Efficacy of Group Cognitive Behavioral Therapy on Depression Among Muslim Parents of Autistic Children in Jordan

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Abstract: Parents with autistic children usually are advised to reduce depression in order to improve their mental health. However, studies on depression among parents of autistic children in Jordan are limited. Therefore, this study aimed to examine the effect of group Cognitive Behavior Therapy (CBT) among parents of autistics children in Jordan. An announcement was made for a group cognitive behavioral therapy at three special needs centers in Irbid- Jordan and BDI-II was administrated to 87 parents. Accordingly, 60 parents with the lowest test score were randomly assigned into experimental and control groups. Participants were tested in three times with the same scales, pre-test, post-test and follow up. Employing SPSS version 19 and repeated measures ANOVA, the three times scores of the experimental and control groups were compared. Result indicated that the participants have reduced their depression across time (T1, T2 and T3). Result showed that 50% of the variability in the depression within the participants may be due to the group counselling treatment. These findings are shown that there is significant difference at all times. These implied that the treatment had a strong lasting effect after one month of group counselling treatment. Moreover, results of this study also indicated that significant difference was found between the experimental and control groups (p < .001, \( \eta^2 = .56 \)). This indicated that, experimental group is better than the control group in term of Depression by 56%. In conclusion, this study implied that group cognitive behaviour therapy is an effective treatment for depression among parents of autistic children.

Key words: Cognitive Behavioral Therapy, Depression, Autistic, Jordan

INTRODUCTION

There are strong evidences from the related literature that parents of autistic children face a high level of depression and stress. Given that parenting a child with autism is uniquely challenging and can be extremely stressful. Parents of children with disabilities have higher levels of depression than parents of typically developing children (Olsson and Hwang, 2001; Singer, 2006). Autism has a pervasive impact on the family and considerably modifies the lifestyle of each member of the family. Family caregivers of children with autism experience different tasks across their lifespan. Families of children with autism are known to be exposed to stress. Studies have also indicated that caregivers of children with autism experience increased depression as well as anxiety, restrictions of roles and activities, strain in marital relationships (Shu et al., 2000).

Several studies have documented a considerable impact of caring for intellectually disabled children on the caregivers’ quality of life. Amongst other important findings, the available research indicates that parents of children with developmental disabilities are at significantly higher risk of anxiety- and depression related symptoms than parents of children with no developmental disorder (Nachshen and Minnes, 2005; Olsson and Hwang, 2001; Singer, 2006). Another study was conducted by Singer, 2006, where meta-analysis was used to synthesize findings from comparative studies of depression in mothers of children with and without developmental disabilities. Effect sizes were determined for 18 studies conducted between 1984 and 2003. A weighted effect size of 0.39 indicated an elevated level of depression in mothers of children with developmental disabilities. Results show that mothers of children with developmental disabilities are at elevated risk of depression compared to mothers of typically developing children.

Olsson and Hwang (2001) conducted a study to assess parental depression by using the Beck Depression Inventory (BDI) in 216 families with children with autism and/or intellectual disability (ID) and in 214 control families. Their results were found that mothers with children with autism had higher depression scores (mean = 11.8) than mothers of children with ID without autism (mean = 9.2), who in turn, had higher depression scores than fathers of children with autism (mean = 6.2), fathers of children with ID without autism (mean = 5.0) and control mothers (mean = 5.0) and fathers (mean = 4.1). Forty-five per cent of mothers with children with ID without autism and 50% of mothers with children with autism had elevated depression scores compared to 15-21% in the other groups. Interestingly, Single mothers of children with disabilities were found to be more
vulnerable to severe depression than mothers living with a partner. In the other hand, studies exploring within-group differences have also found significantly higher levels of depression-related symptomatology with other disorder, in particular Down’s syndrome (Abbeduto et al., 2004).

Previous study has investigated the impact of autistic children on the mental health of their parents. Evidence shows that parents with autistic children experience greater stress than those having children with other chronic diseases as well as, depression and anxiety. Most of the previous studies conducted in Jordan are intended to help families learn ways of handling their children and to reduce negative behaviors. However, most of these available programs center solely on the autistic child and their behaviors, little if any attention is given to the emotional state of the child’s family members, recently, some studies were conducted to examine the attitude of parents toward their autistic children (Abu shuaib, 2007). Research has strongly indicated that cognitive behavioral therapy can be very effective in treating mild to moderate depression (Rupke, Blecke and Renfrow, 2006). Hence, this study aimed to examined the efficacy of group CBT among Muslim parents of autistic children in Jordan.

Counseling and Social Support for Parents of Autistics Children:

Social support is provided by family and other social relationship can significantly improve parent coping skills. While a parent may be surrounded by friends and family, it is his or her satisfaction with the support that ultimately affects the level of parental stress.

Family members may face feelings of guilt, responsibility and blame themselves excessively for having a child with autism. Helping the parents and families understand the etiology of the disorder and facilitating grief work are helpful strategies. Parents cannot change the fact that they have a child with autism, but they can focus on helping the child develop his or her potential. Offering parents therapeutic opportunities to discuss their worries, feelings and fears can be beneficial. Counseling, support groups and other types of support may be beneficial for the parents and siblings. The psychiatric nurse certainly has the skill to provide counseling, support groups and other types of support (Shea et al., 1999).

Psychotherapy for the child with autism often has limited value, but brief counseling may be useful for parents who may experience frustration, grief, depression and anxiety. The psychiatric nurse has skill in coaching parents. Parents benefit from coaching or education to give them behavioral and communication tools to use with the child with autism as well as help the siblings understand this child’s special needs. Learning about the physical, social and psychological effects of autism helps reduce the stigma and enhances treatment adherence. Family members can provide support, encouragement and help the child develop habits for success. However, they need to understand that the child’s symptoms cannot just be erased by willpower, discipline, or their favorite childrearing activities.

Respite care, social support and education help families cope (Hellzen and Asplund, 2002; Pearson, 1995). The family will need the support of resources that can provide responsible respite care or babysitting. Parents benefit from knowing about resources for support and education. In other words, social support also contributed on parenting stress; less support from paternal especially in family affair negatively affect the levels of stress. Boyd (2002) reports that mothers who exhibit low stress level in raising children with autism report more perceived support than mothers who exhibit high stress levels.

Cognitive Behavioral Therapy for Muslims Populations:

Although, there are mounting of evidences for the effectiveness of CBT on depressions across the globe (Kusztal et al., 2010; Weersing et al., 2006). The efficacy of CBT among Muslim populations still raises some concerns (Hogde, 2004). Cognitive behavioral therapy (CBT) has been identified as one of the most effective treatments for depression among parents of autistics children Research on group CBT treatment effectiveness, however, is still in a relatively new state especially among Muslim population. Some studies have suggested that modifying standard CBT protocols to include spiritual beliefs and practices drawn from clients’ spiritual belief systems may enhance outcomes with some clients (Koenig, Larson and Matthews, 1996; Lewis, 2001; Moberg, 2005; Nelson-Becker, Nakashima and Canda, 2007). However, this study focuses on traditional group CBT as the following description.

Cognitive Behavioral Treatment:

This program is designed as the treatment for parents of autistic children. All the group counseling program sessions based on the supportive training program for parents of autistic children by Gonzalez (2006). This program was researched over a three year period at Oxford University yielding highly successful results. It was also evaluated in schools over a one year period using comparison and control group and found to improve coping skills, self-esteem, mood and quality of relationship among participant. This type of intervention has been proven to yield positive outcomes, including decreased feelings of worthlessness and sadness (Barlow, 2002). An intervention based on CBT principles may prove to yield the most positive outcomes. This type of treatment seeks to change the way a person thinks and reacts to their environment. CBT therapy helps an
individual learn new ways of assessing and interpreting their everyday situations. In addition, CBT can provide a client with the opportunity to learn how distorted thought processing can impair their ability to interpret situations. CBT allows the individual the opportunity to gain insight as to how their thoughts and behaviors shape their lives. Essentially, CBT helps an individual learn how to cope with their environment.

The program will consist of homework including reading assignment and the completion of several questionnaires; therefore a minimum of a sixth grade reading level is a requirement for enrollment. CBT techniques in the program will include relaxation exercises, reframing, role-playing and homework assignments. The program offered parents a chance to share their experiences with others and receive feedback on ways of handling and improving their daily challenges and situations. Hypothetically, at the end of the program, participant will report and demonstrate improvement in marital adjustment and a reduction in feelings of parenting stress and depression.

MATERIALS AND METHODS

Research Framework and Design:
This study used an experimental research with the control group, pre-post- follow up test design. The population of this study was recruited from Irbid city. Irbid is the largest city in the north of Jordan, it also has the second largest metropolitan population in Jordan after Amman. First, posters announced that a group counseling treatment aimed at reducing depression among parents of autistic children would be held at the Al Awaeel center, Irbid Between November 6 and December 12, 2010. 250 parents who wished to solve and reduce their depression symptoms volunteered to participate in the program. The Beck Depression Inventory BDI was administered to all participants. The sample of the study consisted of the 60 parents with the highest scores. Both the study and control group consisted of 30 subjects who were randomly assigned. Before the study began, each participant received a questionnaire in a sealed envelope requesting demographic information. The study group attended a 5-weeks of counseling treatment with weekly meeting for 2 and an half hours. A final application of the Beck Depression Inventory was administered to both groups at the end of the program. A follow-up test was given 1 month later to all the subjects participating in the group counseling treatment and the control group.

Data Collection Tool:
Beck Depression Inventory (BDI):
The BDI is a 21-item questionnaires used to assess symptoms of depression in adults. Each item offers four possible responses of increasing severity ranging in value from zero to three. For each item, participants will identify the statement that most closely matches their feelings over the past two weeks. Item responses are summed to achieve an overall score ranging from 0 to 63, with higher 21 scores representative of more severe depression. A score of 10 or higher is often considered to be indicative of mildly elevated symptoms of depression (Beck et al., 1961). The BDI is widely used in clinical practice and research and has very good reliability and validity (Beck, Steer and Garbin, 1988). In this study, the BDI will administer as a measure of parental depression. The questionnaire reflects some of the major characteristics typically associated with depression, including insomnia, sadness, guilt and irritability.

Questions were revised to be more specific and to better associate with the criteria diagnosis in the DSM-IV. The samples that were used to create the BDI-II include psychiatric outpatient clinics and one college-student group. According to the manual, the coefficient alpha for the BDI-II and outpatient clinics was .92 and for the BDI-II and college student group it was .93. The BDI-II had a correlation of .93 with its predecessor the BDI-IA. Additional comparisons to other self-questionnaires demonstrated correlations among the various instruments. For example, the correlation between the BDI-II and Beck Hopelessness Scale (BHS) was .68 and the correlation with the Hamilton Anxiety Rating Scale Revised (HARS-R) was 47. In addition, the changes in the currently used questionnaire addressed specific behaviors that correlate with the diagnostic criteria for depression in the DSM-IV TR. According to the manual of this tool, any score of 3 can be an indicator that this is an area of concern with the participant.

Statistical Analyses:
The difference between the pretest, post-test and follow-up test results of the groups was examined using repeated measure of ANOVA. A value of P < .05 was regarded as significant. All analyses were performed using SPSS version 19.0.
RESULTS AND DISCUSSIONS

The demographic characteristics of both groups are presented in Table 1. The results of the prèt-test of Beck Depression Inventory (BDI) applied to the control and comparable groups revealed no significant differences in Depression (pretest experimental group 21.80, 6.07, pretest control group = 23.50, 5.02, \( P > .05 \)). Post-test and Follow-up scores (at the end of the program) for those attending the Cognitive behavioral program indicated to be lower in total than scores of those parents who did not attend.

<table>
<thead>
<tr>
<th>Table 1: Demographic Features of the Experimental and Control Group.</th>
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<tbody>
<tr>
<td><strong>Experimental group</strong></td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Duration of married</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>No. of children</td>
</tr>
<tr>
<td>Diagnosis</td>
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<tr>
<td>Education</td>
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<tr>
<td>Income</td>
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**H1:** There is significant difference for the mean scores for experimental group in depression for T1, T2 and T3.

In order to test the hypotheses for Depression, a three-factor Mixed Design ANOVA, AxBx(C), repeated measure for Depression as the dependent variable was used to test the hypotheses 1 and 2 is shown in Table 2.

<table>
<thead>
<tr>
<th>Table 2: Results of Repeated Measure ANOVA for Depression.</th>
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<tbody>
<tr>
<td><strong>Variable /Time</strong></td>
</tr>
<tr>
<td><strong>Depression</strong></td>
</tr>
<tr>
<td>Pretest</td>
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<tr>
<td>Posttest</td>
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<tr>
<td>Follow up</td>
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**Pairwise Comparisons**

<table>
<thead>
<tr>
<th>(I) time</th>
<th>(J) time</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>4.467*</td>
<td>.654</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>-4.467*</td>
<td>.654</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>-1.150*</td>
<td>.366</td>
<td>.008</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>1.150*</td>
<td>.366</td>
<td>.008</td>
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</tbody>
</table>

**Main effects between Group**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>Df</th>
<th>F</th>
<th>Sig.</th>
<th>\eta_p^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>15.70</td>
<td>7.178*</td>
<td>1/56</td>
<td>71.1</td>
<td>.000*</td>
<td>56</td>
</tr>
<tr>
<td>Control</td>
<td>22.88</td>
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</tbody>
</table>

Mauchly’s test indicated that the assumption of sphericity had been violated (\( \chi^2(2) = 22.5, p < .001 \)), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity (\( \epsilon = .749 \)). Main effects of repeated measure within time, \( F (1.50, 83.8) = 56.8, p < .001, \eta_p^2 = .50 \).

The results shown in Table 2 indicated that the participants have reduced their depression across time (T1, T2 and T3). Using the commonly used guidelines proposed by Cohen (1988) (.10 = small effect, .25 = moderate effect, .40 = large effect) this result suggested a large effect size. Result showed that 50% of the variability in the depression within the participants was 50% may be due to the group counselling treatment.

Therefore, these results led to the retention of alternative hypothesis 1 of Depression. This implied the treatment received by the participants is effective for reducing their depression.

Accordingly, pairwise comparison test using the Bonferroni correction (Table 2) determined that there was a statistically significant difference on the mean test score between the T1 and T2. The mean scores in depression for at T1 (M=21.8) is significantly higher than T2 (M=13.9), \( p < .001 \). The mean scores in depression for at T1 (M=21.8) is significantly higher than T3 (M=11.4), \( p < .001 \). The mean score in depression for at T2 (M = 13.9) is significantly higher than T3 (M =11.4), \( p < .001 \). These findings are shown that there is significant at all times. This result indicated that the participants have reduced their depression at all times (T1, T2 and T3). These implied that the treatment had a strong lasting effect after one month of group counselling treatment has given:

**H2:** The mean scores in depression for experimental group is significantly lower than that of control group.
Next, a test for significant difference between group was conducted to examine H2 concerning Depression. Result from ANOVA test (Table 2) seems to show the significant difference was found in the mean value of depression between the experimental and the control group $F(1, 56) = 71.1, p < .001$, partial eta squared = .56 in the depression. Analysis of the total mean indicates that the experimental group are lower than that of control group. The results indicated the experimental group performed better in their depression scores than the control group. The partial eta-squared value was .56 indicated a large effects, using guidelines proposed by Cohen (1988) (.10 =small effect, .25 =moderate effect, .40 =large effect). This indicated that, experimental group is better than the control group in term of Depression by 56%.

Therefore, these results led to the retention of alternative hypothesis 2 of depression. These implied that the group counselling treatment is significantly more effective as compare to regular treatment for depression.

**Discussion:**

The way parents are affected by having children with mental disabilities depends on both external circumstances and individual family characteristics. Among the important external circumstances include the extent to which parents seek support and assistance from others. This study highlighted how group CBT treatment may significantly decreased depression among Muslim parents of autistic children in Jordan.

Before conducting the treatment, it was hypothesized that there is a significant reduction of depression in the experimental group with comparison of the control group.

As shown in the results, hypotheses 1 and 2 indicated that there was statistically significant difference in the mean scores of depression across the time from pre-test, post-test and follow up for participants. Therefore, parents of autistic children who participated at the experimental group showed reduction in depression over the three times, with large effect size, the results therefore indicated that the group CBT was highly effective in reducing depression among experimental group comparing with control group; where there is no significant difference on the mean score of depression across the time for control group.

These findings suggested that group CBT was a reliable intervention for reducing depression among Muslim parents of autistic children in Jordan. Hence, the present finding provide more evidence of the efficacy of CBT across different populations as suggested by previous studies (Gonzalez, 2006).

This study is in line with other researches (such as Hick and Chan, 2010; Gonzalez, 2006; Duarte et al., 2009; Kusztal et al., 2010; Weersing et al., 2006) that show CBT intervention effectively reduced the depression symptoms among parents of autistic children.

Findings from this study revealed that parents of autistic children who participated in group CBT treatment had significantly lower mean scores of depression compare to those were in the control group who received the regular treatment. The finding in this section was also by Oei and Dingle (2008). Researchers reviewed 34 papers to evaluate the effectiveness of group cognitive behavioral therapy as an intervention for depression disorders. Their findings indicated that GCBT yielded outcomes better than no-treatment controls and was comparable with other treatments. It was concluded that G-CBT was effective for the treatment of depression and can be used with confidence.

More so, the findings of this study were supported by Lo et al., (2011). They reviewed of 672 participants who joined a Cognitive Behavioral Group Therapy program in the community. However, about 80 percent of participants experienced significant level of impairment and showed very significant improvement after CBGT. These findings greatly affirmed the value of social work intervention via CBGT for depression and anxiety under a “non-stigmatizing” environment.

Finally, it is important to emphasize that additional research is needed to confirm these potential outcomes of group CBT with depressed parents of autistics children in other Muslim population besides Jordan. Recent development of spiritually modified CBT (Azhar and Varma, 2000) has the potential to be investigated in comparisons of traditional CBT in the future research in order to ensure that Muslim population receive the most efficacious treatment for depression. These can be respectively linked to CBT domains like emotions, behaviours, thoughts and the capacity for reflection (Haque, 2004). This may enable the CBT therapist to make the seemingly western CBT concepts more acceptable.

**REFERENCES**


