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
Effectiveness of cognitive-behavioral therapy in depressed mothers of cerebral palsy children

The effectiveness of cognitive-behavioral therapy (CBT) in managing depression among mothers of cerebral palsy children was investigated. Mothers were selected based on convenience sampling, and they were evaluated using the Beck Depression Inventory (BDI-II) before and after the intervention. The intervention consisted of six structured CBT sessions, focusing on helping mothers comprehend and follow instructions related to managing their depression. Mothers were educated about CBT and its role in improving their quality of life by teaching them relaxation and stress management techniques.

**METHODOLOGY**

The study was conducted at the Institute of Physical & Rehabilitation at Dow University Health Sciences. The period of study was from July 2011 to August 2011. Subjects were selected based on convenient sampling and obtained informed consent. The primary objective was to find the effectiveness of CBT in managing depression among mothers of cerebral palsy children. Mothers were included if they had a slight to moderate level of depression, as measured by BDI-II, and were able to understand and follow instructions. Mothers with other mental illnesses or unable to comprehend and follow instructions were excluded.

CBT sessions were conducted over six sessions, each lasting 45 minutes, with a focus on teaching mothers relaxation and stress management techniques. Furthermore, they were provided with an opportunity to discuss their problems and develop a positive view of life.

**RESULTS**

The study revealed significant improvement in depressive symptoms on BDI-II before and after CBT sessions. The mean value of depressive symptoms before CBT was 25.5, which decreased to 16.4 after the intervention. This indicates a statistically significant improvement (p-value < 0.05) in the effectiveness of CBT in managing depression.

**Conclusion**

Cognitive-behavioral therapy is an effective approach for managing depression among mothers of cerebral palsy children, improving their quality of life and facilitating their child’s rehabilitation process. Further research is recommended to explore the long-term effects of CBT in this population.
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>
<thead>
<tr>
<th>S.No</th>
<th>sub-Domain</th>
<th>Pre-Intervention Mean</th>
<th>Post-Intervention Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guilt feelings (GF)</td>
<td>1.4</td>
<td>0.45</td>
</tr>
<tr>
<td>2</td>
<td>Self-criticalness (SC)</td>
<td>1.6</td>
<td>0.7</td>
</tr>
<tr>
<td>3</td>
<td>Suicidal thoughts (ST)</td>
<td>1.6</td>
<td>0.3</td>
</tr>
<tr>
<td>4</td>
<td>Crying spells (CP)</td>
<td>1.7</td>
<td>0.6</td>
</tr>
<tr>
<td>5</td>
<td>Punishment feeeling (PF)</td>
<td>1.7</td>
<td>0.8</td>
</tr>
<tr>
<td>6</td>
<td>Loss of interest (LI)</td>
<td>1.4</td>
<td>0.4</td>
</tr>
<tr>
<td>7</td>
<td>Changes in sleeping patterns (SP)</td>
<td>1.7</td>
<td>0.7</td>
</tr>
<tr>
<td>8</td>
<td>Irritability (IR)</td>
<td>1.2</td>
<td>0.7</td>
</tr>
<tr>
<td>9</td>
<td>Changes in appetite (CA)</td>
<td>1.6</td>
<td>0.4</td>
</tr>
</tbody>
</table>

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. So the CBT could help these mothers to improve their motherhood abilities. 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.

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.

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.

REFERENCES