Efficacy of Supportive Psychotherapy Group Training on Life Expectancy in Gastrointestinal Cancer Patients (Male)
Case study: Delfan City, Iran

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ABSTRACT This study was performed to investigate the efficacy of supportive psychotherapy group training on life expectancy in gastrointestinal cancer patients in Delfan city, Iran. For this purpose, the statistic population were included all patients with gastrointestinal cancer who were referred to treatment and health centers in Delfan city. The present experiment was randomly conducted on 40 individual of them. Then were put into two experimental and control group (20 patients in the experimental group and 20 patients in the control group). From participants were asked to complete the life expectancy questionnaire. Then, the group supportive psychotherapy method was trained to experimental group through one session per week (totally, 9 sessions with 90 minutes). After the end of sessions, the post-test was conducted on experimental and control groups. One way covariance was used to analyze the data. These results defined that the group supportive psychotherapy method can be used to increasing the life expectancy of patients with gastrointestinal cancer in experimental group in comparison with the control group. It can be concluded that the group of supportive psychotherapy can be used to increasing the life expectancy of male patients with gastrointestinal cancer.

KEYWORDS Life Expectancy, Psychotherapy, Cancer.

INTRODUCTION
Despite of significant advances in medicine, cancer is one of the most important diseases of the century. It is discussed the second cause of death after cardiovascular diseases. This disease is characterized with change abnormal cell shape and losing cell differentiation. At present, more than 7 million people die on the world every year due to cancer. It is predicted that the number of new cases reach from 10 million to 15 million in 2020 (Ali-moghaddam, 2008). Cancer can be considered as incurable disease in the population. The patient, suffering from anxiety and depression can be caused by unrealistic fear of death and social energy after the diagnosis.
Individual leads towards mental disorders because of the need for frequent hospitalization and ongoing concern for patients and their families (Bamshad & Safikhani, 2006). The cells in cancer disease begin to multiply abnormally because of mutations and transmitting to other organs through the lymph vessels and veins (for DNA). Sometimes it can lead to adverse effects body via production of toxic chemicals. It is one of the major threats to human life. Since survival is an important principle of life; patients at different stages of the disease need to strengthen mental, before and after surgery, during treatment, immediately after that, and during a period of five years after recover because they fear the return of the disease (Rees, 2000). One of the factors that can affect increasing the longevity of cancer patients is life expectancy. Hope is one of the basic principles of balance and mental strength that characterize life gains and ability to believe better sense of the future. It is a sign of mental health with its penetrating power, which stimulates the activity of the system so that the system can gain new experiences and create new powers in the organism. Thus, the human makes the effort to bring a high level of psychological and behavioral functions. The World Health Organization (2004) defines health as well a state of complete physical, mental and social comfort of person and is not absence of disease or disability. It is a sign of mental health. The published figures on the prevalence of mental disorders demonstrate the importance of necessity of attention to mental health in different countries of the world. According to World Health Organization estimates (2000), about 500 million people worldwide will be diagnosed with a mental disorder in 2002 that about half of them will be included minor psychiatric disorders, such as depression and anxiety.

Also, 20 to 65 percent of women will suffer from depression and anxiety. However, it can be said that the stress on the female body has been planned but their psychological dimension is depended on history of private her life, family and community (Rahmani, 2008). Recognition and treatment of cancer lead to disorder in sleep and activity patterns, creation of physical and psychological symptoms, cognitive performance disorder, community involvement and the individual tasks (Takahashi et al., 2011).

The positive effect of psychological interventions in improving chronic disease has been confirmed (Lechner et al., 2003). In recent decades have been done considerable progress in the development of psychosocial interventions for cancer patients, (Hopko et al., 2008). Some of the treatments which may affect the life expectancy on cancer patients are supportive psychotherapy group training that it has not been noted to researchers. Supportive psychotherapy is the main method used in general medicine and rehabilitation. This is used to strengthen out of psychotherapy interventions such as medication to suppress symptoms, rest for the removal of the patient from excessive stimulation, hospitalization to provide a structured therapeutic environment and health protection and disease control. Supportive psychotherapy can be used as the main or secondary treatment. The overall view, supportive psychotherapy emphasizes "external events" to the psychological events in terms of etiology. It is particularly attended the impact of environmental stress and personal relationships on seriously injured individual (Walker, 2003).

The data have reported by Distefano et al (2008) have revealed that characteristics such as cancer type, stage of cancer, early diagnosis, accepting patient their disease, pain of cancer, mental stress and caregiver behavior affects the quality of life and life expectancy of cancer patients. They results showed that as severity of experienced side effects over time can be more and the quality of life would be more threatened as well.
Levy (2008), believes that cancer and its treatments influence on quality of life and the impact of it due to cancer diagnosis and treatment, have adversely affecting on the mental, physical function and sexual relations. Eisenberg et al (2006) have considered intervention programs that emphasize the emotional competencies will make improve the quality of life and social adaptation of persons with chronic diseases.

Therefore, the objective of this study were answer to this question that do supportive psychotherapy training group affect to increase life expectancy of gastrointestinal cancer men patients?

**MATERIALS AND METHODS**

This study was conducted in Delfan city. It is located in Lorestan province, Iran. The method of study was half-experimental with test and control groups and pre-post test and post-test. The population was consisted of all male patients with gastrointestinal cancer in 2013. We selected 40 persons through simple random sampling and put in two groups; experimental and control. Experimental and control groups were equivalent at random. Before applying the experimental intervention in the experimental and control groups, were performed pre-test and were carried out post-test at the end of the intervention. Supportive psychotherapy group training variable was as independent variables and increasing of life expectancy was as dependent variable.

We obtained the introduction letter from department of science and research branch of Arak city (Markazi province, Iran) at first. Then, it was presented to Medical Sciences of Lorestan province. After that we were referred Health Network of Delfan city to do study. Then, regarding to 90 documents of cancer patients, were asked to answer a questionnaire Herth life expectancy. Among those who had earned lower scores of life expectancy, 40 patients were selected randomly. Supportive psychotherapy group training was held in 9 sessions of 90 minutes per week.

Herth life expectancy questionnaire: Herth hope index was developed in 1999. It consists of 12 questions on 3 options and a high score on the Herth Hope Index indicates a greater presence of hope in the patient’s life. Response options of this test are; I agree, I am not sure and I disagree. There is no time limit setting in its implementation. This test were done 172 patients (60 acute, 71 chronic, and 31 moribund) in northern Illinois. The Cronbach's alpha coefficient was reported 97%. The validity and reliability have reported via the Pearson correlation that its coefficient was 84 percent and Cronbach's alpha that its coefficient was 76 percent that confirms the validity and reliability of the test (Poor-khazinin, 2000). Data was analyzed through Levine, Kolmogorov-Smirnov test and analysis of one variable covariance. For the analysis of data was used SPSS 18 software. Also, significant level was considered α≤ 0.05.

**RESULTS**

The data in table (1) indicate the mean and standard deviation of life expectancy variable in the pre-test and post-test.
Table 1. The mean and standard deviation of life expectancy of experimental and control at pre-test and post-test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Stage</th>
<th>Statistical Index</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>Pre-test</td>
<td>Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Experimental</td>
<td>18.90</td>
<td>4.95</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control</td>
<td>19.40</td>
<td>3.36</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>Experimental</td>
<td>28.75</td>
<td>3.40</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control</td>
<td>18.65</td>
<td>3.59</td>
<td>20</td>
</tr>
</tbody>
</table>

Leven test showed that the groups were homogeneous in the pre-test. Kolmogorov-Smirnov test indicated that life expectancy variable was normally distributed. Effect of supportive psychotherapy group training was studied on increasing the life expectancy of male patients with gastrointestinal cancer. One-way analysis of covariance results are shown in Table 2 a significant difference was observed in the experimental group between the pre-test and post-test. Further, there was significant difference between the control and experimental groups. With respect to the mean scores can be seen that the life expectancy score of experimental group has increased compared to the control group.

Table 2. One-way analysis of covariance on post-test scores mean of male patients life expectancy with gastrointestinal cancer

<table>
<thead>
<tr>
<th>variable</th>
<th>Source of changes</th>
<th>MS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
<th>Eta square</th>
<th>Statistical power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>Pre-test</td>
<td>163.74</td>
<td>1</td>
<td>163.74</td>
<td>19.75</td>
<td>0.0001</td>
<td>0.35</td>
<td>0.991</td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>1066.7</td>
<td>5</td>
<td>1066.7</td>
<td>128.6</td>
<td>0.0001</td>
<td>0.78</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>298.46</td>
<td>36</td>
<td>8.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the other hand, supportive psychotherapy group training was significantly increased life expectancy with considering the average of male patients’ life expectancy with gastrointestinal cancer in experimental group compared to control group. The impact or difference is equal to 0.78. On the other hand, 78% post-test scores of individual differences in life expectancy are related to a group of supportive psychotherapy group training (group membership). Statistical power is equal 1.00. There is no possibility of a type II error.

DISCUSSION AND CONCLUSION

The purpose of this study was to evaluate the effect of supportive psychotherapy group training to increase the life expectancy of male patients with gastrointestinal cancer. The results revealed that supportive psychotherapy group training has a significant effect on increasing the life expectancy of patient. The comparison of mean scores revealed that life expectancy in experiment group was more than the control group. Also, scores increased in experiment group in the post-test as compared to pre-test. These results corresponded with findings of Amini (2009), Pour-movahed (2001), Aghaei (2009),
It can be said despair is shocking status that appeared with the lack of facilities, inability and lack of interest. Individual severely is disabled because of despair and can't figure out one life situations. As a result of these problems, have not the ability of adaptation to change life. Also, the hope and despair influenced on achieving goals of individual and possibility of success. Indeed despair, makes trouble to achieve the goal and are disrupte interpersonal relationships (Schnaider, 1980). Hope is in authority to human and results in from decision to never underestimate himself as unique and important creature. Hope can be obtain by decide to having it. Just, he decides simply that nothing will be rusty outside of himself. So, he will accept the responsibility of changing his life in case of to be undesirable, and he will do it despite of involved risks (Dayer, 1991)

Banson (2006), quoted by Shoaa-kazemi (2009), in a review of studies related to the hope have been expressed that high levels of hope have positive relationship with physical and psychological health, high value of self-worth, positive thinking and extremely social relations. These results are consistent with the findings of the present study. Thus, hope causes psychological health and self-worth and helps to establish social relationships to enhance health.

The Snider (2006) quoted by Amini (2009), concluded that there are significant correlations between high hopes and positive emotions and low hope and negative emotions. Patients who have a hopeful learn ways of encounter faster than others and through the course of their treatment could be as a source of support and information to help other patients. However, patients have fear of the disclosure of their disease, due to avoidance behavior, in many cases. They use thoughts defense mechanism to encounter with their illness. Therefore, they use less encounter skills, such as problem solving and search of suitable strategies. Note (2006) quoted by Amini (2009) have concluded when patients have an opportunity to express their feelings, a significant change was seen in the recovery process that some of these changes can be included better quality of life, reduce stress and increase the body's defense against disease. The group treatment provides an opportunity to discuss their issues and problem for patient, as well. It can help to express feelings in a group and receive feedback and succeed to determine the mindset and attitude of others than oneself. Thus, individual can strengthen one’s social skills and have better relationships with others via participating in the group.

The group treatment enables participants form to other members of the group, "Social-like" that could act as a basis for changing environments (Rhmani, 2008). Another definition of hope is equal to self-confidence. It is necessary to have both, for having each of these. It is believed that ‘hope’ means, One can applied his creative forces to improve the lives of their. You need trust to implement this, and trust is create from behavior, not a wish or thinking about something. The hope is mental section and trust is behavior section and nothing is dispensable. Regardless to conditions, can be decided hopefully toughts and this help the person to select trust behaviors (Dyer, 1991). The aim of supportive psychotherapy is creation of therapeutical relationship as a temporary supporter bridge with the patient who has a weakness and failure and reduction of symptoms via environmental or behavior reconstruction within the existing mental framework. It can be help to better adaptation of patients with its problems.

It can be concluded from the results of this study that the aim of supportive psychotherapy is to maximize the patient’s adaptive or combination capacity so that ability of the patient increases to the circuit and decreases his vulnerability by reinforcing point strengths and firmly defenses.
Hope is an optional matter and is related to human behavior. Then group supportive psychotherapy provides an opportunity for group members to learn appropriate behaviors for their needs satisfaction. This is likely to increase hope in them. The present study showed that a group supportive psychotherapy is applicable in this cases and it is matches with the Iranian culture especially.

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