Effectiveness of De-Stressful Skills Training On Reducing the Distress of Women Infected by Breast Cancer

Fatemeh Givi¹*, Farah Lotfi Kashani², Shahram Vaziri³, Mohamad Esmaeil Akbari⁴

ABSTRACT

Any changes in human’s life is along with stress, as well as diagnosis of cancer occurs the unique distress for the patient. The objective of the extant paper is determining the effectiveness of training the skills of confronting the stress for reducing the distress of women infected by breast cancer. Therefore, 23 women infected by breast cancer referring to Shohada Hospital of Shahid Beheshti University of Medical Sciences in Tehran by means of convenience and random sampling in two test (12 samples) and control (11 samples) groups. All examinees were evaluated firstly as respect to the distress rate by means of Kessler’s distress assessment scale (K10), then de-stressing manner was trained to the test group during 8 sessions each one 90 minute. Control group has received any intermediation. The results of analysis of covariance of distress scores indicated that training stressful skills is effective on reducing the distress of women infected by breast cancer.

Keywords: De-Stressful Skills Training, Women, Breast Cancer

Breast cancer is one of the prevalent diseases in Iran and the world. Some statistics imply that out of 8 women, one person has the chance of infecting by this disease. As per the report of Akbari (2006), every year 1063 persons lose their life due to catching to this disease. Although the existing advances for treating this disease has upraised the lifetime from 75% in 1970s to 87% in 1990, but yet these patients are involved in complications such as pain and distress.

Diagnosing and exposing to treatments related to breast cancer may incur a lot of stress directly and indirectly on the infected person. This stress according to the description of Sile (1946)

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creates a warning reaction at the first stage that is an automatic response and the person has no considerable conscious control thereon. In continue, this body process attempts by resistance to return to its balance and relaxation and if this resistance doesn’t return the balance and relaxation they will be involved in exhaustion and distress. This distress causes the weakness of immune system in a deficient revolving reaction and provides the changeability of early disease to the advancing status. The distress that includes the extensive concept of proprietary symptoms such as concern on disease and reduction of health, depression, anxiety, anger, sleep disorders, reduction of appetite, focusing disorders and sense distress along with fear from inability and death has a lot effect on disease and patient’s life.

While revising distress occurrence it is observed that diagnosing cancer due to the implied meanings of this diagnosis in the patient & family’s mind such as probability of deformity, pain, financial and social problems, disruption of family structure, death and some real events results in some deep emotional and exciting problems for the patient and his family. Fearing from relapse, beginning of treatment, accepting painful medicinal treatments, waiting for test results, combating against uncontrollable pains, pain, reduction of social activities and inability, radiotherapy and chemotherapy make these patients more distressful and limit the perception of their ability for coordinating the life conditions with the existing stress as a situation out of tolerance, such conditions reduce the patient’s health feeling and effectiveness of individuals effective on their improvement. Upon increasing the depression and anxiety, lack of enjoy feeling, taking distance from friends or family, lack of motivation and failure bearing, reduction of sexual desire, increasing or decreasing appetite and weight, reduction of energy and premature fatigue, sleep disorder become incident, in other word, the resistance force is weakened against tumor and again the distress including anxiety, depression and fear become more acute. Due to this revolving reaction, the researches show that within 50 to 85% of patients infected by cancer suffer from a psychiatric disorder concurrently.

The distress requires the immediate management in order to avoid the patient’s problems not to become more complicated. As Bridin, Canner, Chrichnazami & Plant (1999) have reported, any action for reducing the distress rate will have very important effect on the improvement of enormous amount of symptoms and signs resulted from cancer and controlling actions. Sometimes, the patient’s distress leads the patient towards choosing uncommon treatment methods and as a result postponing the main treatments. Thus, treating the distress is a part of patient’s main treatment that should be commenced since the same first stage and to be continued until the end of treatment.

The researches indicate that psychological interventions may reduce the emotional distress of these patients including anxiety, fear, concern and anger and improve the quality of their life and self-esteem and increase their immune system and satisfaction with life. Whist, the studies show
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that self-supposing thought, cognitive mistakes, training level, and aiming based on concern and anxiety have considerable role in occurrence of psychological problems of these patients and coping and confronting based on negative excitement increase the distress of whom infected by breast cancer, it seems if the cognitive ability of patients infected by cancer is increased and learn them some methods to how avoid from meditating about stressful subjects and how reduce their emotional turmoil level, their psychological distress of these patients may be reduced successfully.

Altogether, it seems the cancerous patients need to express their feelings, receive their required protection and learn the required coping skills. In this study, it is attempted to reduce the distress resulted from breast cancer of patients by training the de-stressful skills such as relaxation by deep breaths, learning the focus on present, changing the intellectual forms and replacing the positive inner whispers instead of negative inner whispers, avoiding from disaster-making, sympathy and attracting social protections, laughing and walking.

Procedure:
The extant quasi-experimental study has been applied as a pretest-posttest design by the control group. The studied statistical population of this study is consisted of women infected by breast cancer referring to Shohada Hospital of Shahid Beheshti University of Medical Sciences within the age range of 20-65 and educational lever higher than middle school diploma. Out of this population, 23 persons were selected via random convenience sampling and were divided in two test (12 persons) and control (11 persons) groups randomly. The conditions for admitting treatment included passing at least 3 months after chemotherapy, having at least middle school diploma, lack of relapse and lack of using psychiatric drugs and conditions for exiting from study is not passing 3 months after chemotherapy, literacy less than middle school diploma, relapse and using psychiatric drugs. For observing the moral codes of all examinees of treatment process, the treatment period of the informed and written satisfaction of individuals for admitting in the research were obtained.

The control group was told to wait for the beginning the course as the waiting group for one month. After completion of course, training method was applied for them.

The de-stressing skills including deep breathing, consciousness, thinking styles, sympathy, problem solving, establishing communication, social protection, laugh and walking were trained to the test group twice per week, each session 90min, and for one month. The both groups before beginning the intermediations and after 8 sessions were assessed aiding Kessler’s distress assessment scale (K10).
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For collecting data, Kessler psychological distress assessment scale 10 (K10) was used. This scale that has been designed for identification of distress rate of the publics during the recent month has been introduced by Kessler (2003). This scale has been compiled by Kessler et al in 2002 as a 10 item scale. The questions answer had 5 options (ever, most times, sometimes, rarely and never) and each answer is scored between 0 to 4. Forokava (2003) has confirmed the validity of K10 for diagnosing the mood and anxiety disorders. Fessart (2009) has reported the reliability of this test by Cronbach’s alpha coefficient equal to 0.93. Donker (2010) has reported the reliability of this test equal to 0.93 and declared that the high scores in this scale have close relationship with diagnostic scores of major depression, anxiety, social phobia, phobia disorder, and agoraphobia. This scale of Vaziri & Lotfi Kashani (2011) in a survey study have reported the reliability of Kessler scale K10 by Cronbach’s alpha coefficient equal to 0.93 and correlation between the scores of this scale by means of GHQ28 equal to 0.83.

In this study, test group were trained by de-stressing skills. This treatment program has been drafted by Vaziri & Lotfi Kashani based on the available backgrounds and management methods and confronting stress considering the needs of patients infected by breast cancer. This package has been executed as 8 sessions each 90min. in table 1, the applied intermediation plan has been reported for each session separately.

Table 1: De-stressing plan for the patients infected by breast cancer for each session separately:

<table>
<thead>
<tr>
<th>Session</th>
<th>Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>First session</td>
<td>Familiarizing the group member to each other and psychotherapist, familiarizing the group members to the regulations of group therapy, introduction to stress, training the relaxation by deep breathing, presenting practice, requesting for relaxation by breathing in middle of therapy sessions as the practice</td>
</tr>
<tr>
<td>Second session</td>
<td>Examining the practice results of first session, explaining the importance of being at present and life in present time and its effects in psychological status, practicing consciousness as the method for being in present, requesting for relaxation practice by breathing and consciousness in middle of therapy sessions as the practice</td>
</tr>
<tr>
<td>Third session</td>
<td>Examining the results of second session practice, explaining the importance of laughing and joy, practicing laugh, requesting for relaxation by breathing and consciousness and laugh in middle of therapy sessions as the practice</td>
</tr>
<tr>
<td>Fourth session</td>
<td>Examining the results of third session practices, explaining the importance of thought and beliefs based on the disaster-making, practicing the change in intellectual form and replacing positive inner whispers instead of negative inner whispers, requesting for practicing relaxation by breathing, replacing the positive inner whispers instead of negative inner whispers, consciousness and laugh in middle of therapy sessions as the practice</td>
</tr>
</tbody>
</table>
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Fifth session
Examining the results of fourth session practices, familiarizing the individuals to the effects of social protection and its role in psychological status, practicing the attraction of social protection and foundation of assistance group and admitting the close members and spouses therein, requesting for practicing relaxation by breathing, replacing the positive inner whispers instead of negative inner whispers, consciousness and laugh along with practice of attracting the social protection in middle of therapy sessions as the practice

Sixth session
Examining the results of fifth session practice, explaining the importance of walking, requesting for relaxation by breathing, replacing the positive inner whispers instead of negative inner whispers, consciousness and laugh, attracting the social protection and walking in middle of therapy sessions as the practice

Seventh session
Examining the results of relaxation by breathing, replacing the positive inner whispers instead of negative inner whispers, consciousness and laugh, attracting the social protection and walking in middle of therapy sessions and explaining the individual experiences

Eighth session
Examining the results of relaxation by breathing, replacing the positive inner whispers instead of negative inner whispers, consciousness and laugh, attracting the social protection and walking in middle of therapy sessions and explaining the individual experiences, completing the therapy and requesting the group to control and protect each other for dealing with daily practices and holding regular group sessions.

Whereas in this research, pretest-posttest method with control group has been applied and considering the confirmation and normality of scores distribution by Kolmogorov-Smirnov test and variance homogeneity by Lone test and confirming the regression gradient homogeneity, analysis of variance was used and the data was analyzed by applying SPSS software version 16.

FINDINGS
The findings indicate that 10 persons (43.3%) had educational level under high school diploma, 8 persons (34.5%) high school diploma, 3 persons (13.05) associate's degree and only 2 persons had bachelor's degree or higher educations. 20 persons (87.4%) of the participators in this research were married and 3 persons (12.6%) were single. In table 2, the descriptive elements, the scores of test and control groups' distress in pretest and posttest are presented (table 2).
**Table 2: Descriptive elements of scores of test and control groups' examinees in distress scale for pretest and posttest separately**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number</th>
<th>Mean value</th>
<th>Standard deviation</th>
<th>Confidence level of 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>Test</td>
<td>12</td>
<td>27.00</td>
<td>2.594</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>11</td>
<td>24.73</td>
<td>6.310</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23</td>
<td>25.91</td>
<td>4.776</td>
</tr>
<tr>
<td>Posttest</td>
<td>Test</td>
<td>12</td>
<td>17.75</td>
<td>1.138</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>11</td>
<td>22.36</td>
<td>6.680</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23</td>
<td>19.96</td>
<td>5.253</td>
</tr>
</tbody>
</table>

Analysis of covariance has been provided for specifying if the applied procedure has had effective significant effect on distress posttest scores or not. Normality and uniformity of dependent variable variance was confirmed by Lone test ($F=3.929$, $df=1, 21$, $p=0.061$). Examining the regression homogeneity indicates that the interaction between conditions and pretest is not significant, consequently, the data protects the homogeneity of regression gradients. Analysis of regression chart's graphic confirms as well as the linear relationship between the auxiliary random variable and dependent variable.

**Table 3: Summary of analysis of covariance (ANCOVA) for reviewing the effect of intervention on distress of women infected by breast cancer**

<table>
<thead>
<tr>
<th>Change resource</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
<th>PES</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>249.292</td>
<td>1</td>
<td>249.292</td>
<td>21.171</td>
<td>0.001</td>
<td>0.514</td>
<td>0.992</td>
</tr>
<tr>
<td>Main effect of groups</td>
<td>211.956</td>
<td>1</td>
<td>211.958</td>
<td>18</td>
<td>0.001</td>
<td>0.474</td>
<td>0.981</td>
</tr>
<tr>
<td>Remained error</td>
<td>235.503</td>
<td>20</td>
<td>11.775</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As it is observed in table 3, summary of analysis of variance indicates that by eliminating the effect of pretest scores, the main effect of intervention on scores of distress posttest for women infected by breast cancer is significant ($F=18, 1, 20$, $p<0.001$, partial $\eta^2=0.981$).

**DISCUSSION AND CONCLUSION**

Many of diseases are in connection with stress and whatever the stress is more severe and longer will provide more negative psychological and physiological complications. It seems, the life's stressful occurrences in addition to increasing the probability of infection by different diseases are effective on severity or trend of disease. This effect in relation to cancer types has been considered somewhat. Diagnosis of cancer incurs considerable and extraordinary stress on the individual and threatens his life. Upon continuation of stress and finishing the individual's power for resistance against stress, the individual enters into psychological distress status. Psychological distress is somehow the result of individual's inability versus acute psychological pressure that in other front causes the weakness in immune system and loss of its response. This research has been applied for investigating the effectiveness of de-stressing skills training for...
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reduction of distress of women infected by breast cancer. The findings indicated that training the de-stressing skills including relaxation by deep breathing, learning the focus on present, changing the intellectual form and replacing positive inner whispers instead of negative inner whispers, avoiding from disaster-making, sympathy and attracting the social protections, laugh, and walking are effective on reducing the distress of women infected by breast cancer.

In relation to the findings of extant paper, it is observed that within two recent decades, Loy (1991) showed that good social relationships and protection are in connection with high rate of natural killer (NK²) cells that attack the cancer calls and high psychological pressure with low number of these cells. The sport has positive effects on immune system and endocrines of whom suffering from chronic diseases. Oze, Dillnsy & Kamishe (2012) demonstrated that the psychological interventions in group causes the positive perception of social protection and this subject increases the social compatibility and their ability for coping with breast cancer. The researches indicated that social protection as the information and feedbacks we receive from our important loved ones and friends have positive effect for coping with psychological stress and positive excitements (joy, happiness, love and interesting) by motivation lead them forward the new experiences and self-improvement. Therefore, there is a positive relationship between the amount of immune globulin A and kidding for coping with stress.

So, it is concluded that solving the stressful conditions may be an adaptive or non-adaptive manner. Non-adaptive manners such as deny and rejecting along with a short and deceptive relief endangers the individual’s health whilst adaptive manners whether in problem-oriented or emotion-oriented provide the conditions that the individual takes action actively for confronting his negative excitements. The sport, establishing social bonds, requesting for protecting the others, combating against negative thoughts, possibility of explaining the stressful event and its aspects to the protectors and talking about negative excitements and important issues of life though as persuading the patients to clarifying the harms and life pains as memoir writing, relaxation training, meditation and resting are considered as the actions may be taken according to the conditions of breast cancer patients in order to reduce the distress.

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Conflict of Interests
The author declared no conflict of interests.
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