ORIGINAL ARTICLE

EFFECTIVENESS OF COGNITIVE BEHAVIOUR THERAPY IN REDUCING ANXIETY, DEPRESSION AND VIOLENCE IN WOMEN AFFECTED BY INTIMATE PARTNER VIOLENCE: A RANDOMIZED CONTROLLED TRIAL FROM A LOW-INCOME COUNTRY

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ABSTRACT

Objective: The purpose of the study was to investigate the efficacy of group cognitive behaviour therapy (CBT) on symptoms of anxiety and depression in women affected by intimate partner violence (IPV).

Methodology: For the present study, 200 participants were selected randomly from shelter home and NGOs of Karachi City having a minimum of 2 years of marriage. These females were randomly assigned to either CBT Group (treatment) or CBT based self-help group (controls) with 100 females in each group. Therapy was delivered in 10 sessions. Assessments were carried out both at the baseline and then at the end of the intervention. Feedback from the participants was taken weekly. SPSS v.21 was used for the statistical analysis of the data.

Results: The mean age of IPV survivors was 30 ±6.5 years. There was significant difference between the post-tests scores of treatment and control group (p value 0.000). The post-therapy mean value of the experimental group was 12.2, which has been significantly reduced from pre-therapy mean value of 50.01. In comparison, the mean value of the control group was 39.90 as compared with mean value of 47.9 before receiving self-help manual.

Conclusion: Cognitive-behavioural group interventions were effective in reducing depressive and anxiety symptoms of intimate partner violence survivors.

Key Words: Cognitive behaviour therapy, Anxiety, Depression, Intimate partner violence

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INTRODUCTION

Violence towards women has been defined as "the series of sexually, psychologically and physically coercive acts used against women by present or past male intimate partners". This form of violence continues to exist and occur over a prolonged period and yet least identified human right abuse in the world. Understanding violence against women is a challenging issue and the experts have found that it is very difficult to estimate the true occurrence of violence against women because of the irregularity in definitions, lack of coverage and limited number of epidemiological studies[1]. Nevertheless, present statistics from almost every part of the world confirm that one out of every three women experiences violence at some point in her life in an intimate relationship.

As per the 48 population-based studies conducted in various parts of the world, 10-69% of the women have reported that they have faced physical abuse by an intimate partner during their lifetime[2]. According to the studies, a woman is abused, normally by her intimate partner; in every 15 seconds and their intimate partners in the United States murder every day more than three women[3].

In Pakistan, domestic violence is considered as a private matter, as it usually occurs in the family and not brought to the clinic for assessment and interventions. According to a survey conducted in Pakistan, every day, at least two women are reported to have been burned in domestic violence incidents[4]. Pakistan is primarily a patriarchal society, which requires women's subordination and male dominance. Due to secondary status of women in Pakistani society, the vulnerability of women cut across all socio-economic groups. Divorced women are generally considered burdens and rejected by the society and families. In some places in Pakistan, the groom's parents pay bride price to the parents of the

bride. Therefore, they have no right to have an opinion in their daughter's welfare. This custom often results in abuse of wives at the hands of husbands who have paid to acquire a wife.

Many theorists believe that depression is highly likely after intimate partner violence. Hegarty et al[5] found that depressed women are 5.8 times more likely to have experienced intimate partner violence than those who were not depressed. Studies showed that depression severity was significantly higher in those who have also suffered violence. A strong connection (co-morbidity) of partner violence with anxiety, depression, post-traumatic stress disorder (PTSD), suicide attempts, illicit drug use and alcohol misuse has been established. It may be a matter of nosological semantics that one woman's suffering is referred to as depression and another's as anxiety. Identification of the specific form of distress does, however, have some significance to therapeutic modalities. In the clinical settings, a woman who had experienced partner violence may show symptom cluster of generalized anxiety disorder, panic attacks, or a specific phobia[6].

Several different researches have concluded that IPV results in long-term effects on the emotional and physical health of the individual and effective treatments and support are crucial for IPV survivors. Many different studies have been published which prove the effectiveness of CBT in reducing the mental health symptoms which are the results of IPV and related traumas[7]. There is also an evidence that group therapy in particular can be an effective method to address the symptoms present in women who have suffered IPV as the woman can learn from others' experiences as well as her own. Participation in the group also aids rebuild the woman's trust in other women and makes it easier to restore friendships. In addition, women can learn not to be dependent on others or take a position where they have to give in to others in order to feel secure. Moreover, women can be taught to manage a relationship without using manipulation with the help of group therapy techniques such as role-play. Group therapy techniques are effective in teaching better expression of anger without being abused or judged[8]. In addition to the therapeutic factors, just being around others with similar experiences might help with perceived feeling of support[9].

Group CBT has been employed on female victims of IPV to enhance their short-term safety and long term functioning. Overall, the group CBT addressed the areas including anxiety symptoms and depressive symptoms. Specifically, the focus of the group CBT was to increase the feelings of security, promoting goal setting behaviours and coping skills among IPV survivors. In addition, the group learned new communication skills to increase their ability to express their emotions effectively and control anger and took further steps towards increased social support and trust in others within the group. There are CBT techniques, which would allow the therapist to focus on IPV survivors' core beliefs about themselves, challenge their dysfunctional thinking and help them to modify cognitive appraisals associated with the trauma. Such CBT techniques include thought stopping, automatic thought records[10] and role-playing etc. Other interventions were more directed towards symptoms management, psycho-education, problem solving, changing negative thinking and improving relationships. Lastly, CBT sessions motivate the group to identify maladaptive coping strategies and change them with healthy communication and coping strategies. If the group CBT is effective in reducing the symptoms in IPV clients, it also might prove to be a cost-effective option in the long run. Table 1 describes salient features of this intervention.

The self-help manual used in this study was developed for the local population in Pakistan (can be downloaded from website[11]). The manual has been tested in a large, multi-centre randomized controlled trial (RCT)[12]. Current clinical guidelines suggest self-help manual could be a useful treatment for some emotional problems of IPV survivors and is an effective method for reducing anxiety and depression. Culturally adapted guided self-help has been used effectively in Pakistan to reduce depression and anxiety. We, therefore, wanted to test the effectiveness of a group CBT approach against culturally adapted CBT based self-help.

METHODOLOGY

This was a randomized controlled trial conducted in Karachi. Two hundred participants were recruited randomly from one shelter home and three NGOs of Karachi City and study was conducted at the shelter home. The duration of the study was 30-35 weeks. Selected participants were not formally educated but they could read their first language and a helper was also assigned to guide them in home work and in reading self-help manual. Their ages ranged from 18 to 40 years and those who fulfilled the criteria for depression, anxiety and domestic violence were included in the study. After administration of clinical interview and screening measures, it was ascertained that none of them was having clinical disorder with impaired functioning. Diagnosed cases of psychopathology like depression with psychotic features and bipolar disorder were excluded. Furthermore, any diagnosed cases of cognitive impairment with physical illness were also excluded.

Consent was taken from all the participants. The research was conducted in a manner that respects the dignity, rights and welfare of the participants and was protected from all possible harm to the participants of this study.

In this study, 02 groups were taken, experimental and control group. Pre-assessment (screening for symptoms of anxiety, depression and presence of domestic violence) was taken, and participants were randomly assigned to treatment and control groups. Each group had 100 participants. The treatment group received group CBT (please see Box 1 for sessions of group CBT) and control group received self-help manual. CBT sessions were conducted in Urdu language. Treatment group participants were divided into ten smaller groups consisting of 10 members each. A total of 10 group CBT sessions were conducted. Duration of one session was 1 hour and 30 minutes. At a time, 2 groups were given sessions, which were scheduled twice weekly. At the end of group sessions, post-assessment was also conducted.

Control group participants were also divided into 10 smaller groups consisting of 10 members each. Self-help manuals were given to members. Feedback of participants about self-help manual exercises was taken weekly. At the end, post assessment was also conducted. The purpose of providing self-help manual to the participants of the control group was to help them in learning and applying the techniques for reducing anxiety and depression. The study was thus designed in a way to preserve the right of treatment for all the participants regardless of their group allocation.

Clients reported the information about basic demographic variables like age, education, marital status, economic status, monthly family income and monthly expenditure on a separate questionnaire. The Aga Khan Anxiety and Depression Scale (Urdu Version) was used to measure depression. This is a screening instrument for anxiety and depression developed indigenously from symptoms of patients suffering from anxiety and depression recorded verbatim in the local Urdu language[13]. It is a 25-item scale (13 psychological and 12 somatic items) that covers most of the clinical features considered characteristic of anxiety and depressive disorders. Each item has four response options (never, sometimes, often, always) scored from 0 to 3. Scores can range from 0 to 75. High scores indicate a high level of anxiety and depression. A cut-off score of 19 differentiates between people with a minor level of anxiety and depression and people with high level of anxiety and depression. It is a good screening instrument to be used locally as it has a high linguistic validity[14].

Domestic violence was measured using the HITS Scale. This is a short domestic violence screening tool used to measure intimate partner violence. Each item is scored from 1-5, thus scores from this inventory can range from 4-20. A score of greater than 10 is considered the presence of domestic violence. The HITS scale has shown good internal consistency and concurrent validity. The HITS scale has also shown good construct validity in its ability to differentiate family practice patients from abuse victims. The HITS scale is promising as a domestic violence screening mnemonic for family practice physicians and residents[15].

Analyses were carried out using SPSS v21. Both parametric and non-parametric analyses were carried out. The SPSS explore command was used to measure frequency and distribution of the data. Analysis of covariance (ANCOVA) was used to measure the time x group interaction.

RESULTS

The mean age of IPV survivors was 30 ±6.5 years. Majority of the clients were married and a few were separated. The maximum duration of marriage was 07 years and the minimum was 03 years. Most reported years of marriage was 05 years. Most of the survivors were not formally educated but they were able to read Urdu language. Physical violence was highly reported by the participants. Emotional violence was the second most reported type of violence, which is also an important issue in our society. Both emotional and verbal violence decrease the confidence and self-esteem of women. Table 1 describes differences between treatment and the control groups.

The results of ANCOVA found significant time x group interaction for both the depression and anxiety scores. These results are described in Table 2, 3 and 4. Analysis of covariance (ANCOVA) is a method of testing significance difference between the post-treatments by controlling the impact of pre-treatment scores. There are two basic assumptions, which should be tested before using ANCOVA technique. The first assumption to test is “test of groups independence” on pre-treatment scores, since our scores were divided in treatment and control group. Pre-treatment scores were compared and table 02 shows that treatment and control group were independent on pre-treatment scores as p value was .053. The second assumption to test on the post treatment scores is “test of homogeneity of regression condition”. Table 03 shows that test of homogeneity was significant since the coefficient on the variable group “Aga Khan anxiety and depression scale pre-scores” was insignificant (p value 0.118 which is greater than the level of significance). Since both conditions for the application of ANCOVA were satisfied so we moved on to run ANCOVA.

Table 04 showed that there was statistically significant difference between the post-tests scores of treatment and control group by controlling the impact of pre-test scores. The test was significant with p value of 0.000. The post-therapy mean value of the experimental group was 12.2, which has been significantly reduced from pre-therapy mean value of 50.01. This shows de-

creased level of depression among the participants. In comparison, the mean value of the control group, which received self-help manual, was 39.90 as compared with mean value of 47.9 before receiving self-help manual.

DISCUSSION

We found that level of depression and anxiety would be decreased with group CBT in IPV survivors. This approach was in line with the stepped care model of the delivery of psychological therapies. In this approach low-intensity therapy, for example, self-help is offered before a more complex group or individual therapies. This is especially important in the context of low and middle-income countries like Pakistan where resources are a major problem. We found both group CBT and self-help manual to be effective in reducing symptoms of anxiety and depression in the group. However, group CBT was more effective than the self-help manual. Two similar studies of step care model have been conducted in the UK[16] and their results show the effectiveness of this model[17].

As compared with individual therapy, group therapy is cost effective. Likewise, using self-help is more cost-effective than group therapy. Pakistan is a developing country with a majority of the people living in poverty. Therefore we have decided to use group therapy for this study. The approach which we are trying to develop is to use the self-help manual first for IPV survivors. Group therapy needs to be used for those victims having complicated problems and those with more complicated problems, which can't be handled in the group, should be provided with individual therapy. This

Box 1: Sessions of group CBT for intimate partner violence survivors

No of meetings	Aims and Objectives
1	The goal of this session was a detailed assessment of the problems as well as education on depression, anxiety and an introduction of CBT. Therapist designed a tentative plan of group CBT sessions.
2	This session was aimed at educating participants in a group on anxiety symptoms, providing them with coping skills and how they can identify their triggers related to anxiety.
3	The purpose of this session was to provide information about depression and violence. The focus of the session was the symptoms, causes, treatments of the depression and the consequences of not treating depression. Participants were given an introduction to the behavioural methods, for example, activity scheduling.
4	The aim of this session was to improve participants' activity level. During this session therapist has worked with participants using behavioural techniques. Participants were suggested to improve their nutrition and increase their physical activity to reduce their level of depression and improve their functioning.
5	The aim of this session was to teach the participants in the group, problem-solving skills.
6	The aim of this session was to help participants in group in recognizing thoughts and emotions and understanding the link between situations, thoughts and emotions.
7	The purpose of this session was to help the participants understand the link between thoughts, situations and mood. Participants in group were able to distinguish their views and comprehend the cognitive errors.
8	The goal of this session was to help the participants in the group to challenge their cognitive errors. At the end of this session, they were able to replace their cognitive faults through cognitive restructuring. The therapist also taught them about evidence in favour and against of their maladaptive thoughts.
9	This session was aimed to start working on participants' dysfunctional beliefs. At the end of this session, participants in the group could comprehend the ideas of the faulty assumptions and core beliefs. They were additionally requested to intervene on their beliefs and put forth those inquiries through down arrow technique. At the end, assertiveness training was practiced.
10	This was the last meeting. Therapist discussed unhealthy attitudes and faulty assumptions in more detail to help them to discover and challenge these beliefs through Socratic dialogue. Communication skills were discussed. At the end summary and review of the group sessions were done. The participant was given a chance to contact the therapist for further assistance after the therapy sessions.

Table 1: Sessions of group CBT for intimate partner violence survivors

Variable	Total Participants n=200	%	Exper Group n=100	%	Cont Group n=100	%
Age						
• 18 to 30 years	120	60	64	64	56	56
• 31 to 40 years	80	40	36	36	44	44
Marital Status						
• Married	152	76	97	97	98	98
• Separated	48	24	3	3	2	2
Years of Marriage						
• 3 years	67	33.5	30	30	23	23
• 5 years	90	45	48	48	42	42
• More than 7 years	43	21.5	22	22	21	21
Education						
• Illiterate	116	58.0	61	61	55	55
• Under Matric	41	20.5	16	16	25	25
• Matric	32	16.0	18	18	24	24
• Intermediate	7	3.5	3	3	4	4
• Graduate	3	1.5	2	2	1	1
• Masters	1	.5			1	1
Income group						
• Upper	15	7.5	3	3	12	12
• Middle	74	37.0	29	29	45	45
• Lower	111	55.5	68	68	43	43
Family Structure						
• Nuclear	160	80.0	87	87	73	73
• Joint	40	20.0	13	13	27	27
Frequency of violence						
• Daily	119	59.5	63	63	56	56
• Biweekly	61	30.5	31	31	30	30
• Weekly	15	7.5	5	5	10	10
• Bimonthly	3	1.5	1	1	2	2
• Monthly	1	.5	-	-	1	1
• Once in few months	1	.5	-	-	1	1
Type of Violence						
• Physical	196	98.0	96	96	100	100
• Emotional	89	44.5	24	24	65	65
• Verbal	35	17.5	8	8	27	27
• Sexual	2	1.0	-		2	2

Table 2: Test of group independence on pre-scores of both groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	220.500a	1	220.500	3.791	.053
Intercept	479416.320	1	479416.320	8.242E3	.000
Group	220.500	1	220.500	3.791	.053
Error	11517.180	198	58.168		
Total	491154.000	200			
Corrected Total	11737.680	199			
a. R Squared =.019, (Adjusted R Squared =.014)					

Table 3: Statistical analysis of homogeneity of regression condition

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	39546.278a	3	13182.093	124.803	.000
Intercept	7800.311	1	7800.311	73.850	.000
Group	2020.603	1	2020.603	19.130	.000
AD-pre-test	1097.878	1	1097.878	10.394	.001
group* AD pre-scores	260.424	1	260.424	2.466	.118
Error	20702.117	196	105.623		
Total	196021.000	200			
Corrected Total	60248.395	199			
a. R Squared =.656, (Adjusted R Squared =.651)					

* AD-pre: Aga Khan anxiety and depression scale pre-scores

Table 4: Analysis of co-variance with pre and post interventions scores of depression among treatment and control groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Squared
Corrected Model	39285.854a	2	19642.927	184.599	.000	.652
Intercept	7548.245	1	7548.245	70.936	.000	.265
AD*-post	949.049	1	949.049	8.919	.003	.043
Group	35996.590	1	35996.590	338.286	.000	.632
Error	20962.541	197	106.409			
Total	196021.000	200				
Corrected Total	60248.395	199				
a. R Squared =.652, (Adjusted R Squared =.649)						

* AD: Aga Khan anxiety and depression scale

is in line with the results of the study by Newman et al[18] where it was concluded that more intensive treatments are normally reserved for those who do not benefit from simpler first-line treatments, or for those who can be accurately predicted not to benefit from such treatments. The CBT counselor works with the client in reviewing self-monitoring situations, assessing thoughts and behaviours that occurred in conflict situations and disputing and modifying dysfunctional patterns of cognition and action. Group therapy is a very cost effective treatment for Pakistani community as in one hour; one therapist can treat 10 clients. In group therapy, survivors practiced conflict management, communication skills and technique of assertiveness. Our study confirms findings from other studies, which found group therapy to be effective[19-21].

LIMITATIONS

Several limitations are noteworthy. Ideally, a control group should have used another form of therapy. Similarly, our randomization was not effective, as there were differences between the treatment and the control groups at the baseline. Future research should employ bigger samples, robust methodology and therapy groups as a control.

CONCLUSION

Cognitive-behavioural group interventions were effective in reducing depressive and anxiety symptoms of intimate partner violence survivors. CBT groups can be used to reduce domestic violence and to improve the mental health of the victims.

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CONTRIBUTORS

ML conceived the idea, planned the study, and drafted the manuscript. SJK helped acquisition of data, did statistical analysis and critically revised the manuscript. All authors contributed significantly to the submitted manuscript.