

Effectiveness of Cognitive-behavioral Therapy in Depressed Mothers of Cerebral Palsy Children

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ABSTRACT

Objective: The purpose of this study is to prove the effectiveness of cognitive behavioral therapy (CBT) in reducing the level of depression among mothers of cerebral palsy (CP) children.

Study Design: Intervention-based study.

Subject and Method: This study was conducted at department of Occupational Therapy, Institute Of Physical Medicine & Rehabilitation-Dow University of Health sciences. The present study was conducted during July 2011 to August 2011. Screened mothers with moderate depressive symptoms on Beck Depression Inventory-II were selected for CBT sessions. 24 mothers were enrolled for the therapy. Six structured CBT sessions for each mother were conducted. Pre- and post-interventional evaluations of depressive symptoms were done by using Beck Depression Inventory II (BDI-II).

Results: Means of pre-intervention and post intervention were compared to find out the effectiveness of CBT for depressed mothers of CP children. Results show a significant improvement in post interventional evaluation of depression symptoms, indicating that CBT helped these mothers to cope up with their depressive symptoms.

Conclusion: CBT assists mothers of CP children with moderate depressive symptoms to cope up with their depressive symptoms effectively.

Key words: Cognitive behavioral therapy (CBT), cerebral palsy, maternal depression, beck depression inventory-II, relaxation techniques, stress management.

INTRODUCTION

Most children spend healthy childhood and put little demands on society and care givers. About 7.7% have reported to experience complications during their growing period.¹ Cerebral palsy (CP) is the commonest problem that begins in early childhood.² It is defined as a group of disorders of development, movement and posture causing activity limitation that are attributed to non-progressive brain injury which occurs in the developing fetal or infant brain. The motor disorders of CP are often accompanied by disturbance of sensation, cognition, communication, swallowing, perception and behavior.³⁻⁴ It is the most common neurological disorder affecting children, with an estimated prevalence of 2.0 to 2.5/1000 life birth.² Raising a disabled child is a challenging process for the parents and care givers.⁵ The routine chores of feeding, toileting, traveling, and communication are

much more physically and emotionally challenging for parents of children with disabilities.⁶⁻⁷ It's not easy for parents to raise a child with special needs. These parents have to be stronger, adaptive and optimistic.⁸ Researches provide evidence that parents of children with special needs go through many psycho-social problems like anxiety, depression, feeling of helplessness, frustration and aggressive behaviors, whereas society's incompatibility supplements to the worries of family.⁹⁻¹⁰

As in children with disabilities, mother is an integral part of team working to improve child health. They face a lot of social and emotional problems.¹¹ Mothers suffer from psychological distress in response to their child's disability,¹²⁻¹³ so there is a need to emphasize on parent mental health issues, explicitly maternal depressive symptoms in this population. Researches indicate that mothers of disabled children are usually more prone to depression as compared to mothers of normal children.¹⁴ Singer (2006) stated that 6%-24% mothers of disabled children scored above clinical cutoffs for depression.¹⁵ Little work has been done to identify the prevalence and causes of maternal depression in neurological disorders such as cerebral palsy.¹⁴ Working with family especially mothers, help

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them to manage their depression thus indirectly helping CP child to improve his/her health.⁸

Coping includes psychological means to remove, adjust, or manage a disturbing event or emergency situation.¹⁶ It depends upon the parents' coping strategies how they interpret and manage their crucial situations in order to raise their child with special needs. Researches indicate that parents' financial status, educational level, problem solving skills, strong marital relationship and social support also help determine the parent's level of adjustment and coping with their problems.¹⁷⁻¹⁸ As depression is one of the main problems of mothers of children with disability so cognitive behavior therapy (CBT) could be used to help them manage their depression. "It is a form of action-oriented psychosocial therapy which assumes that maladaptive or faulty thinking patterns cause maladaptive behavior and "negative" emotions. The treatment focuses on changing an individual's thoughts (cognitive patterns) in order to change his or her behavior and emotional state".²¹ In a paper published in Lancet, Rahman et al (2001) reports the success of using CBT to treat maternal depression in rural areas of Pakistan.⁵ As far as author's knowledge is concerned, CBT is still not used for depressed mothers of disabled children to manage their depressive symptoms that could in return support them to improve their child's quality of life. Therefore, the focus of the present study was to find out the effectiveness of CBT with moderately depressed mothers of cerebral palsy children, so that child rehabilitation process could be facilitated and mothers can play more effective role in it.

METHODOLOGY

It was an intervention-based study, conducted at Institute of Physical & Rehabilitation- Dow University Health Sciences. The study period was from July 2011 to August 2011. Subjects were selected on convenient basis, after obtaining written informed consent. They were explained the purpose of study and how it would help them in rehabilitation process of their child. Only moderately depressed mothers were enrolled for six structured CBT and were post-evaluated for depression using Beck depression Inventory. Mothers with any other mental illness or those who were unable to comprehend and follow instructions were not included in the study.

Mothers were called to Institute of Physical Medicine & Rehabilitation on alternative days for 45minute session. Focus of the sessions was to help them to change their faulty cognition(negative thoughts), teach them relaxation and stress management techniques.

Furthermore they were provided with an opportunity to discuss their problems and to develop a positive view of life.

Results were evaluated using SPSS 16. Mean value of depressive symptoms on BDI-II before and after CBT sessions were taken to see the difference; p-value of < 0.05 was considered statistically significant with confidence interval of 95%. (See Tables 1 & 2).

RESULTS

Mean value of pre-intervention (before CBT) is high i.e. 25.5 when compared with post-intervention (after CBT) Mean value i.e. 21.4 (See Table: 01) indicating that CBT helped mothers of CP children to cope up with their depressive symptoms.

Furthermore results show significant change on⁹ out of 22 items of BDI-II (See Table: 02). Before CBT Mean value for guilt feeling was 1.4, while after CBT Mean value was 0.4, signifying that CBT helped these mothers to change their guilt-related feeling by re-educating them the actual cause of their child disability. Similarly for their self-critical thoughts pre-intervention (before CBT) Mean value was 1.6 and after intervention (after CBT) Mean value was 0.7, also an indicator of improvement in self-critical feelings that were substituted by more appropriate and positive thoughts during therapy sessions.

Suicidal thoughts Mean value before intervention was 1.6 and after intervention mean value was 0.3, show that their suicidal ideations decreased after taking therapy by using thought stopping techniques and diverting mind to more positive thoughts.

Whereas Mean values for crying spells were 1.7 (before intervention) and 0.6 (after intervention), show their crying spells reduced as they learned to stop their negative thoughts that were reason to cry by substituting them with more positive and healthy thoughts. 1.7 was the Mean value for feeling of punishment before intervention and 0.8 was the mean value of after intervention; show that CBT helped them to reduce these feeling.

The Mean value before CBT sessions for loss of interest in activities was 1.5 and after CBT sessions it significantly changed to 0.4, which means after receiving CBT these mothers developed interest in their daily activities.

Mean value for change in sleep pattern before CBT sessions was 1.7 and after CBT sessions was 0.7: shows a significant improvement, indicating that CBT helped these mothers to have a sound sleep.

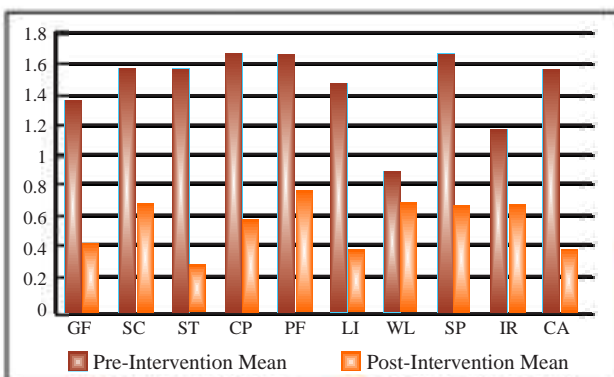
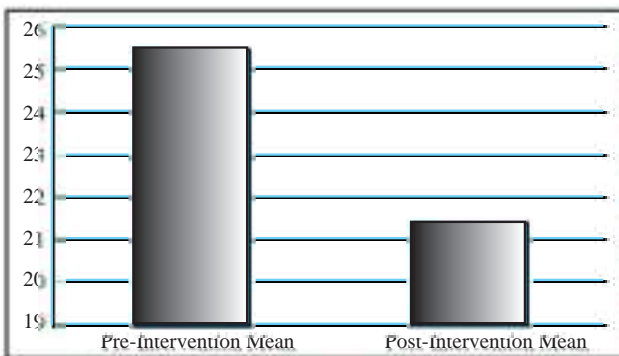
Level of irritability decreased after receiving CBT as Mean values changed from 1.2 (Mean of before intervention) to 0.7 (Mean of after intervention). CBT also helped these mothers to have a track of their daily diet and to add a healthy food into their diet that improved their appetite. Before intervention Mean value for change in appetite was 1.6 and after intervention Mean value was 0.4, indicating a significant improvement.

Table 1: Mean Value of BDI-II before CBT and after CBT

Sample Size N	Pre-Intervention Mean	Post-Intervention Mean
24	25.5	21.4

Table 2: Mean Value of Sub-Domain of BDI-II before CBT and after CBT

S.No	Sub-Domain	Pre-Intervention Mean	Post-Intervention Mean
1	Guilt feeling (GF)	1.4	0.45
2	Self-criticalness (SC)	1.6	0.7
3	Suicidal thoughts (ST)	1.6	0.3
4	Crying spells (CP)	1.7	0.6
5	Punishment feeling (PF)	1.7	0.8
6	Loss of interest (LI)	1.5	0.4
7	Changes in sleeping patterns (SP)	1.7	0.7
8	Irritability (IR)	1.2	0.7
9	Changes in appetite (CA)	1.6	0.4



DISCUSSION

This study reveals the impact of cognitive behavioral therapy (CBT) on depressed mothers of cerebral palsy (CP) children. It signifies a modified treatment in which evidence-based intervention was used to help mothers of CP children to cope up with their depressive symptoms. Results indicate that mothers receiving CBT experienced substantial reductions in depressive symptoms as pre-treatment mean scores of BDI-II were high (i.e., 25.5), and treated mothers scores low (mean 21.4) specifically on items related to guilt feelings. As previously they felt that they were personally responsible for their child’s disability. Subsequently suicidal ideations in these mothers have shown a decline and they showed a more appropriate coping strategy against their child problem.

Researchers indicate that maternal depression has negative impact on children’s health, thus improvement in depressive symptoms of mothers has a potential to benefit their child.⁸ So the CBT could help these mothers to improve their motherhood abilities.⁵ There are two possible mechanisms by which CBT affects maternal attitude towards motherhood for CP children. Firstly, by helping these mothers to alter their faulty cognitions like feelings of worthlessness, guilt and self-critical analysis. Secondly, by improving mother-child relationship thus by focusing to reduce mother’s irritation, increasing her interest in life and in child’s rehabilitation, this is also achieved by teaching them relaxation techniques which ultimately help mothers to cope with stress and improving their sleep.¹⁹

After receiving CBT mothers reported increased satisfaction and interest in their life, they reported decrease in self-critical analysis that was the major factor leading to frequent crying spells and suicidal thoughts, the results also correlate with an open trial of In-home CBT conducted by A.T. Robert et al (2003), who reported that mothers receiving CBT showed increased satisfaction towards motherhood and more positive view of child and child-rearing from pre to post treatment.²⁰

Moreover mothers receiving CBT during their sessions learned how to relax themselves by using relaxation techniques and altering cognitions, thus they reported decrease in irritability and improved feelings of wellbeing after involving themselves in pleasurable activities.

This study was an initial step to re-educate mothers of CP children and helping them to cope up with their depressive symptoms, it seems additional efforts are needed to engage and maintain this population in treatment. This study had limitations as it was conducted

with mothers of CP children only; it must also be conducted with mothers of children having other type of physical/mental disabilities and with mothers of children with no disability so that data could be compared which would help to identify the normal level of stress/depression among all mothers. The researcher would be able to differentiate between the levels of stress/depression among mothers of children with/without disability.

The study also has strength that for the first time in Pakistan the mental health issues of mothers of children with disability are addressed and now work has been done on their psychological well being facilitating the rehabilitation process of their child.

There are various possibilities for forthcoming research with mothers of disabled children using CBT. Replication and expansion is needed to recheck the favorable results of this study. Furthermore follow-ups should be made to see the period of effectiveness and relapse prevention and long-term impact on children rehabilitation processes.

CONCLUSION

Cognitive Behavioral Therapy (CBT) is an existing evidence-based treatment for depressive symptoms; this study proved that CBT assists mothers of disabled children to cope up with their depressive symptoms that help them to participate effectively in their child rehabilitation management

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