



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>Journal DOI: [10.21474/IJAR01](https://doi.org/10.21474/IJAR01)INTERNATIONAL JOURNAL
OF ADVANCED RESEARCH

RESEARCH ARTICLE

Efficacy of Cognitive Behavioural Therapy on depressive symptoms for Schizophrenic patients in selected Rehabilitation Centres.**Anna Sebastian¹ and Sheela Upendra².**

1. S.Y.MSc Nursing Student, Symbiosis College of Nursing, Pune-411004, Maharashtra, India.

2. Associate Professor, Symbiosis College of Nursing, Pune-411004, Maharashtra, India.

Manuscript Info**Manuscript History:**Received: 14 April 2016
Final Accepted: 19 May 2016
Published Online: June 2016**Key words:**

Efficacy; Cognitive Behavioural Therapy; Depressive symptoms; Schizophrenia; Rehabilitation.

Corresponding Author*Anna Sebastian.****Abstract**

Depression is one of the most common symptom seen in Schizophrenic patients. Cognitive Behavioural Therapy is one of the effective psychotherapy treatment modality for treating depression, which includes both cognitive and Behavioural strategies. It refers to the use of both cognitive restructuring and Behavioural plan of activity scheduling. **Aim:** To assess the efficacy of Cognitive Behavioural Therapy on the depressive symptoms for Schizophrenic patients in selected rehabilitation centres of Pune city.

Methods:- True Experimental approach was adopted for the study. 50 samples (25 experimental and 25 control group) which met the inclusion criteria, was selected by simple random sampling technique. The Structured questionnaire was used to assess the level of depressive symptoms in Schizophrenic patients. A pilot study was conducted and the reliability of the tool was established by the split-half method and Cronbach's alpha ($r=0.87$). The experimental group was administered with three sessions of Cognitive Behavioural Therapy in a gap of 2 days. Data analysis was done by descriptive and inferential statistics.

Results:- Findings revealed that the average depression score in pre-test was 39.2 which reduced to 32.4 in posttest by applying paired t-test. Two sample t-test for the comparison of average reduction in depression scores of experimental and control groups was done. The Average change in depression score in the experimental group was 6.9 and control group had a score of 4. Age was found to have a significant association with the depressive symptoms among Schizophrenia patients.

Conclusion:- Cognitive Behavioural Therapy is proved to be significantly effective in reducing the depressive symptoms among the Schizophrenic patients.

Copy Right, IJAR, 2016. All rights reserved.

Introduction:-

A mental disorder or mental illness is a psychological or behavioural pattern that occurs in an individual and is believed to cause distress or disability that is not anticipated as part of normal development or culture. Mental illness has been found to be common, with over a third of people in most countries. Services for the Mental illness may be based in hospitals or the community. Mental health professionals diagnose individuals using different methodologies, often relying on case history and interview. Psychotherapy and psychiatric medicines are two major treatment options, as well as supportive interventions and self-help.

Psychotherapy helps in the exploration of thoughts, feelings and behavior for the purpose of problem solving or achieving higher levels of functioning^[1, 2].

Schizophrenia is one of the severe mental disorders. Schizophrenia is a disease that affects an individual's thought, feelings and behaviour. The onset of symptoms occurs in young adulthood. Depressive symptoms are common among them. Even with available treatments, most people with Schizophrenia continue to experience symptoms throughout their lives.

Schizophrenia influences more than 21 million people worldwide. The Prevalence Rate for Schizophrenia is approximately 1.1% of the population over the age of 18. At any one time, 51 million people worldwide suffer from Schizophrenia, including 6 to 12 million population in China, 4.3 to 8.7 million individuals in India, 2.2 million persons in the USA, 285,000 people in Australia, over 280,000 people in Canada, over 250,000 diagnosed cases in Britain^[3].

Depressive symptoms are thought to represent an important symptom domain in schizophrenia patients, with prevalence estimates ranging to as high as 80%. Depressive symptoms have been associated with impairments in social and vocational functioning, quality of life and an increased risk of relapse. They were found to increase mortality rates in patients with schizophrenia by contributing to the alarmingly high rates of suicide. Therefore, measuring symptoms of depression has become of increasing interest and importance in the past years in schizophrenia research^[4, 5, 6, 7, 8, 9].

Dr Beck's groundbreaking systematic research established for the first time the efficacy of any psychotherapy for the treatment of depression. Beck's Cognitive Therapy has been evaluated in several well-controlled outcome studies. First, Cognitive Behavioural Therapy (CBT) is effective with a variety of population of depressed people clinical and subclinical from a relatively wide range of social class. Secondly, the combination of drugs and Cognitive Behavioural Therapy sometimes appears more effective than CBT alone. CBT alone is mostly comparable to drugs alone, but drugs alone have not so far been found to be superior to CBT. Focusing on outpatients mean percentage change across the samples of outpatients who have received CBT alone is 66%^[10, 11].

Problem statement:-

Efficacy of Cognitive Behavioural Therapy on depressive symptoms for Schizophrenic patients in selected Rehabilitation Centres of Pune city.

Objectives:-

1. To assess the existing level of depressive symptoms in Schizophrenic patients.
2. To evaluate the effect of Cognitive Behavioural Therapy on depressive symptoms on Schizophrenia patients.
3. To find an association between the depressive symptoms and Cognitive Behavioural Therapy with selected demographic variables.

Materials and methods:-

An experimental approach was used to conduct this study. True experimental design was used in the study. The study was done in Chaitanya Rehabilitation Centre among Schizophrenic patients suffering from depressive symptoms undergoing the rehabilitation programme.

The tools were as follows:-

1. Demographic variables.
2. Structured questionnaire.
3. Checklist.

Researcher got certified as Certified Cognitive Behavioural Therapist from Endorphin Foundation, Pune, Maharashtra. A pilot study was conducted in Chaitanya Rehabilitation Centre, Wondewadi. The reliability of the tool was established by the split-half method and Cronbach's alpha $r=0.87$ and was considered to be highly reliable.

The written permission was obtained from the concerned authority of Chaitanya Mental Health Care Centre, Kondhwa, Pune before data collection. The data collection was done from 23rd February 2016 to 24th March 2016. 50 samples (25 experimental and 25 control group) which met the inclusion criteria, was selected by simple random sampling technique. The experimental group was administered with three sessions of Cognitive Behavioural Therapy in a gap of 2 days.

Downward Arrow Technique was used for the administration of Cognitive Behavioural Therapy .It is to elicit the thoughts, beliefs through questioning .Starting with the Automatic thoughts going towards core beliefs. The double column was also used to make people think more rationally. It is used to convert unrealistic thoughts to realistic ones. Initially, written consent was taken from the samples. Cognitive Behavioural Therapy was given individually to 25 experimental samples. Duration of each CBT session was minimum 30 minutes. Data collection was done in the following steps.

STEP 1: Pre-test with the Structured questionnaire to assess the level of depressive symptoms in Schizophrenic patients.

STEP 2: Agenda setting for Cognitive Behavioural Therapy session

STEP 3: Patient describes a situation in which he had maladaptive thoughts

STEP 4: The Physical sensation of the patient is checked. He is made rate his emotions.

STEP 5: Patient is made to explain the automatic thoughts in that situation

STEP 6: Problem Solving through restructuring done.

STEP 7: Re-rating of the emotion or thoughts after Cognitive Behavioural Therapy session is over.

STEP 7: Homework is given

STEP 7: Summary and feedback

(Three Cognitive Behavioural Therapy session was given to every experimental sample in a gap of 2 days)

STEP 8:Post-Test

Data analysis was done by descriptive and inferential statistics.

Results:-

The data gathered was analysed and interpreted according to the objectives. Descriptive statistics were used. Mean, median, mode, mean percentage and standard deviation with the graphical representation of data was done. Inferential statistics was used at 0.05 level of significance. The analysis of data was mainly classified into four sections:

Section 1:Description of samples based on their personal characteristics

Table 1: Description of samples based on their personal characteristics

(N=50)

Demographic variable	Control group		Experimental group	
	f	%	f	%
Age				
20-39 years	10	40%	13	52%
40-59 years	11	44%	9	36%
60-79 years	4	16%	3	12%
Gender				
Male	14	56%	13	52%
Female	11	44%	12	48%
Education				
Primary	5	20%	4	16%
Secondary	5	20%	6	24%
Higher secondary	9	36%	6	24%
Diploma/Graduation	5	20%	7	28%
Post-Graduation	1	4%	2	8%
Education				
Primary	5	20%	4	16%
Secondary	5	20%	6	24%
Higher secondary	9	36%	6	24%
Diploma/Graduation	5	20%	7	28%
Post-graduation	1	4%	2	8%
Marital status				
Single	8	32%	10	40%
Married	11	44%	8	32%
Widow/widower	4	16%	4	16%

Divorcee	2	8%	3	12%
Occupation				
Government job	4	16%	6	24%
Non-government job	7	28%	4	16%
Self employed	7	28%	6	24%
Unemployed	4	16%	9	36%
Family income				
Below Rs. 10000	4	16%	4	16%
Rs. 10001-30000	11	44%	8	32%
Rs. 30001-50000	6	24%	8	32%
Above Rs. 50000	4	16%	5	20%
Religion				
Hindu	16	64%	10	40%
Christian	3	12%	4	16%
Muslim	2	8%	2	8%
Any others	0	0%	2	8%
Type of family				
Nuclear	20	80%	19	76%
Joint	3	12%	4	16%
Extended	2	8%	2	8%
Duration of illness				
Less than one year	5	20%	7	28%
1-5 years	10	40%	8	32%
5-10 years	6	24%	5	20%
More than 10years	4	16%	5	20%

Section II-Analysis of data related to the existing level of depressive symptoms in Schizophrenic patient
Figure 1: Existing level of depressive symptoms in Schizophrenic patients (N=50)

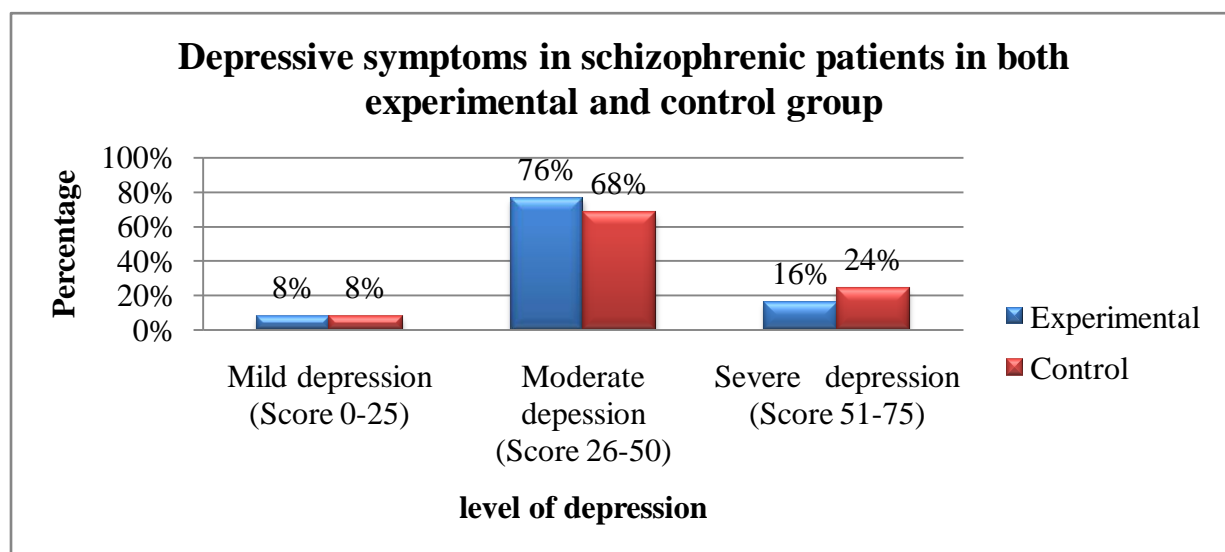


Figure 1 reveals that in the pretest, in the experimental group, the majority of 76% of the Schizophrenic patients had moderate depression (score 26-50), 16% of them had severe depression (score 51-75) and 8% of them had mild depression (score 0-25). In the pretest, in the control group, the majority of 68% of the Schizophrenic patients had moderate depression (score 26-50), 24% of them had severe depression (score 51-75) and 8% of them had mild depression (score 0-25).

Section III-Analysis of data related to the effect of Cognitive Behavioural Therapy on depressive symptoms on Schizophrenia patients

Figure 2: The Effect of Cognitive Behavioural Therapy on depressive symptoms on Schizophrenia patients (N=50)

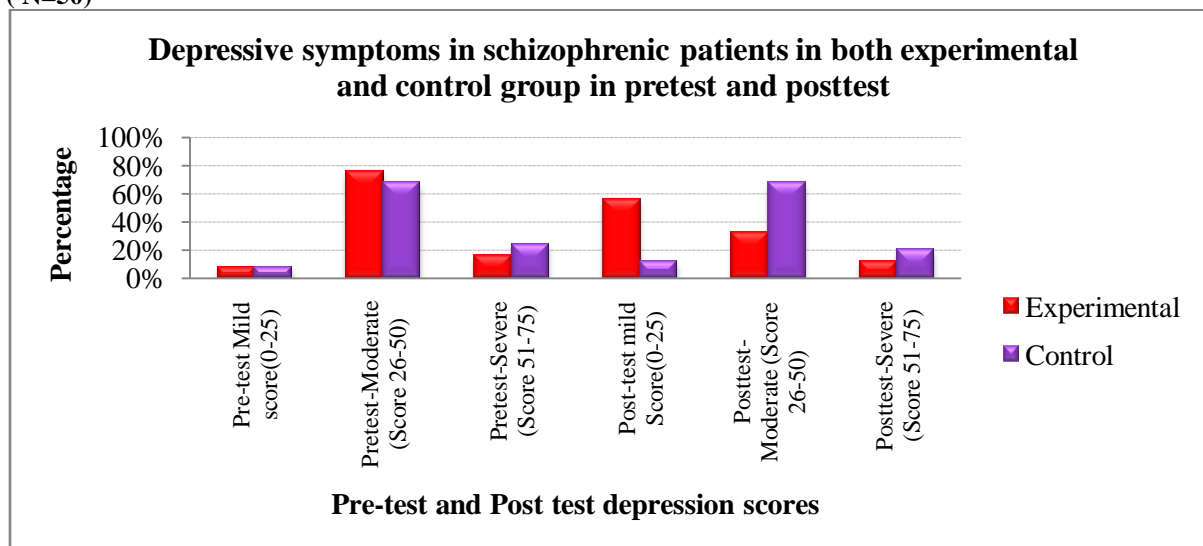
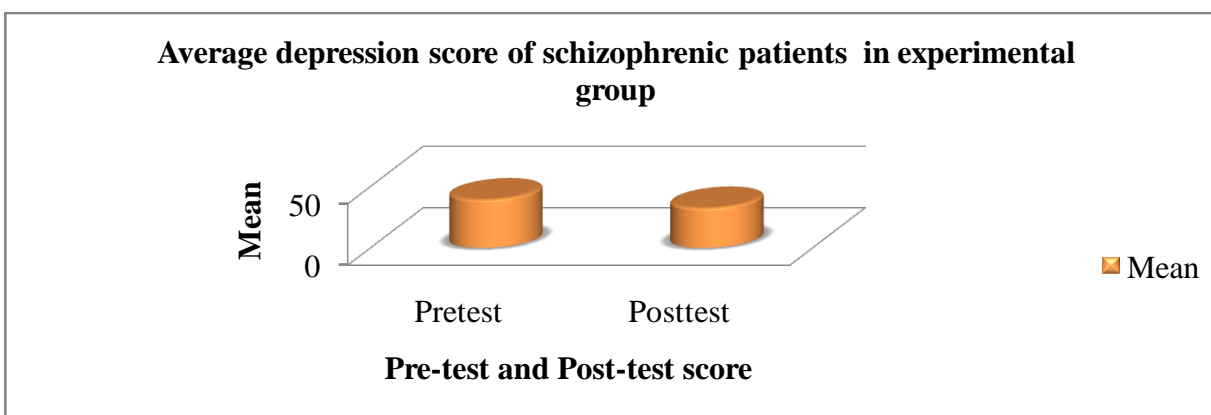


Figure 2 depicts that in the pretest, in the experimental group, the majority of 76% of the Schizophrenic patients had moderate depression (score 26-50), 16% of them had severe depression (score 51-75) and 8% of them had mild depression (score 0-25). In pretest, in the control group, majority of 68% of the Schizophrenic patients had moderate depression (score 26-50), 24% of them had severe depression (score 51-75) and 8% of them had mild depression (score 0-25). In posttest, in the experimental group, 32% of the Schizophrenic patients had moderate depression (score 26-50), 12% of them had severe depression (score 51-75) and 56% of them had mild depression (score 0-25). In the control group, majority of 68% of the Schizophrenic patients had moderate depression (score 26-50), 20% of them had severe depression (score 51-75) and 12% of them had mild depression (score 0-25). This indicates that the depression level in experimental group improved remarkably after Cognitive Behavioural Therapy.

Figure 3: Paired t-test for the effect of Cognitive Behavioural Therapy on depressive symptoms on Schizophrenia patients (N=50)



The researcher applied paired t-test for the comparison of pretest and posttest depression scores. Average depression score in pretest was 39.2 which reduced to 32.4 in the posttest. T-value for this comparison was 8.6 with 24 degrees of freedom. The corresponding p-value was < 0.05 ; thus the null hypothesis is rejected. Cognitive Behavioural Therapy is proved to be significantly effective in improving the depression among Schizophrenia patients.

Figure 4: Two sample t-test for the effect of Cognitive Behavioural Therapy on depressive symptoms on Schizophrenia patients (N=50)

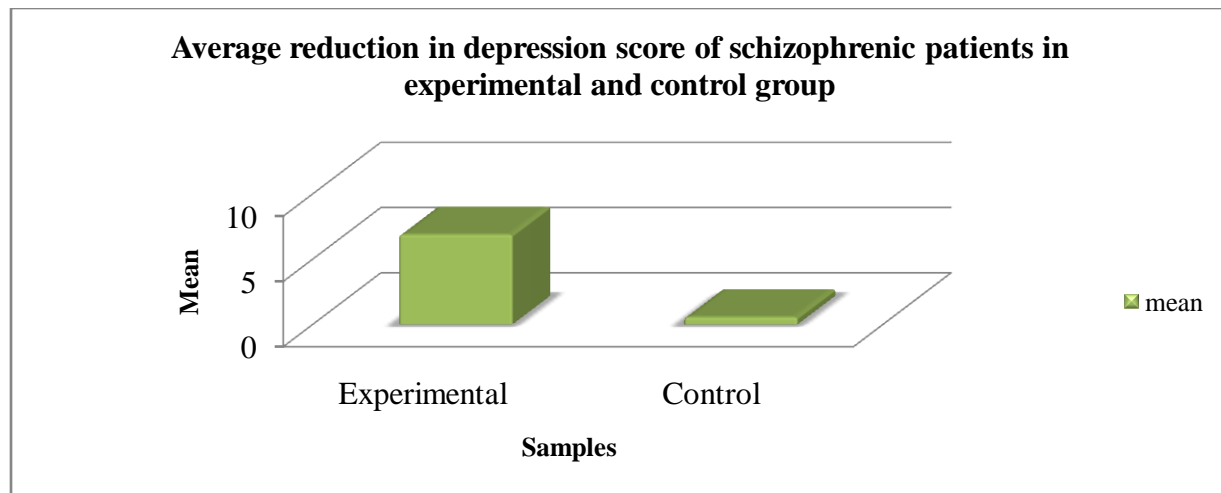


Figure 4: Researcher applied two sample t-test for the comparison of average reduction in depression scores of experimental and control groups. The average change in depression score in the experimental group was 6.9 which was 4 in the control group. T-value for this comparison was 7.2 with 48 degrees of freedom. The corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Average reduction in depression score in experimental group was found to be significantly higher than that for control group. Cognitive Behavioural Therapy is proved to be significantly effective in improving the depression among Schizophrenia patients.

Section 4: Analysis of data related to association between the depressive symptoms and Cognitive Behavioural Therapy with selected demographic variables

p-value corresponding to age was 0.038 (less than 0.05), age was found to have significant association with the depression among Schizophrenia patients. More the age, more is the proportion of severity of depression among Schizophrenia patients.

Discussion:-

Findings of the present study revealed that the average depression score in pretest was 39.2 which reduced to 32.4 in posttest by applying paired t-test. Two sample t-test for the comparison of average reduction in depression scores of experimental and control groups was done. The average change in depression score in experimental group was 6.9 and control group had a score of 4. Age was found to have significant association with the depressive symptoms among Schizophrenia patients. In this study, it is noted that Cognitive Behavioural Therapy is effective in reducing level of depressive symptoms in Schizophrenic patients undergoing rehabilitation program. It can also be effectively used to control relapse rates which occur due to prevalent depression.

A similar prospective cohort study was conducted at the University Hospital in Thailand on the effect of cognitive Behaviour Therapy in depression. Life stress event score in Cognitive Behaviour Therapy group was significantly higher than the no Cognitive Behaviour Therapy group. The mean TDI scores of the Cognitive Behaviour Therapy group and non-Cognitive Behaviour Therapy group were 26.7 and 25.3 at the baseline respectively. The TDI scores in the Cognitive Behaviour Therapy group were significantly higher than the non-Cognitive Behaviour Therapy group both immediately [12.13 (95% CI, 10.00 - 14.26)] ($p < 0.001$) and at 3-month post-treatment [15.94 (95% CI, 13.69 - 18.18)] ($p < 0.001$). Cognitive Behaviour Therapy is beneficial for the treatment of depression among adult HIV-infected patient^[12].

A similar study was carried out in University of Maryland School of Medicine, Baltimore, Maryland. The aim of systematic review and meta-analysis of double-blinded randomised controlled trials to examine the efficacy of group cognitive Behaviour Therapy treatment among HIV-infected with depressive symptoms. The result of the study

pooled effect size from the random effects model was 0.38 (95% confidence interval) and was significant. Studies reporting the use of supportive group psychotherapy had a pooled effect size from the random effects model 0.58 (95% CI: -0.05–1.22) and was non-significant. This study suggests that group Cognitive Behaviour Therapy is efficacious in reducing depressive symptoms among, HIV-infected individuals^[13].

The findings of the present study are in synchrony with that of studies above to find that Cognitive Behavioural Therapy significantly improved depression scores in long-term mental disorders.

Conclusion:-

The study findings reveal that the average depression score in pretest was 39.2 which reduced to 32.4 in posttest by applying paired t-test. Two sample t-test for the comparison of average reduction in depression scores of experimental and control groups was done. Average change in depression score in experimental group was 6.9 and control group had a score of 4. Age was found to have significant association with the depressive symptoms among Schizophrenia patients. So Cognitive Behavioural Therapy is proved to be significantly effective in reducing the depressive symptoms among the Schizophrenic patients.

Acknowledgement:-

This effort in our academic life would not have been possible without the support, guidance and encouragement given by some persons. I am immensely thankful to my research guide, Mrs. Sheela Upendra and also I would like to express my gratitude towards my statistician, Mrs Vaishali Chirmade for her stretching help.

References:-

1. Schloberg A. Psychiatric Stigma and Mental health Professionals. Med Law. 1993;12:409-416.
2. Upendra S, Barde S. Skill Is Strength: Empowering the Student Nurses through Skill Training On Selected Psychotherapy. IJHSR (2015);5(2):235-239
3. Schizophrenia Facts and Statistics. Schizophrenia.com. 2016. Available from: <http://www.Schizophrenia.com/szfacts.html>
4. Sands JR, Harrow M: Depression during the longitudinal course of schizophrenia. Schizophr Bull 1999; 25: 157–171.
5. Zisook S, McAdams LA, Kuck J, Harris MJ, Bailey A, Patterson TL, Judd LL, Jeste DV: Depressive symptoms in schizophrenia. Am J Psychiatry 1999; 156: 1736–1743.
6. Tollefson GD, Andersen SW: Should we consider mood disturbance in schizophrenia as an important determinant of quality of life? J Clin Psychiatry 1999; 60(supp 5):23–29, 30.
7. Resnick SG, Rosenheck RA, Lehman AF: An exploratory analysis of correlates of recovery. Psychiatr Serv 2004; 55: 540–547.
8. Moller H-J: Drug treatment of depressive symptoms in schizophrenia. Clinical Schizophrenia Related Psychoses 2008; 1: 328–340.
9. Conley RR: The burden of depressive symptoms in people with schizophrenia. Psychiatry Clin North Am 2009; 32: 853–861.
10. Beck Research: About Dr. Beck's Research . Med.upenn.edu. 2016 . Available from: <http://www.med.upenn.edu/suicide/beck/research.html>
11. Cognitive Behavioural Therapy for Depression: Background, Indications, Contraindications . Emedicine.medscape.com. 2016. Available from: <http://emedicine.medscape.com/article/2094696-overview>
12. Whitfield G and Williams C .The evidence base for cognitive–Behavioural Therapy in depression: delivery in busy clinical settings. Advances in Psychiatric Treatment (2003)9: 21-
13. Seth H; Medoff, Deborah R.; Oyeniya, Gloria. Efficacy of Group Psychotherapy to Reduce Depressive Symptoms among HIV-Infected Individuals: A Systematic Review and Meta-Analysis. October 2007 AIDS Patient Care & STDs; Oct 2007, Vol. 21 Issue 10, p732