The Effectiveness of Hope Therapy on Increasing the Resilience of Women with Cancer

Hajar Mirzayi
Department of Psychology, Bandar Abbas Branch, Islamic Azad University, Bandar Abbas, Iran.

ABSTRACT
This study examined the effectiveness of hope therapy on resiliency improvement of cancer patients. This study was conducted as quasi-experimental method. The statistical population of the study included all patients with cancer. The sample study consisted of two groups of 15 patients as the control and test. The data collection tools were the Connor and Davidson resilience questionnaire and hope therapy education pack. First, the resiliency of cancer patients in the control and test groups were measured in order to conduct the research and then the test group was given hope therapy training and the control group received no training. After training, the resiliency in both groups was reassessed. Multivariate covariance test was used in order to inferentially analyze the research. The results showed that hope therapy could have affect resiliency and its dimensions at the confidence level of 99% (F = 5.094 and p= 0.0001). The results suggest that hope therapy is an appropriate indicator in order to increase the resilience of women with cancer.

Keywords: Hope Therapy, Resiliency, Cancer.

INTRODUCTION
Cancer is a term that encompasses more than 200 neo-plastic diseases and has a long history, so that malignant diseases have existed before the advent of human beings and their impact is not only known on animals, but also on the life of plants . The occurrence of cancer is been considered about 2500 years before the birth of Christ. Today, cancer is one of the most important health problems worldwide and if its prevalence increased in thus way, one out of every five people will surely suffer from a form of cancer according to UN estimations. Statistics of cancer patients in Iran also follows the same rule. After cardiovascular disease, cancer is the second leading cause of death in America and the third leading cause of death in Iran¹.

One of the types of cancer is blood cancer. Losemi or blood cancer or leukemia is progressive and malignant disease of hematopoietic organs of the...
body. The disease is caused by the deformed proliferation and development of white blood cells and its precursors in the blood and bone marrow. The word losemi means white blood. Cancer has different impacts and variations on the lives of patients and their families. Response to cancer is dependent on the cases such as the patient and his psychological structure, family and social environment and disabilities and deformations and can affect all the levels of the patient's activities. Crises resulting from cancer cause imbalances and inconsistencies in thought, body and soul. But, maximum state for this period is the patient's hopelessness.

Clinical Psychology has traditionally emphasized the mental disabilities and deficiencies and has rarely considered the flexibility, plan and the power of clients to assess the change. But in recent decades, positive psychology and health psychology emphasize the increase of happiness, health and scientific research about the role of personal powers and positive social systems in optimal health promotion. One of the main themes of positive psychology is hopefulness. Hope therapy is a positive motivational state based on the derived state of a kind of successful interaction and action which is based on agency (the internal energy of self-targeted) and then methodology and planning in to achieve those goals and desires. Hope therapy is gen from the Hope Therapy of Snyder and the thoughts of Cognitive-Behavior Therapy, Solution-Focused Therapy and Narrative Therapy and is based on the objective to help patients to formulate the objectives and build several gates to reach them, to motivate themselves to follow goals and re-frame the barriers as challenges to overcome. Also, one of the appropriate strategies to promote mental health in individuals is resiliency. Resiliency considers the issue that individual can improve his social performance and overcome problems as well as exposure to extreme stress and risk factors. According to what was said above, this study was conducted to assess the "effectiveness of hope therapy on increasing the resilience of women with cancer".

METHODOLOGY

This study is quasi-experimental with pretest and posttest and control group. In this project, hope therapy education with an emphasis on Snyder (2000) theory is considered as the independent variable and resiliency is considered as the dependent variable.

The statistical population of the study included all cancer patients in Iran. Initially, Connor and Davidson Resiliency Scale (SIR- DC) was used for the control group in order to collect data in this study and Resilience Scale was used for resiliency. Accordingly, the questionnaire was conducted with the consent of patients. The survey questionnaire was as follows:

Resilience Scale:
The resiliency is a score that the individual gains in Conner-Davidson Resilience Scale (SIR-DC). This questionnaire is a good tool that can separate resilient and non-resilient individuals in clinical and non-clinical groups. This scale has 25 items and is scored based on 5-point Likert scale. The minimum resilience score of the person on this scale is zero and the maximum score is 100. To determine the validity of the scale, first the correlation of each item was calculated with the total score of the category and then the factor analysis was used. The correlation of each score with total score of 0 to 64, except for items 3, show ratio from 0.41 to 0.64. Then, the scale items were analyzed by factor analysis using principal components. The reliability of this test was obtained as 0.87 using alpha coefficient. In this study, Cronbach's alpha reliability coefficient was estimated to be equal to 0.85.

The hope therapy stages:

Reviewing the theoretical literature suggests that hope synergy is efficiently achievable by integrating cognitive-behavioral, narrative, solution-focused interventions and maintain hope is possible through the integration of an intensive version of these interventions. Thus, hope theory is been proposed to help seeker in conceptualizing more apparent objectives, creating numerous ways to reach the target, mobilize mental energy to keep track of goals, and framing intractable barriers as problems that must be overcome. A promising therapeutic relationship facilitates these hopes factors. Changes in the level of hope does not occur in appearance level, but happens in the deep image of the self as a being who is capable of increasing goal-oriented and willful thinking. Lopez et al (Snyder, 2000) have raised therapeutic process in two major steps each step of which is consisted of two other steps. Firstly, hope or instilling hope obtained through finding hope and hope consolidation. Secondly, increasing hope through facilitating hope increase and hope retention.

Which are summarized as follows:

The first step: creating hope or instilling hope:

Accession to hope in the treatment is usually expressed based on likes, trustworthiness, respecting each other, mutual commitment, and understanding the activity. Hope sprouting when individuals establish strong bonds with one or more than one caregiver to feel they have control over the environment. Therapeutic alliance and promising literature suggest that the hopeful union includes: 1. Respectful dialogue about flexible treatment goals, 2. Creating numerous and varied ways to achieve the goal, and 3. Changing the sense of relationship between therapist and client to the needed mental energy to continue pursuing the goals of treatment. In general, each step was as follows:

Step one: finding hope: Diagnosis of hope by telling their story
Step two: Consolidation of hope (a new look to effective Union)

Step three: Raising hope

In this study, multivariate analysis of variance was used after describing hope therapy in pre-test and post-test.

RESULTS

In Table 1, mean and standard deviation of resilience and its dimensions are shown separately in the control and experimental groups.

### Table 1. Groups separately

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal competence and stability</strong></td>
<td>Control</td>
<td>15</td>
<td>26</td>
<td>30</td>
<td>24.8</td>
<td>1.146</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>12</td>
<td>31</td>
<td>24.13</td>
<td>5.617</td>
</tr>
<tr>
<td><strong>Trust to the instinct and tolerating negative thoughts</strong></td>
<td>Control</td>
<td>15</td>
<td>18</td>
<td>26</td>
<td>23.46</td>
<td>2.03</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>18</td>
<td>24</td>
<td>22.26</td>
<td>2.051</td>
</tr>
<tr>
<td><strong>The positive acceptance of changes</strong></td>
<td>Control</td>
<td>15</td>
<td>14</td>
<td>19</td>
<td>16.02</td>
<td>1.279</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>12</td>
<td>15</td>
<td>15.26</td>
<td>1.099</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Control</td>
<td>15</td>
<td>8</td>
<td>11</td>
<td>8.93</td>
<td>0.961</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>7</td>
<td>10</td>
<td>8.46</td>
<td>1.125</td>
</tr>
<tr>
<td><strong>Spirituality</strong></td>
<td>Control</td>
<td>15</td>
<td>2</td>
<td>7</td>
<td>3.26</td>
<td>1.334</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>2</td>
<td>5</td>
<td>3.86</td>
<td>0.915</td>
</tr>
<tr>
<td><strong>Total (resilience)</strong></td>
<td>Control</td>
<td>15</td>
<td>64</td>
<td>78</td>
<td>71.26</td>
<td>4.463</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>73</td>
<td>78</td>
<td>72.2</td>
<td>4.345</td>
</tr>
</tbody>
</table>

As can be seen in Table 1, the mean of personal competence and stability in pre-test of the sample was equal to 24.8 in the control group and was equal to 24.13 in the test group. The pre-test mean of the control group in trust to the instinct and tolerating negative thoughts is equal to 23.46 and was equal to 22.26 in the test group. The pre-test mean of positive acceptance of changes was equal to 16.02 in the control group and equal to 15.26 in the test group. The pre-test mean of the studied patients was equal to 8.93 in the control group and 8.46 in the test group. The pre-test mean of spirituality was equal to 3.26 in the control group and equal to 3.86 in the test group. The pre-test mean of resilience was equal to 71.26 in the control group and 72.2 in the test group.
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Table 2. Mean and standard deviation of post-test resiliency and its dimensions in the studied groups separately

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal competence and stability</td>
<td>Control</td>
<td>15</td>
<td>14</td>
<td>22</td>
<td>17.26</td>
<td>2.016</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>26</td>
<td>31</td>
<td>28.6</td>
<td>1.242</td>
</tr>
<tr>
<td>Trust to the instinct and tolerating negative thoughts</td>
<td>Control</td>
<td>15</td>
<td>13</td>
<td>23</td>
<td>19.53</td>
<td>2.445</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>21</td>
<td>27</td>
<td>24.13</td>
<td>1.684</td>
</tr>
<tr>
<td>The positive acceptance of changes</td>
<td>Control</td>
<td>15</td>
<td>11</td>
<td>17</td>
<td>13.46</td>
<td>1.684</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>9</td>
<td>19</td>
<td>16.46</td>
<td>2.642</td>
</tr>
<tr>
<td>Control</td>
<td>Control</td>
<td>15</td>
<td>4</td>
<td>10</td>
<td>6.8</td>
<td>1.612</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>9</td>
<td>12</td>
<td>10.93</td>
<td>1.032</td>
</tr>
<tr>
<td>spirituality</td>
<td>Control</td>
<td>15</td>
<td>2</td>
<td>10</td>
<td>5.77</td>
<td>2.722</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>3</td>
<td>8</td>
<td>5.86</td>
<td>1.597</td>
</tr>
<tr>
<td>Total (resilience)</td>
<td>Control</td>
<td>15</td>
<td>50</td>
<td>68</td>
<td>63</td>
<td>5.719</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>15</td>
<td>64</td>
<td>93</td>
<td>85.6</td>
<td>6.884</td>
</tr>
</tbody>
</table>

The mean of personal competence and stability in post-test of the sample was equal to 17.26 in the control group and was equal to 28.6 in the test group. The post-test mean of the control group in trust to the instinct and tolerating negative thoughts is equal to 19.53 and was equal to 24.13 in the test group. The pre-test mean of positive acceptance of changes was equal to 13.46 in the control group and equal to 16.46 in the test group. The pre-test mean of the studied patients was equal to 6.8 in the control group and 10.93 in the test group. The pre-test mean of spirituality was equal to 5.77 in the control group and equal to 5.86 in the test group. The pre-test mean of resilience was equal to 63 in the control group and 85.6 in the test group. Multivariate analysis of covariance (MANCOVA) was conducted on dependent variables scores to study the effect of the experimental intervention.

Table 3. Summary results of MANCOVA test on the resiliency scores and its dimensions

<table>
<thead>
<tr>
<th>Effect</th>
<th>Test</th>
<th>Value</th>
<th>F</th>
<th>df hypothesis</th>
<th>df error</th>
<th>p</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>process</td>
<td>Pillai's Trace</td>
<td>0.643</td>
<td>5.094</td>
<td>6</td>
<td>17</td>
<td>0.004</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Wilks' Lambda</td>
<td>0.357</td>
<td>5.094</td>
<td>6</td>
<td>17</td>
<td>0.004</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Hoteling's Trace</td>
<td>1.798</td>
<td>5.094</td>
<td>6</td>
<td>17</td>
<td>0.004</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Roy's Largest Root</td>
<td>1.798</td>
<td>5.094</td>
<td>6</td>
<td>17</td>
<td>0.004</td>
<td>0.99</td>
</tr>
</tbody>
</table>
Table 3 shows a significant difference between the two groups at least in one of the dimension of resiliency. To further explore these differences, one-way MANCOVA analysis of variance was conducted on the dependent variable. The results of this analysis are presented in Table 4. Table 4 shows ANOVA results in the context of MANCOVA to compare variables scores between the two different groups.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Dependent variable</th>
<th>Sum of squares</th>
<th>Degree of freedom</th>
<th>Means squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Personal competence and stability</td>
<td>240.368</td>
<td>1</td>
<td>240.368</td>
<td>95.154</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>Trust to the instinct and tolerating</td>
<td>53.339</td>
<td>1</td>
<td>53.339</td>
<td>7.725</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>negative thoughts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The positive acceptance of changes</td>
<td>6.891</td>
<td>1</td>
<td>6.891</td>
<td>1.288</td>
<td>0.269</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>22.723</td>
<td>1</td>
<td>22.723</td>
<td>11.61</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>spirituality</td>
<td>7.105</td>
<td>1</td>
<td>7.105</td>
<td>1.568</td>
<td>0.224</td>
</tr>
<tr>
<td></td>
<td>Total (resilience)</td>
<td>311.173</td>
<td>1</td>
<td>311.173</td>
<td>11.284</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Results in Table 4 show that the one-way analysis of variance is not significant among different dimensions of personal competence and stability (F= 95.154 and p= 0.0001), trust to the instinct and tolerating negative thoughts (F= 7.725 and p= 0.01) and control (F= 11.61 and p= 0.003) and dimensions of positive acceptance of changes (F= 1.288 and p= 0.269) and spirituality (F= 1.568 and p= 0.224). In general, hope therapy education has a meaningful effect on the resiliency with respect to (F= 11.284 and p= 0.003).

**CONCLUSION**

The results of multivariate analysis of variance of the main hypothesis of the research showed that hope therapy has been effective on resiliency of cancer patients. Results showed that hope therapy has increased the resilience cancer patients at the confidence level of 99%. Results in this hypothesis are consistent with the research results of Pourghaznein et al\(^9\), Abdi et al\(^10\), Aladdini et al\(^11\), SotodeAsl et al\(^12\), Monami Motlaq et al\(^13\) and Qorbani\(^14\). Results of Abdi et al (2007) has shown that hope promoting interventions were performed for the patients groups as in-depth and face-to-face discussions individually with problem-based learning method. The results showed a significant statistical difference between
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the mean scores of hope between patients and control groups after the hope promoting intervention (p= 0.008). Accordingly, the results also indicate that hope therapy could have helped patients in the fight against cancer.

REFERENCES


