Studying The Effect of Cognitive Behavioral Group Training on Depression in Hemodialysis Patients

Abdolvahed Marvi *, Mohammad Hossein Bayazi, Mehdi Rahmani, Ali Kazemi Deloei

Department of clinical psychology, Islamic Azad University, Torbat-e Jam Branch- Iran

Abstract

This study aimed to investigate the effect of cognitive behavioral training on depression in Hemodialysis patients selected hospitals in Mashhad was. For this purpose the number of cases in 1210 haemodialysis patients in 12 hospitals in Mashhad dialysis with random (cluster) from 12 hospitals, four hospitals selected from among 40 cases of patients selected for the study and random assignment in the two groups….. (20 patients) and control (n = 20) groups. Training patterns of cognitive behavior therapy for experimental group and control group were not given training in this study significant amount of pre-test and post test results from t-test Msql criteria. Results indicate the experimental group had reduced depression and cognitive behavior training effect on haemodialysis patients was felt depressed. Recent research results highly consistent with results Sylvyra Priscilla Dvarth et al (2009) has a total of this study indicate Asrgzary cognitive behavioral patterns in hemodialysis patients is to reduce depression.

Keywords: depression, hemodialysis, cognitive behavior therapy

1. Introduction

Nowadays one of the chronic diseases that have great growth is renal failure. Its comrades need alternative treatment, rehabilitation and special education. This disorder is one of the major reasons of disability and death in the world and it has been caused after some illnesses (and the most importants are high blood pressure and diabetes). This disorder is not limited to any special age and according to the generating situation it can occur in childhood or oldness. (Brock, 1990)

The most common and the best way to cure this disorder is hemodialysis and because of the special situation, hemodialysis causes patients to hospitalize in the hospital. Morakinyo and his colleagues consider hemodialysis as high technological treatment way and effective way for ESRD patients. (Morakinyo, 1995)

Studies show that about 9 percentages of dialysis patients are hospitalized because of mental problems. Dementia and drug abuse in depression and psychological problems are the most common problems for these patients. As the disorder is accompanied with renal failure, the treatment process for these patients has become difficult. Since depression affects main process of disease treatment, because of failure in treatment, the patient may suddenly drop dialysis and drug therapy, quit social relationships. Also in worse situation, the patient may commit suicide. (Keitner and his colleagues). Therefore major depression existance and improvements in renal failure
patients (treated by hemodialysis), which causes some symptoms and difficulties, makes necessity starting the treatment.

Like other mental illnesses, major depression has both biological and psychological treatment. Biological treatment includes drug therapy (antidepressants), ECT (electro shock), sports and sleep deprivation. Psychological treatment includes cognitive behavioral therapy that is based on identification and refining of person’s negative thoughts and poor behaviors. (Beck Barry Dean, Parvin and John, 2002)

In 2006, Holon and his colleagues justify that cognitive behavioral therapy is as effective as drug therapy but the most significant benefit of cognitive behavioral therapy is prevention or decrease of depression recurrence in next years. Cognitive behavioral therapy which is based on Beck’s attitudes, is a useful, orderly and short treatment (15-20 sessions). In this type of treatment, it focuses on present problems instead of focusing on further causalities, and tries to find reasonable solution for them. In this way of treatment, patients are taught to indentify and refine their negative automatic thoughts and his distortions in information processing. (Seyyed Mohammadi, 2009)

Comparing the above treatments reveals the significant role of cognitive behavioral therapy for decreasing psychological problems (especially depression) in hemodialysis patients. Now we should examine this treatment to realize whether it could affect the depressed patient by decreasing psychological problems or not?

Most researchers and therapists consider cognitive behavioral therapy as the most common non-pharmaceutical therapy for depression. In this type of treatment, symptoms returning rate is very low. Nancy Fultan, in her recent research (2010) considers cognitive behavioral techniques very purposeful, fast and focused on the problem. Also Mahnaz Modanlu and Alireza Zahir-din did separate research (in 2005). They both consider depression as the most common cognitive problem for hemodialysis patients. They have expressed cognitive behavioral therapy or counseling therapy as effective treatment for these patients.

Dr. Daniel Cukor, who had observed 16 hemodialysis patients whom had major depression, believed that patient’s opinion that depression is an integral component of physical illness depends on their impaired thinking. He added that negative thoughts reveal the necessity of cognitive refining through cognitive behavioral therapy. Cukor used techniques of combating with distorted thinking (cognitive) and encouraged patients to do appropriate activities and behaviors such as proper eating habits and exercise (behavioral). The patients, who had followed Cukor’s advice, had experienced useful and effective therapeutic results. This study has been done just to investigate whether cognitive behavioral training is effective on depression of hemodialysis patients or not? In other words, this study examines the following hypothesis: whether cognitive behavioral training can be effective on depression of renal dialysis patients or not.

2. Method

2.1. Participants

Participants of this study were patients who suffer from final stage of renal failure. They were under treatment with hemodialysis in 4 hospitals in Mashhad (Hashemi-nezhad, Qaem, Imam reza and Bent-alhoda) in 2010. 40 patients of them (17 women and 23 men) were selected randomly then by random assignment they were separated into two groups. (Controlling group and experimental group/each group contains 20 patients). After initial interviews and rationalization sessions, the groups were trained.

2.2. Measures

In this study, we used a questionnaire with a title of “Beck Depression Inventory” (BDI). This questionnaire consists of 21 multiple-choice questions. Participants were asked to answer the questions according to their feelings and attitudes. They answered to questions two times, once at the beginning of the research and once at the end. For each person, depression rate was calculated.

2.3. Style of performance

First, participants were devided into 2 groups of experimental group and controlling group. All the participants were explained about the research, then they were tested by pre-test Beck Depression Inventory (BDI)
and every patient’s depression was assigned. Then the experimental group was trained by 12 sessions of cognitive behavioral training. (The controlling group wasn’t trained). This training course was twice a week and each session continued for about an hour. During training sessions, cognitive and behavioral problems and negative thoughts were discussed to the participants, and then they were told about applicable methods of treatment. At the end of each session, homework was given to participants. The next session, homework was asked and new subject was taught. At the end of training courses, both groups answered Beck questionnaire (as pro-test). Then the gathered information of both groups about the effect of cognitive behavioral training on depression was evaluated by using independent T-test. Also the difference in average of depression score in pre-test and pro-test of experimental group was judged.

3. Results

After conducting the questionnaire, the data has been approved by frequency tables, charts of pre-test and pro-test and differences of two groups (controlling group and experimental group. The data has been analyzed by T-test.

![Chart1: Frequency distribution of pre-test result of the controlling group](chart1.png)

As you see, score 16 by repeating 4 times has the most frequency in the controlling group. Repetition of the scores indicate on depression in this group.
Chart 2: Frequency distribution of pre-test result of the experimental group.
As you see, in this group, scores of 17 and 24 have the highest percentage of repetition and depression can be clearly seen in this group.

Chart 3: Frequency distribution of pro-test results of the controlling group.
Results show that depression rate of the controlling group hasn’t changed at the end of the cognitive behavioral training. Even in some cases, the depression rate has increased.
Char4: Frequency distribution of pre-test result of the experimental group.

Results clearly show that the depression rate has been increased at the end of the cognitive behavioral training.

Table 1. Comparing Mean, SD, and Student’s t-test for (BDI)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control group (N=20)</th>
<th>pre-test group (N=20)</th>
<th>T(df=38)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>8.678**</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: n=40
* p<0.05
**p<0.01

As you see in the above table, the resulting scores of pre-test and pro-test and subtraction of them has been analyzed by T-test. The calculated score is 8.678 which is significant at the zero level, So zero is rejected. As a result of this research, we can see great difference of depression rate between the two groups. And the test hypothesis, cognitive behavioral training is effective on decreasing the depression in hemodialysis patients, is approved.

4. Discussion and conclusion

The aim of this research was determining the effect of cognitive behavioral training on renal patient’s depression (renal patient who treated by hemodialysis). Cognitive behavioral training can decrease the depression. Prelude to implementation of this research was to prove that renal failure patients who spend the long time of their life beside the dialysis machine, due to complication of long-term treatment, illness type, economic, social and cultural problem of this illness suffer from serious psychological problems specially depression.

According to Beck questionnaire and the diagrams of both groups, it was determined that all the hemodialysis patients participated in the research have the depression score of 11-41. In other words, depression in these patients was apparent. Daniel Cokur(2007), in his research that was about the use of cognitive behavioral therapy for hemodialysis patients, considered high blood pressure and depression as two deductive factors that affect illness and treatment of patients. In his research that is very similar to Morakinyo’s and Aganowa’s research (1995), he believes that this mental problem (major depression) exists in more than 20-30 percentage of patients. The pro-test diagram of the controlling group and comparing it to pre-test results of this group shows that the depression score of the controlling group hasn’t changed at the end of the research. It means that their depression hasn’t been decreased.
Also Kindy Miller (2007) in his research, that was about cognitive behavioral training to hemodialysis patients who had depression, he examined both experimental and controlling group (each group consists of 12 people). After determining the depression rate, he planned training classes for them in 6 weeks. He didn’t train the controlling group. He revealed that the controlling group hadn’t improved in their depression score.

By mentioning the fact that depression can cause death or changes in life quality of hemodialysis patients, Priscila Duarte and her colleagues (2009) did intervention group therapy and cognitive behavioral therapy to decrease the depression. At the end of her research, she realized significant difference between pro-test scores of controlling and experimental group by conducting pro-test questionnaire. Therefore she considered implementation of these training as a useful and effective way to decrease depression. In this research, comparing chart scores is completely consistent to this conclusion.

According to the hypothesis of the research: cognitive behavioral therapy is effective on decreasing the depression of hemodialysis patients, The research result that is reflected by diagrams indicates that the difference between pre-test and pro-test scores in experimental group is significant. In other words, the result of this study shows that cognitive behavioral therapy is effective on hemodialysis patients to decrease their depression.

References


Psychological intervention IN fluid Manageinent.(2006)
