The replies are scored on a 4-point Likert scale. The scoring system of this instrument is based on two methods: raw scores (describing coping effort for each of the eight types of coping) and relative scores (the ratio of effort in each coping type). I didn't use both scoring methods on a four-choice Likert scale: 0=, 1=very little, 2=to some extent, and 3=in large quantities. The validity of this tool was determined appropriately by testing the internal stability of coping measurements obtained by Cronbach's alpha coefficient. The reliability of the test can also be regarded as acceptable. The coefficient for clarity and accuracy of questions was reported to be 0.76, and

the relation between each subscale and its main scale was 0.70 (24). In this research, professors confirmed the face and content validity, and its overall validity was established through the calculation of Cronbach's alpha coefficient which yielded a high value of 0.895, indicating strong reliability.

### Reality Therapy Sessions

In the first experimental group, Glasser's group reality therapy intervention (25) was performed in eight 120-minute sessions.

### Cognitive Behavioral Therapy Sessions

In the second experimental group, CBGT (18) was performed in eight 120-minute sessions. The collected data were analyzed in SPSS22 software using descriptive and inferential statistics. Accordingly, descriptive statistics were utilized to investigate the demographic characteristics of the subjects and the status of each research variable based on the frequency, mean, and standard deviation tables. Inferential statistics, mixed variance analysis, and Bonferroni test were conducted to investigate and compare the effectiveness of interventions on dependent variables.

## 4. Results

The mean age of participants was 27.17 (8.49). The majority of individuals (46.7%) held a bachelor's degree as their highest level of education. Of the participants, 62.2% were housewives, 37.8% were

employed, and the largest age group was 26 to 30 years old, making up 46.7% of the respondents.

As seen in Table 2, the effect of the time\*group variable on all components is significant ( $P<0.001$ ). In other words, the scores of the groups in the post-test were significant compared to the pre-test. Furthermore, the effect of the between-subject variable of interventions was significant in increasing the score of groups ( $P<0.001$ ). This means that CBGT and group reality therapy have successfully boosted women's coping strategy scores in comparison to the control group. The interaction between time and intervention and these two variables' simultaneous effect on the components' scores were also statistically significant ( $P<0.001$ ). In other words, the coping strategy scores of women in each intervention vary over time.

Table 3. Bonferroni test results for binary comparison of groups in coping strategies. In Table 3, the results of the Bonferroni test show that the mean scores of all components were significantly higher in both experimental groups than in the control group ( $P<0.01$ ). There is also a significant difference between the two experimental groups (CBT and group reality therapy) in terms of the effectiveness of coping strategies in all components except the two components of confrontation ( $P=0.302$ ) and avoidance ( $P=0.603$ ). According to the results of Table 3, CBT shows a superior effect on self-control, seeking social support, accountability, avoidance selection, problem-solving, and positive re-estimation, resulting in greater enhancements.

**Table 1. Descriptive statistics values of components**

Variables	CBT		Reality Therapy		Control	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Confrontive coping	8.40±1.76	11.73±1.83	8.67±1.44	10.07±1.16	8.40±1.99	8.47±1.45
Distancing	8.60±1.92	11.87±1.35	8.87±1.50	10.53±1.40	8.27±1.75	9±1.60
Self-controlling	10.87±1.55	13.87±1.30	10.20±1.78	11.93±1.90	9.93±1.38	10.07±1.79
Seeking social support	8.73±1.87	12.27±1.10	9.27±1.79	10.27±1.38	8.93±1.66	8.60±1.59
Accepting responsibility	5.20±1.61	9.40±1.18	4.93±1.53	7.80±1.52	5.13±1.66	5.40±1.80
Escape-avoidance	11.60±1.29	15.20±1.93	12.27±1.03	13.40±1.80	12.27±1.50	11.80±1.65
Planful problem-solving	9.33±1.54	13.40±1.12	9.07±1.48	11.67±1.49	8.87±1.18	8.53±1.55
Positive reappraisal	9.93±1.62	14.33±1.63	10.47±1.24	12.07±1.58	10.47±1.45	10.27±1.28

**Table 2. Results of mixed variance analysis among experimental and control groups in coping strategies in pre-test and post-test stages**

Variable	Source	SS	df	MS	F	P	Eta
Confrontive coping	Time	57.60	1	57.60	21.58	0.001	0.20
	Group	20.28	2	20.14	7.55	0.001	0.15
	Time*Group	40.46	2	20.23	7.58	0.001	0.15
Distancing	Time	80.27	1	80.27	31.25	0.001	0.27
	Group	39.82	2	19.91	7.75	0.001	0.15
	Time*Group	24.62	2	12.31	4.79	0.011	0.10
Self-controlling	Time	59.21	1	59.21	22.13	0.001	0.20
	Group	84.28	2	42.14	15.75	0.001	0.27
	Time*Group	30.95	2	15.47	5.78	0.004	0.12
Seeking social support	Time	44.10	1	44.10	17.45	0.001	0.17
	Group	45.42	2	22.71	8.98	0.001	0.17
	Time*Group	57.86	2	28.93	11.45	0.001	0.21
Accepting responsibility	Time	134.44	1	134.44	59.23	0.001	0.41
	Group	62.15	2	31.07	13.69	0.001	0.24

	Time*Group	60.02	2	30.01	13.22	0.001	0.23
<b>Escape-avoidance</b>	Time	46.94	1	46.94	18.42	0.001	0.18
	Group	28.46	2	14.23	5.58	0.005	0.11
	Time*Group	62.68	2	31.34	12.30	0.001	0.22
<b>Planful problem-solving</b>	Time	100.27	1	100.27	47.14	0.001	0.35
	Group	108.88	2	54.44	25.59	0.001	0.37
	Time*Group	75.28	2	37.64	17.69	0.001	0.29
<b>Positive reappraisal</b>	Time	84.10	1	84.10	40.69	0.001	0.32
	Group	46.82	2	23.41	11.32	0.001	0.21
	Time*Group	80.60	2	40.30	19.50	0.001	0.31

Table 3. Bonferroni test results for binary comparison of groups in coping strategies

Variable	Group (i)	Group (j)	Mean Diff. (I-J)	Std. Error	P
<b>Confrontive coping</b>	Control	CBT	-1.63	0.42	0.001
	Control	Reality therapy	-0.93	0.42	0.049
	CBT	Reality therapy	0.70	0.42	0.30
<b>Distancing</b>	Control	CBT	-1.60	0.41	0.001
	Control	Reality therapy	-1.06	0.41	0.035
	CBT	Reality therapy	0.53	0.41	0.60
<b>Self-controlling</b>	Control	CBT	-2.36	0.42	0.001
	Control	Reality therapy	-1.06	0.42	0.040
	CBT	Reality therapy	1.30	0.40	0.008
<b>Seeking social support</b>	Control	CBT	-1.73	0.41	0.001
	Control	Reality therapy	-1.00	0.41	0.021
	CBT	Reality therapy	0.73	0.41	0.043
<b>Accepting responsibility</b>	Control	CBT	-2.03	0.38	0.001
	Control	Reality therapy	-1.10	0.38	0.018
	CBT	Reality therapy	0.93	0.38	0.046
<b>Escape-avoidance</b>	Control	CBT	-1.36	0.41	0.004
	Control	Reality therapy	-0.83	0.41	0.019
	CBT	Reality therapy	0.53	0.41	0.048
<b>Planful problem-solving</b>	Control	CBT	-2.66	0.37	0.001
	Control	Reality therapy	-1.66	0.37	0.001
	CBT	Reality therapy	1.00	0.37	0.028
<b>Positive reappraisal</b>	Control	CBT	-1.76	0.37	0.001
	Control	Reality therapy	-0.90	0.37	0.032
	CBT	Reality therapy	0.86	0.37	0.047

## 5. Discussion

This study aimed to compare the effectiveness of group reality therapy and CBT on coping strategies of women after abortion. The results demonstrated that group reality therapy and CBT had an effect on postoperative coping strategies of women after abortion, and this effect WAS more evident in CBT. The findings of this research were in line with those reported by Habibi et al. (14), Amani (15), Soleimani et al. (16), Carpenter et al. (17), Kinsinger (18), and Mosalanejad et al. (26).

The study also found that group reality therapy and CBT were effective in enhancing coping strategies for women following an abortion. The impact of CBT on indicators of self-control, seeking social support, social responsibility, problem-solving, positive re-outcome, and avoidance was stronger compared to group reality therapy in terms of coping strategies. Accordingly, the mean value obtained from coping strategies in the experimental group was higher than that of the control group. Moreover, post-test results showed that women exhibited stronger coping strategies after the abortion compared to the pre-test. This indicates that the CBT educational program has increased the cognitive level of the

studied women regarding dealing with existing events and comprehending life events as integral aspects of reality. Consequently, post-testing revealed that women were able to strengthen their coping strategies, adopt behavioral changes, and engage in actions conducive to their well-being, flexibility, and resistance. The coping level in the studied women was also evident and stable after follow-up. In line with the results, Mosalannejad et al. (26) concluded that CBT produced psychological hardiness and cognitive coping styles in the experimental group. As in the present study, there was a significant difference in hardiness between the two groups after the intervention. Before and after the intervention, there was no significant difference between coping strategies; however, there was a significant difference in terms of cognitive-oriented coping scores in pre-test and post-test scores in the experimental group.

In explaining the obtained results, it is stated that coping strategies are one of the most important and flexible activities to manage and overcome obstacles and problems in different life conditions. Coping strategies are effective strategies that an individual adopts according to the current situation. These strategies include self-control, seeking social support, accountability, avoidance excerpts, problem-solving

and positive re-estimation, confrontation, and avoidance, each of which can be used in specific circumstances. Accordingly, abortion and subsequent surgery are some of the most important events in women's lives that can be counteracted by using these coping strategies. The employment of behavior therapy can strengthen the ability to use coping strategies in people. Accordingly, the pre-test and post-test scores of coping strategies were different in women; as a result, they could understand and apply coping strategies in the post-test stage. Therefore, CBT profoundly influences an individual's cognition, understanding, and realization to choose the most appropriate path throughout life (according to the specific conditions). Field et al. (27) have stated that CBT is based on the belief that intellectual distortions and dysfunctional behaviors contribute to the creation and maintenance of psychological disorders. By instructing individuals in acquiring new cognitive skills and strategies, coping mechanisms can be developed to alleviate symptoms and distress associated with these disorders.

Reality therapy has been able to help women use coping strategies against abortion by determining behavioral guidelines, outlining methods to attain satisfaction, happiness, and success, facing reality, accepting responsibility, solving problems, and coping with realities, such as abortion. However, the women's feedback indicated that while group reality therapy holds significance, CBT has proven to be more impactful as it involves reflective thinking and behavioral pattern recognition in specific scenarios. As a result, women's coping strategies following abortion have been influenced by CBT, given its objective of enhancing mental well-being and fostering individual coping strategies for problem-solving (28). However, the studied women were unable to strengthen confrontational and avoidance strategies concerning reality therapy and CBT, underscoring the profound impact of abortion on them. In behavior therapy, more effort should be made to understand the subjective perspectives and realistic perceptions of these women regarding abortion and subsequent practices. This understanding can assist these women in promptly confronting this experience and distancing themselves from it. Thus, there was a difference in the effectiveness of group reality therapy and CBT on women's postoperative coping strategies following abortion.

It is recommended that further research be conducted on other human communities to achieve the goal of this study as the current study was restricted to the society of women after abortion. This significant limitation hinders the generalization of the results to other populations. The absence of interview conditions in the current study precluded this possibility, presenting a challenge and constraint within the research. To ensure that the research findings are comparable, similar studies should be conducted on women who have had abortions in

various cities and cultures.

## 6. Conclusion

It can be concluded that CBT was more effective than reality therapy in improving coping strategies.

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## Conflicts of interest

The authors declare that they have no conflict of interest.

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