EXAMINED THE EFFECTIVENESS OF CBT (COGNITIVE BEHAVIOR THERAPY) ON DEPRESSION AND DEPRESSION IN CHILDREN WITH NOCTURNAL ENURESIS

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Abstract: In this study we assessed the effectiveness of "Cognitive behavioral therapy" on stress and depression in children with nocturia. The cognitive behavioral treatment sessions were designed based on Kendall's method and then was performed on 51 kids in experimental group. Experimental and control groups were assessed using "Penn State worry questionnaire for children", "revised children's depression and depression scale" and "positive and negative affect schedule" on before-after sections. The resulting data were analyzed using descriptive statistics and analysis of covariance. The experiment group showed significant decrease in stress, depression, worry and negative feelings. According to results the cognitive behavioral therapy is effective on stress and depression and it can be used as a harmless treatment in group training on children with nocturia.

Keywords: nocturnal enuresis, depression, Kendall cognitive-behavioral

1 Introduction

The mental health-related problems in children with enuresis are 2 to 6 times the general population (Parishan et al., 2007). So that depression and depression in children with enuresis are of common psychiatric disorders. Enuresis in elementary school age children is an important and complex problem and is problematic both for parents and child, And, if untreated, cause behavioral problems in children and concerns of parents and even this problem is effective in child's communication in adult age(Sepehmanesh and Marvoogi, 2014). There are various treatment methods for treatment of. Methods that had more effective effects in the treatment of antidepressant are include using tricyclic drugs (desmopressin, conditioning therapy, cognitive therapy or a combination of both.(Yusefi & et al, 2009) Research has indicated that despite the similarity of childhood depression with adults, depression in children includes a variety range of symptoms than in adults depression, in addition to this that depression in children and adolescents has more simultaneity with other mental disorders (Charlson, 2000).

Major depressive disorder is one of the most important cases that is raised about children despite a variety of childhood and adolescent depression and is debilitating like major depressive disorder in adults (Ryan, 2003) So that, the individual operations will be injured in the short term or long term. In fact, major depressive of childhood is a recurrent mood disorder which interferes greatly with normal growth of child and increasingly associates with the risk of suicidal behaviors (Birmaher, et al., 2006). The depression of children is diagnosed when they indicate some evidence of function change according to several two-week periods. Including that depressed child may be irritable or disinterested and does not enjoy of many things or has both of them. In addition, the child should have at least four of the following symptoms nearly every day, and some of his most important functions be disturbed:

- Disorder in sleep (oversleeping or insomnia)
- Slowness or severe psychomotor agitation
- Fatigue or lack of energy
- Feelings of worthlessness or unwarranted and extreme feelings of guilt
- Loss of ability to think, concentrate or make decisions
- Repetitive thoughts about death and suicide (Firoozbakht 2006)

In addition to major depressive disorder, dysthymic disorder also is one of the unipolar and relatively stable mood disorders that appear often in childhood(Park & Goodyer,2000)Childhood dysthymic has mild depressive symptoms for at least one year in childhood and adolescence that is associated with at least two of the following symptoms:

Poor appetite or overeating, low energy or fatigue, feelings of worthlessness, low concentration or poor decision-making and feelings of hopelessness (Khodayari fard & Abedini)

Psychotherapy and pharmacotherapy have been distinguished useful for children and adolescents with depression disorders. However, evidence indicates that psychotherapy is prior to pharmacotherapy frequently for depressed children (Park & Goodyer.2000) in cognitive-behavioral therapy; the therapist teaches coping skills to the child and provides situations for him to practice these coping skills. These skills are protective factors in anxious disorders of children (Kenoly and Bernstein 2007.) Cognitive-behavioral therapy has different techniques, but experts using mainly from the following techniques:

- Training to child and parents about depression
- Progressive muscular relaxation exercises
- Deep breathing techniques
- Challenging the thoughts that cause depression (cognitive restructuring)
- Put the child exposed to situations cause depression (real and imagined)

Plans to avoid recurrence (such as amplifiers sessions and cooperation with parents and school) the program of coping cat fighting cat is most usable and best guide of cognitive behavior therapy(kandal ,1990).

In coping cats program children learn that how to modify their primary and secondary evaluation processes that are rooted in incorrect beliefs, In poor evaluation of their abilities and high extent of the threatening situation, By learning several skills of psychological in an atmosphere of therapy, make plans for confrontation, Thinking about available solutions, cognitive re organizing and avoid hopeful thought and cognitive avoids. And by modifying these self-talking, coordinate their ability with the nature of stressful situations and finally with the confrontation (instead of avoiding) help to strengthen their confidence (Dadsetan& et al, 2010).

Parents learn relaxation techniques and act as therapist.(Kenoli &Brinson,2007). In this way, parents are regularly associated with therapist. In these meetings parents raise their concerns with the therapist. They can help treatment process by informing the therapist of depression situation of their children at home and the way of their reactions. Since parents have profound feelings toward their children, they may be upset by seeing their Childs grievance, but the best thing that they can do is to help their child to confront with his fear (Dadsetan & et al, 2010). Although few studies have focused on aspects of cognitive therapy and are considered often the methods of pharmacotherapy and behavioral therapy. Therefore, due to the lack of indigenous study in this field and the importance of the outcomes of enuresis, in this study we

will evaluate the effectiveness of cognitive-behavioral therapy on depression and depression of children with enuresis. And we are attempting to answer this question whether cognitive behavioral therapy is effective to reduce depression in children with enuresis or not?

2 Methodology

Methodology is quasi-experimental with pre-test and post-test scheme with a control group.

The statistical population of present study includes Children with enuresis referring to outpatient clinics of Urology Specialists in 2015 and the first half of 2016 in Kermanshah city. The total number of participants in this study was 30 children admitted to the pediatric urology specialists in Kermanshah that after randomly selection, 15 individuals were placed in control group and15 individuals were in intervention group. Sampling for children to targeted participate in the study was based on inclusion criteria. After selecting the case study sample, they randomly were placed into two groups: Control and alternative. In the pilot studies minimum samples of 15 people is appropriate. (Delavare, 2001)

Exclusion criteria including the following cases: lack of chronic diseases, lack of bladder or kidney health problems in children, lack of specific medication, no history of traumatic experiences in the past six months, the primary nocturnal enuresis

3 Research Tools

A: Penn State-form of children Worry Questionnaire (PSWQ-C) (Korpita et al. 1991).

This questionnaire includes 14 items of self-report type.

The questionnaire has used to worry measurement in the children and is useful tool for comprehensive diagnosis and assessment in children between 6 and18 years old. questionnaire materials is graded from zero to three as a 4-degree scale.The total test score is between zero and 42 and with the higher total score in children is a sign of greater concern.The convergent and diagnostic and reliability validity of questionnaires has been approved in the study of Mofrad, Atef and Bayanzadeh (2000) (Bakhtiari, et al., 2013).

3.1 Revised child depression and depression scale (RCADS)

This scale of self-report questionnaire is for children and adolescents from 8 to 18 years old with 47 items and has six scales for measuring separation depression disorder, social phobia, generalized depression disorder, panic disorder, obsession, incontinent and major depression disorder. At this scale the respondent should express that whatever every item is true on him/her due to their usual feelings.In a study on clinical and non-clinical samples good psychometric properties has been reported to this questionnaire. Two specific strong point of this scale are: have several scales is related to the numerous diagnosing depression disorder that can be helpful in determining for treatment, the second that has the short scale for depression to be evaluated the possibility of depression (Chorpita 2011).

3.2 Positive and Negative Affect Scale for Children PANAS-C

This questionnaire is a scale that is used to emotion of children in many studies that includes 24 items and measures the positive and negative emotion of children. Unlike a scale of emotion and arousal, this scale wants from children to grading some adjectives alone (such as angry, sadness) with respect to that in have felt them in recent weeks. Psychometric properties of this scale have been reported appropriate by Alornt and et al. In a series of comparative analyzes on clinical population, Chorpita and Dalyden observed that measures of negative affection and arousal emotional scale both have correlation with depression scales. Meanwhile Negative Affection Scale reliability is high briefly. It was observed in the same study that positive affection Panas has higher correlation with depression clearly, although there is a problem due to significant correlation with other scales of negative affection, concern and confusion in its discriminant validity. Although the scale of emotional arousal due to having the high content validity to mood has better potential for prediction for the occurrence of depression in the future. However, any advantage or disadvantage related to it requires further researches. According to our findings use of the PANAS is recommend generally in the comprehensive assessment program (Chorpita, 2011)

D. assessment questionnaire of children with nocturnal enuresis

This questionnaire in parts of parents assessment, medical assessment and psychological therapist, including A. the findings of résuméB: familial history, C. physical examination findings, D. paraclinical findings has been set. Each section has yes and no option and one column is to more explain about that option. Parents form includes 23 items and therapist form has been set in four different sections. This form has been prepared, set and presented by Mahmoud Gharayi in the book of bowel disorders and nocturnal enuresis of children as a practical guide for assessing and treating physicians, psychiatrists, psychologists.

3.3 Implementation Method

participants after examining specialist doctor by questionnaire for nocturnal enuresis was showing that the problem is psychogenic was selected and after performing the first three questionnaires were enrolled and randomly assigned to the intervention group and control group. These sessions once a week for an hour, was conducted by the researcher. As well as during a session with parents the need to implement the treatment plan was recommended to them. And it was agreed that sessions to be implemented twice a week and for 60 minutes and parents also participate and collaborate in some sessions. Cognitive behavior therapy based on cognitive behavioral program of Kendall program in 1994 was designed by Philip Kendall to reduce the symptoms of disorders in children, this therapy method has four steps based on therapy protocol: understanding feelings of fear step, waiting for negative events, actions and attitudes that can reduce interference and results and encouraging, it has been designed. Therapy sessions were designed in a way that at first childhood be aware of your physical reactions to depression and physical symptoms and identify signs of depression. In the next incidents of negative expectations and anxiogenic accidents and their types will be discussed in therapy session meeting. In the third step the actions and behaviors of children against the events of are examined anxiogenic and problem solving skills and mental relaxation was taught to them. Finally, to the group members were given an opportunity to evaluate the new behaviors they have learned and encourage him/her to do new skills. That content of each session has been prepared and set and presented in the table based on the book of Chorpita (2011).

Table 1: content of cognitive behavioral therapy sessions for treatment of children

Session	content
First	Its contact with the authorities, assessment, setting treatment goals, identify stressful situations, familiar with the concept of age-related behavioral problems and nocturnal enuresis
Second	Training different feelings, identify symptoms created in anxiogenic position, positive reinforcement Training, probationary contract and blackout behavior
Third	Training physical symptoms of depression, identify physical reactions, Training forming behavior and interaction behavior
Fourth	In person meeting of parents order to increase cooperation with them in the treatment process and responding to possible questions.

of pre-test in experimental and control groups. Data were analyzed by using 23-SPSS statistical software.

Data analysis in the descriptive part with mean and standard deviation and ...In the second part ANCOVA analysis of covariance was used to testing hypotheses and control of the effect

4 Results

Table 2: Replacing the participants in groups

Group	Number	Percentage
Invention	15	50
Control	15	50
Total	30	100

Findings in Table show that in this study, 30 children were present with nocturnal enuresis that were replaced in both groups (intervention and control) and in each group 15 people has been located.

Table 3: Mean and standard deviation of scores participants in the positive and negative assessment questionnaire for children

Variable	Number	Minimum	Maximum	Mean	Sd	Skewness	
Positive affection	30	25	43	32	4.938	0.186 -0.060	
Negative affection	30	41	58	51.10	4.78	0.488 -0.439	

As can be seen in the table mean and standard deviation positive affection among participants was equal to the 32.200±4.938. While in negative affection score of 51.10 ± 4.78 had been obtained.

Table 4: Mean ± SD of depression and depression

Variable	Number	Minimum	Maximum	Mean	Sd	Skewness
Depression	30	44	69	55.53	6.67	0.186 -0.060

The mean of depression and depression of participants was equal to 55.53 years old with standard deviation of 6.67.

Table 5: Mean ± SD of concern PSQW

variable	Number	Minimum	Maximum	Mean	Sd	Skewness
Concern	30	28	40	34.23	2.95	0.322 -0.501

The average concern score of participants was equal to 34.23 years with a standard deviation of 2.95.

In all variables skewness and kurtosis is between -2 and +2, which represents the normal distribution samples.

- **Research hypothesis:** there is a significant difference between depression scores in the intervention and control group after the intervention step

Table 6: descriptive data of depression variable

	Group	Mean	Sd
Pre test	Intervention group	58.80	6.97
	Control group	53.60	6.60

Post test	Intervention group	50.530	5.659
	Control group	54.533	6.42

As can be seen in the total average score of depression participants in the control group was equal to (6.28 ± 53.60). This mean and standard deviation in the intervention group was equal to (5.65 ± 58.80). While the mean of the control group has not changed significantly (6.42 ± 54.53) it seems a significant change has occurred in the intervention group (5.65 ± 50.530) that this difference is measured by testing significant covariance. Covariance analysis was carried out on the data normality in descriptive part and homogeneity and Levin test also has come in this part.

Table 7: Levene test a test for equality of variances

F	Degrees of freedom 1	Degrees of freedom 2	Significant
2.61	1	28	0.117

Equality of variances test shows that default of covariate analysis has been observed so the next table shows the covariance analysis results.

Table 8: results of covariance ANCOVA effectiveness of treatment on depression at pre-test post-test part

Resource	Sum of squares	Degrees of freedom	Mean square	F	Significant	Eta coefficient
Modified Model	647.493	2	323.756	17.553	0.000	0.565
Anxiety	527.493	1	527.493	28.301	0.000	0.514
Groups	352.712	1	352.712	19.124	0.000	0.415
Error	497.947	27	18.443			
Total	83938.00	30				

The results indicate that after removing the effect of pre-test, the two interventions and control groups are significantly different with F equal to 19.12 at level of 0.000. Eta coefficient is equal 0.415 which indicates the effectiveness of the intervention.

Table 9: paired Comparison of intervention and control groups in in depression post-test step

groups	Mean difference	standard error	Significant	The difference in the confidence level of 92%	
				Up	Down
Control	7.4	1.692	0.000	10.87	-3.928

5 Discussion

According to research findings, the hypothesis of research was confirmed that cognitive-behavioral program decreases the rate of depression in children with enuresis that is aligned with the findings of (Pennant & et al, 2015) that indicated the effectiveness of psychotherapy on reducing children and adolescents' depression and depression in a review study. For this purpose, 27 clinical trial studies were selected in which children with depression and depression had been treated. The overall results indicated that cognitive behavior therapy is one of the most effective treatment methods for children. This finding means that people who were in the experimental group have reported significantly fewer depressive symptoms than those in the control groups after the intervention.

In fact, this treatment program has been able to reduce the rate of depression. Wolk & et al (2015) findings that were conducted in a study aimed to evaluate the effectiveness of of psychotherapy on depression and depression in children also, indicated that those who had recently thought about suicide have responded to treatment more than others. These results eventually indicated that depression and depression in children has decreased. In another study that was conducted recently by Pennant & et al (2015) in a review study that evaluates effectiveness of psychotherapy on reducing depression and depression in children and adolescents. 27 clinical trial studies were selected in which children with depression and depression had been treated. The overall results indicated that cognitive behavior therapy is one of the most effective treatment methods for children. This finding is aligned with results obtained in this research.

Articulating this finding, we can say that although this method of treatment emphasizes more on children's anxieties but the techniques taught to the children and their parents especially in 5-6 and 7 sessions can have a significant effect on reducing negative self-talking and cause increasing confidence and positive self-talking and increasing the mood of students. In this orientation sessions of self-talking in situations of depression or depressive, differentiation were performed between depression and harmonious self-talking, problem solving training, helping child to change self-talking and the results indicated these techniques had

been effective. Results of previous researches confirm that the behavioral disorders and psychological problems have more prevalence among children with enuresis. So that Yusefi & et al., (2012) found that children with enuresis were significantly more behind in terms of evolutionary and growth than normal children in five axis of Personal social, problem solving skills, rough movements, subtle movements and communication of children with primary nocturnal enuresis. The results of Salehi & et al., 2012 study from the internalizing problems, externalizing, depression- depression, retirement-depression and emotional - behavior, there was a significant difference between the two groups of children with and without primary nocturnal enuresis.

Sepehrmanesh, 2014 reports prevalence rate of depression disorders in children with enuresis 39 percent that is significant figure. So, the necessity to attention to disorders associated with enuresis can be helpful in reducing the problems associated with this problem. Since many people linked the depression, depression and even the quality of mother's life and children with enuresis with enuresis, so, reducing on the symptoms of depression and depression can have a positive effect on children's confidence, reduce their behavioral problems. The results of this study indicate that using standard cognitive-behavioral therapy has been effective in children with enuresis and has been able to significantly reduce the rate of depression and depression. So adding parents and teachers training to this context of treatment and prevention of signs and symptoms and the prevalence of enuresis can be useful in future studies.

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