The effectiveness of schema therapy for children with cancer to improve depression symptoms

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Abstract

This investigation was accomplished with the purpose of determining the effectiveness of schema therapy for children with cancer to improve depression symptoms. In this investigation pretest-posttest multi groups quasi-experimental scheme was used. Sampling was carried out in a purposeful manner and the sample size according to the methodology was determined 20 persons that 10 people of them were treated individually with Yung schema model. In order to collect data, children depression inventory questionnaire was used. To analyze data, proportional with data measurement level and statistical hypotheses, covariance analysis test was used for hypothesis test and the results showed that schema therapy causes significant clinical and statistical decreases in symptoms of depression in children with cancer.

Keywords: schema therapy, depression, cancer

Introduction

Depression as a moral disorder is one of the most common psychiatric displeasure, it is diagnosed with lack of pleasure being away from friends or family, not having motivation, and failure intolerance, vegetable symptoms which are libido decrease, appetite or weight decrease and increase, energy decrease and early fatigue, sleep disorder (in 75% of cases), menstrual disorder, constipation, moth dryness and headache (Chen and Chong, 2000). Depression diagnosis and effective interventions in child hood and adolescence ages decrease the risk of other mental illnesses, maladaptive behaviors and even children mortality. Almost all children and adolescents experience some depression symptoms and about 5 percent of them before puberty and 10 to 20 percent of adolescents (after puberty) experience acute depression (Jonson, et al quoted from Mech & Wolf, 2008). Nowadays cancer is known as one of the most important hygienic problems all over the world and if its prevalence increases similarly, according to united nations estimates, one out of every 5 people is certainly diagnosed with one types of cancer, the statistic of cancer patients in Iran follows the same rule, cancer after cardiovascular diseases is the second cause of mortality in America and third cause of death in Iran (Ilkhani, 1991). Among the proposed psychological problems in children and adolescents with cancer, depression has been known as one of the most common psychiatric disorders (Goldman, 2006). Banki et al (Banki, Abedin, Monirpour, 2011) through a study on adolescents with cancer in Iranian sample express that using of specific coping strategies could be effective on possible development of cancer in chronic diseases and cancer (Sanjari, Jafarpour, Safarabadi, Hosseini, 2005). Also they showed that according to the children report the life quality of children with cancer under chemotherapy is lower than the children with cancer that their treatment has been interrupted. Depression with cancer is a risk factor in survival decrease in cancer patients and an important factor in lack of treatment acceptance by these patients (Bavers and Bile, 2003, Nardin et al, 2001). If we want to briefly explain the problems of children during and after cancer experience, we can say that according to researchers in this field children and their families are exposed to high risk of intensified psychological irritations, disorder in self-concept, self-respect, body image and identity and also post-traumatic stress disorder and post-traumatic stress syndrome. According to this, these kinds of physical and psychological effects influence negatively on social
functionality. So that these patients most of all have reported decreased social relations, communication problems with peers and anxiety about future and marriage rates in them are lower than the others and also they will have less intimate relations in adulthood (Bruce, 2006).

**Methodology**

Research scheme which is used in this research is pretest-posttest two groups scheme. The statistical society includes the girls 11-13 years old with one type of cancer who are treated in Mahak hospital and sampling is purposeful and selective form. The sample size according to methodology which is quasi-experimental was determined 20 people. The sample size for experimental and quasi-experimental researches is recommended 10 to 15 people in each group (Delavar, 2005). The tool which is used in this research is the children depression inventory. Children depression inventory is a 27-point self-reporting scale which is suitable for children who are 7-17 years old and it has been prepared and regulated by Kovacs (1997). This test has significant validity and reliability and distinguishes the children and adolescents with fundamental and moral depression from other clinical conditions and normal children.

The depression scale of children has 27 points and each point has selections which are scored with zero, one and two. Much higher depression scores on this scale indicate higher depression intensity. Therefore with summing up the scores of each one of the chosen situations the person's score is obtained. If child selects more than a choice, higher score will be considered. Total score of inventory is in the range of zero to 45. In cases that the data resulted from research implementation were collected in quantity form (numbers and figures), quantity analysis is done on data, for this purpose SPSS software has been used in this investigation to analyze the obtained data.

**Findings**

**A) Descriptive findings**

**Table 2. Descriptive information of depression symptoms according to measurement stage separation in groups**

<table>
<thead>
<tr>
<th>Statistical indicator</th>
<th>Factors</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>42.90</td>
<td>38.10</td>
</tr>
<tr>
<td></td>
<td>Standard deviation</td>
<td>6.95</td>
<td>6.17</td>
</tr>
<tr>
<td>Test group</td>
<td>Number</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>41.89</td>
<td>42.70</td>
</tr>
<tr>
<td></td>
<td>Standard deviation</td>
<td>5.33</td>
<td>5.76</td>
</tr>
<tr>
<td>Control group</td>
<td>Numbers</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>42.40</td>
<td>40.40</td>
</tr>
<tr>
<td></td>
<td>Standard deviation</td>
<td>6.07</td>
<td>6.85</td>
</tr>
<tr>
<td>Total</td>
<td>Numbers</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>42.40</td>
<td>40.40</td>
</tr>
<tr>
<td></td>
<td>Standard deviation</td>
<td>6.07</td>
<td>6.85</td>
</tr>
</tbody>
</table>

As it is observed the average of test group in post-test stage has been decreased compared with pre-test.

**B) Inferential findings**

**Main hypothesis test**

Schema therapy is effective on depression symptoms decreases.
The effectiveness of schema therapy for children...

Table 3. Covariance analysis test for research hypothesis

<table>
<thead>
<tr>
<th>Statistical indicator of variables</th>
<th>SS</th>
<th>Df</th>
<th>F</th>
<th>sig</th>
<th>Effect measure</th>
<th>Test power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>222.39</td>
<td>1</td>
<td>8.06</td>
<td>0.01</td>
<td>0.32</td>
<td>0.78</td>
</tr>
<tr>
<td>Group</td>
<td>133.57</td>
<td>1</td>
<td>4.84</td>
<td>0.04</td>
<td>0.22</td>
<td>0.61</td>
</tr>
<tr>
<td>Error</td>
<td>468.6</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33440</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of table 3 show that with eliminating the effect of pre-test variable and according to calculated F coefficient, a meaningful difference is observed among the adjusted averages of depression symptoms scores of participants based on group membership ((test and control)) in post-test stage. (P<0.05). Therefore according to modified averages in graph-5 and the results of table 4-5 it is concluded that zero hypothesis is rejected and schema therapy in test group participants compared with control group had more effect on depression symptoms of girls with cancer. The measure of this effect ((practicable meaningfulness)) was 0.22, means it had been 22 percent of total variance or individual differences in depression symptoms of girls with cancer related to schema therapy. Beside statistical test power at present researches states this point that with the possibility of 61 percent, zero hypothesis has been correctly rejected.

Pursuit hypothesis test

In order to consider this hypothesis that whether intervention results are persistent or not after a month a pursuit test was taken from 8 persons of control group and the meaningfulness of the difference of their results compared with post-test stage was tested by correlated t test.

Table 4. The comparison of the post-test stages averages and pursuit

<table>
<thead>
<tr>
<th>Statistical indicator of stages</th>
<th>Numbers</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Averages differences</th>
<th>t measure</th>
<th>Freedom degrees</th>
<th>Meaningfulness level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-test</td>
<td>8</td>
<td>40.01</td>
<td>1.52</td>
<td>0.37</td>
<td>2.04</td>
<td>7</td>
<td>0.08</td>
</tr>
<tr>
<td>Pursuit</td>
<td>8</td>
<td>40.36</td>
<td>1.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As the results of the table show, the obtained t measure is 2.04 with freedom degree of 7, and it is less than the measure of the table and also the meaningful level of this test is equal to 0.08 and this measure is more than meaningful level of 0.05.

Conclusion

The obtained results of this table show that schema therapy has been effective meaningfully on children depression decreases. Cognitive models of psychopathology has traditionally emphasized on the effect of primary occurrences on next experiences and having anxiety and depression through development of negative cognitive styles. Compared with other cognitive vulnerabilities, primary maladaptive schemas are more unconditional and automated and because they are related to significant issues of life could spread high levels of negative emotion. According to cognitive model (Beck 1967) negative automatic thoughts lead to create depression. According to accomplished research by Abedin et al 2011 there is a positive and meaningful relationship between negative perception of the disease and depression in young people with cancer. Perception of the disease includes individual beliefs about the effects of the disease on life and morale of a person, continuation of disease, treatment and control of disease, experiencing the disease symptoms, concern and understanding about the disease. Whatever the patient perception of disease severity is more, as a result more difficult outcomes and less control on disease is understood and depression symptoms will be also increased. Perception of milder disease through having more information
of their diseases in children and adolescents with cancer is related to depression decrease (Morris 1997, 1384, quoted from Abedin et al, 2011). This evidence confirms this issue that there is a direct solidarity between the perception of disease intensity and depression so that increasing the knowledge about disease with decreasing the intensity of understood disease could reduce the depression of children and adolescents affected by cancer. Beck (1967) claimed that there are three main levels of thinking in beginning, keeping and accelerating of depression: schema related to depressed building, maladaptive beliefs and negative automated thoughts. Schema are at the center of the cognitive model of Beck, although schema have been defined with various methods, most definitions include this idea that they have structural capacities (like organization) and propositional elements (like content); according to this it could be expected that through modifying the primary maladaptive schema, depression symptoms will be also improved. In explaining the effectiveness of schema therapy it should be said that it seems schema therapy with combination of different approaches (affection, object relations,...) could be effective on treatment of patients with chronic depression. At present research as it was mentioned, the hypothesis was confirmed therefore hypotheses result could be compared with the results of Nordal and Hans (2005), Valiente et al (2014), laonnis et al (2014), Darvishi et al (2013), Gabriella et al (2013), Janet et al (2013) and Calvete.

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