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## Efficacy of Behaviour Activation Group Therapy For Major Depressive Disorder

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**Abstract:** WHO, March 2018 reported depression as the leading cause of disability worldwide, and a major contributor to the overall global burden of diseases with over 300 million people of all age being suffering from same, depression not only effects the primary patient, but also their family, caregivers and associates by; negatively impacting their dignity, economical condition and confidence. Thus, it is important to help individuals suffering from Major depressive disorder learn adaptive reinforcement techniques and deal effectively with their environment. The present study aims at exploring the effect of behaviour activation group therapy in treating major depressive disorder with a pre-test/post-test design in comparison with a control group. After screening the candidates, a sample of 30 individuals with 20 or above in the Beck Depression Inventory were randomly distributed to two groups of 15 individuals each. The members of experimental group receive 10 sessions; one session weekly of 60 each. Upon the completion of sessions, the subjects of both the groups were reassessed using Beck Depression Inventory. The data gathered was analyzed using Regression analysis of mixed between –within ANOVA (Split – Plot Analysis). The overall result showed individuals receiving behaviour activation group intervention showed improvement in their level of depression over time in comparison to wait list control; thus Behaviour Activation was effective in treating and prolonging relapse along with improving condition of individuals suffering from Major Depressive Disorder.

**Keywords:** Major Depressive Disorder, Behaviour Activation Group Therapy, relapse prevention

### 1. INTRODUCTION

Sadness, gloominess, crying over small and trivial life events and grief are normal human emotions experienced by every individual one or the other time in life. However, Major Depressive Disorder (MDD) are more than that, and they are continuous feeling of overwhelming sadness, low mood, low appetite, decreased sleep and are also accompanied by other emotional and physical symptoms. Depression has also been marked as the leading cause of disability worldwide by WHO, March (2018) it not only affects the primary patient, but also their family, associates, and caregivers by negatively impacting the overall functioning and well being of life WHO (2018). Chronic MDD can last for up to two years, and single episodes are rare. Generally, it is recurrent (American Psychiatric Association, 2000; Kupfer, Frank, & Wamhoff, 1996; Post, 1992). The essential feature of MDD is that there has been at least one major depressive episode, and that there is no history of manic, mixed, or hypo-manic episodes DSM IV-TR, **APA (2000)**

Researches all over world states that psychological treatment combined with antidepressant is associated with a higher improvement rate than drug treatment alone Pim Cuijers et.al.(2013).

Among psychological treatment the cognitive behaviour therapy and cognitive therapy are the most researched and tired treatment method, both treatment option have shown efficacy in treating depression. Researches have also shown that CBT is as effective in treating depression as antidepressant medications (Robert J. DeRubeis, Greg J. Siegle, and Steven D. Hollon, 2008; Gerald Gartlehner Gernot Wagner et.al, 2017; Sandro Pampallona, ScD; Paola Bollini, MD,et.al,2004)

Our research reviews have stated that there has been no study based on Indian population to prove the efficacy of any new psychotherapeutic methods, and none to see the efficacy of new generation therapy as Behaviour

Activation (BA). Thus, the present study is conducted with the view to see the efficacy of BA on individuals suffering from MDD on a pre and post test intervention in comparison to those in waiting list Control (WLC).

## 2. METHODOLOGY

Study Design:

The present research is an experimental (experimental) study, by type, and an applied research, by purpose, which has been done within pre-test-post-test and 2 month follow – up design taking into account a control group (Figure 1).

**Figure 1: Research Design**

<b>Experimental group</b>				
Depression pre- test	10 therapy session 60 minutes each For 10 weeks	} trained therapist	Depression post- test	Depression 2 month follow – up post treatment
<b>Control group</b>				
Depression pre - test	10 unstructured meeting 20 minutes each For 10 weeks	} Counsellor	Depression post test	Depression 2 month follow –up Post treatment

### Statistical Population, the Sample and the Sampling Procedure

Overall sample comprised of 90 consenting adults of which 35 dropped out of study due to financial, family constraints and taboo associated with treatment and 25 individuals were not considered as study sample as they did not fit the inclusion criteria for the study.

Finally 30 individuals both men and woman above age 20 and below age 45 years from hospitals and rehabilitation centres in Pune city providing psychiatric treatment, with diagnosis of Major Depressive Disorder, as per Diagnostic and Statistical Manual for Mental Disorder (DSM – IV TR). To be selected as sample of the study all the participants were screened using Beck Depression Inventory (BDI), Beck, A. T. (2017) to get the baseline score for Depression, and assessed on The Psychiatric Diagnostic Screening Questionnaire (PDSQ), Zibberman, M. (2002) for assessing the co-morbidity. Individuals selected as sample should get a score of 20 and above on BDI and should not have any co-morbid condition in PDSQ. These procedures will be carried out by trained Counsellor (training of these counsellors will be done by licensed Clinical Psychologist).

Those participants who consented for participating in the study were randomly allotted to two treatment groups (BA and WLC) (the random allocation of participants was done using permuted blocks randomization) After randomization; group therapy sessions for BA was conducted by Licensed Clinical Psychologist (Therapist) and for WLC group will be conducted by counsellor.

**Variables in study:** The independent variable in the study is the treatment provided to all participants through BA and WLC (GROUP). The dependent variables in the study are the score of Depression as assessed by BDI at three times span (pre test, post test and 2 month follow up scores for depression)

### Data collection instruments

#### **Beck Depression Inventory (BDI)**

BDI is used as a screening tool for symptom of depression present in an individual. It is a self – report inventory. Alpha reliability ranges from .76 to .95 in psychiatric population. BDI takes approximately 5-10 minutes to complete. Each statement is scored on a four point scale (0 – 3) and a total score is obtained by summing the ratings of each statement. Sum point of all 21 item ranges form 0 – 63. A score of 0-13 indicates no depression, score of 14 – 19 indicative of mild depression. 20– 28 indicative of moderate depression and score 29-63 and above indicative of severe depression.

#### **Psychiatric Diagnostic Screening Questionnaire (PDSQ)**

It is a screening tool for co – morbid conditions. It is a self- report instrument designed to screen for the DSM IV; Axis I disorders. The scale had 125 yes/no items and takes approximately 15 to 20 minutes to be administered and

completed. PSDQ can be scored to obtain subscale score in 13 areas : major Depressive Disorder, Obsessive – Compulsive Disorder, Post- traumatic Stress Disorder, Bulimia/ Binge Eating Disorder, Psychosis, Agoraphobia, Social phobia, alcohol abuse/ dependency, drug abuse/ dependency, generalised anxiety disorder, somatization disorder and hypochondriasis. The PSDQ scale will be used to just assess if the participant is having any other co – morbid condition. The score of PDSQ will not be used for analysis purpose in the present study.

### **3. TREATMENT**

**Behaviour Activation (BA)** ten sessions of group intervention for BA will be conducted in ten weeks time; adapted from work of Jacobson et al. (2001). Each session would be for 60 minutes.

Briefly; session one would include welcoming the group members and expressing optimism about their decision to attend the sessions. It would include an introduction to the common rules and regulation to be followed by all the group members this would be: confidentiality, no acting out or interruptions during session, complete participation, following and completing the homework assignment. The therapist would also describe some of the benefits of group therapy. Further the group members would introduce them self to each other. The session would include an introduction to the behavior theory of depression elaborating the goal and importance of Behavior Activation in treating depression. The role and responsibility of therapist focusing on; how the therapist would be a personal trainer to every group member, and guide them in achieving their therapeutic goal would also be discussed in the session. The session would end by asking members of group to fill BDI to take the initial score for depression. Finally the members would be encouraged to participate in the study.

Sessions 2<sup>nd</sup> to 9<sup>th</sup> would include helping group members understand treatment aim and goal. In these sessions the therapist would aim to teach individuals treatment techniques such as (functional assessment, mastery and pleasure rating of activities, verbal report of activities, maintaining and completing daily activity scheduling, understanding relationship between mood and environment, active approach toward problem solving; using methods such as: role play, role rehearsal, reinforcement of activity and others. Therapist would also aim at discussing the past experiences of individuals so as to assist him/her by reflecting, probing and clarifying with the mindset of identifying behaviors to target for intervening. Members of the group will begin their group activity from a warm up exercise ( progressive muscle relaxation, relaxation, imagery or other) followed by use of various other techniques to increase positive experiences from life.

The main focus is to increase the amount of responsibility to the group members and this involves the individuals to take on more responsibility for their own treatment as well as for helping other group members with treatment. The final phase would include setting of homework assignment.

The tenth session would include sharing of any meaningful experiences group members have had during the past weeks. This session would include detailing the individual's about relapse prevention including how to identify relapse and quick review of implementation of behavioural techniques to counter the symptoms. The therapist would then also summarize the gains that have been made by the group members and highlight some of the most meaningful examples of Behavioral Activation success. The final phase the individuals would be asked to score themselves using BDI.

#### **Waiting list Control (Group):**

Individuals in Waiting List Control will be seen by a trainee counsellor for therapy sessions. Individuals in waiting group will not be given structured sessions; which mean that there will be no cognitive or behavioural techniques used in treating these individual it will be. However, they will be asked to meet their therapist as frequently as individuals receiving Rational Emotive Behaviour Therapy.

### **4. RESULTS**

#### **Data Analysis Method**

In order to analyze the data, we have used analysis of mixed between –within ANOVA (Split – Plot Analysis) all stages of analysis have been done by using SPSS software.

**TABLE 1:** Statistical Description of Depression Test in the Experimental & Control group

Group	Variables	Number of Subjects	Pre -test	Post- test	2 month follow – up
			Mean	Mean	Mean
BA	Depression	15	29.6	18	13
CONTROL	Depression	15	29	24	20

Table 1 shows the mean value of each group (behaviour Activation and wait list control) across three time points respectively (pre- test, post test and 2 month follow up) for numeric differences in level of depression. In the table above the mean score for Behaviour Activation group for pre tests were 29 while post test was 18 and it further reduced to 13 at 2 months follow - up. In other words there was a considerable decrease in depression score across three time point.

**TABLE2:** Interaction effect

Effect		Value	Hypothesis df	Error df	Sig.	Partial Eta Squared
Time	Wilks' Lambda	.155	2.000	27.000	.000	.845
time * group	Wilks' Lambda	.697	2.000	27.000	.008	.303

$P < .0$ ,  $f > .14$

TABLE 2: Shows the interaction effect to assess whether there is any change in score of Depression over time for two different groups. The result above shows a significant value for time and group interaction which means that across time therapy showed effect; with a higher value for partial eta square indicative of large effect size which means that time and group interactive were highly significant for therapy.

Further, the table also showed significant value across time with higher value for partial eta square this indicates that there is a significant difference with large effect size in Depression score across three time point; which means that level of Depression reduced with time for post test and then further for 2 month follow- up

**TABLE 3:** Pair wise Comparisons (three time point)

Pairwise Comparisons						
Measure: MEASURE_1						
(I) time	(J) time	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	95% Confidence Interval for Difference <sup>b</sup>	
					Lower Bound	Upper Bound
1	2	7.967*	1.036	.000	5.329	10.604
	3	12.133*	1.167	.000	9.162	15.104
2	1	-7.967*	1.036	.000	-10.604	-5.329
	3	4.167*	.381	.000	3.196	5.138
3	1	-12.133*	1.167	.000	-15.104	-9.162
	2	-4.167*	.381	.000	-5.138	-3.196

Time point 1. Pre test ; 2 post test ; 3 2 month follow- up  
Based on estimated marginal means  
\*. The mean difference is significant at the .05 level.  
b. Adjustment for multiple comparisons: Bonferroni.

$P < .05$

Table 3: shows which time point (pre- test, post – test and two month follow – up respectively) was significantly different from each other; the finding above shows that time point 1 compared to 2 and 3 had significant difference; which means that level of Depression improved from pre -test to post- test and further reduced at 2 month follow-up. Further, results also indicates that time point 2 had significant difference in comparison to time point 3 which means that there was further significant improvement in level of Depression from post test to 2 month follow up. Thus, it could be concluded that exposure to treatment over time has significant difference over level of Depression.

## 5. DISCUSSION

The present research aimed at exploring the efficacy of BA when conducted in group; in treating MDD for age group 20 to 45 on Indian population. Our research findings indicated that there were significant changes in the level of

depression among individuals being treated with BA in comparison to WLC. Our research also stated that with time; there was a significant change in self – rating of depression, which indicates that BA therapy helped individual's in relapse. Our research findings are in line with results already reported by; Porter, Spates, And Smitham, 2004; Dobson et al.2008; Dimidjian et al.2006; Ekers D,2014.

Group intervention for REBT proved to be efficacious, as; it was seen that individuals helped each other during therapy session by discussing their life events to identify irrational thought pattern and then, adapt or change to more adaptive method of acting in or handling a situation through discussion with each other, with active help of the therapist. It was also seen that individuals in group helped each other differentiate between health and unhealthy negative emotions. Group also offered an effective environment for role play, modelling, and behavioural rehearsals. Group also helped individual realise that depression can happen to anyone irrespective of caste, economical condition, education, marital condition or gender and if approached adequately one can learn adaptive mechanism to deal with same

This study also has further implications for clinicians treating MDD considering the cost- conscious environment. In our research we found significant improvement in MDD only in 10 sessions of group therapy. If we see this from a economical perspective, the use of group format allows the clinician to render their services to more individuals per unit of time, compared to individual therapy (Porter, Spates, And Smitham, 2004). Group therapy can also be cost effective for the individuals receiving treatment; however this completely depends on the clinician.

BA group therapy is also easy to administer and also easy for an therapist to assess the change in the recipient. It is very easy to learn and follow because participants does not require abstract thought processes or developed cognitive ability; it could even be helpful to those with limited intellectual abilities, regardless of whether they are suffering from depressive condition. (Porter, Spates, and Smitham, 2004)

## 6. CONCLUSION

The present research is an explorative study among Indian population to assess the efficacy of group BA and it has been found to show positive evidence in treating depression also it has shown that group BA can also be used among adults and help them deal effectively with depression .

Among the restrictions of the present research, we may refer to the shortness of the training period and the lack of a follow up study to explore the effectiveness of group BA intervention method. Furthermore, we have only assessed individuals for 2 month follow-up, further research should include 6 months and one year follow- up to see if there is any long term improvement achieved through therapy.

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## REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Beck, A. T. (n.d.). *Beck Depression Inventory*. Retrieved January 04, 2017, from <https://www.bmc.org/sites/.../Beck-Depression-Inventory-BDI.pdf>
- Depression. (2018, March). Retrieved April 12, 2018, from <http://www.who.int/mediacentre/factsheets/fs369/en/>
- DeRubeis, R. J., Siegle, G. J., & Hollon, S. D. (2008). Cognitive therapy vs. medications for depression: Treatment outcomes and neural mechanisms. *Nature Reviews. Neuroscience*, 9(10), 788–796. DOI: <http://doi.org/10.1038/nrn2345>
- Dimidjian S, Hollon SD, Dobson KS, et al. (2006) Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of consulting and clinical psychology* 74 (4): 658 -70. : DOI:[10.1037/0022-006X.74.4.658](https://doi.org/10.1037/0022-006X.74.4.658)
- Ekers D, Webster L, Van Straten A, Cuijpers P, Richards D, et al. (2014) Behavioural Activation for Depression; An Update of Meta-Analysis of Effectiveness and Sub Group Analysis. *PLoS ONE* 9(6): e100100. doi:10.1371/journal.pone.0100100

- Gartlehner G, Wagner G, Matyas N, Titscher V, Greimel J, Lux L, Lohr K. N (2017). Pharmacological and non-pharmacological treatments for major depressive disorder: review of systematic reviews. *BMJ Open*, 7(6), e014912. DOI: <http://doi.org/10.1136/bmjopen-2016-014912>
- Jacobson, N.S., Martell, C.R., & Dimidjian, S. (2001). Behavioral activation treatment for depression: Returning to contextual roots. *Clinical Psychology: Science and Practice*, 8(3), 255–270. <http://dx.doi.org/10.1093/clipsy/8.3.255>
- Jeffrey F. Porter, C. Richard Spates and Sean Smitham (2004). Behavioral Activation Group Therapy in Public Mental Health Settings: A Pilot Investigation. *Professional Psychology: Research and Practice* 35(3), 297-30: <http://dx.doi.org/10.1037/0735-7028.35.3.297>
- Keith S. Dobson, Karen B. Schmalting, Robert J. Kohlenberg, Michael E. Addis, Robert Gallop, et al. (2006) Randomized Trial of Behavioral Activation, Cognitive Therapy, and Antidepressant Medication in the Acute Treatment of Adults With Major Depression. *Journal of Consulting and Clinical Psychology* 74 (4), 658–670: <http://dx.doi.org/10.1037/0022-006X.74.4.658>
- Kupfer DJ, Frank E, Wamhoff J. Mood disorders: Update on prevention of recurrence. In: Mundt C, Goldstein MJ, editors. *Interpersonal factors in the origin and course of affective disorders* (1996) London, England: Gaskell/Royal College of Psychiatrists; pp. 289–302
- Pim Cuijpers, Marit Sijbrandij, Sander L. Koole, Gerhard Andersson, Aartjan T. Beekman, Charles F. Reynolds III. (2013). The efficacy of psychotherapy and pharmacotherapy in treating depressive and anxiety disorders: a meta-analysis of direct comparisons. *World Psychiatry* 12, 137–148: <https://doi.org/10.1002/wps.20038>
- Post RM. Transduction of psychosocial stress into the neurobiology of recurrent affective disorder. *American Journal of Psychiatry*. 1992;149(8):999–1010. [PubMed]
- ScD; Paola Bollini, MD, DrPH; Giuseppe Tibaldi, MD; Bruce Kupelnick, MA; Carmine Munizza, MD (2004). Combined Pharmacotherapy and Psychological Treatment for Depression: A systematic review. *Arch Gen Psychiatry*, 61:714-719.
- Zibberman, M., MD. (2002). *Psychiatric Diagnostic Screening Questionnaire*. Torrance: WPS Publications.