

EFFECTS OF RATIONAL EMOTIVE BEHAVIOIUR THERAPY AND PSYCHOEDUCATION ON SCHIZOPHRENIC PATIENTS

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Abstract

The study examined the effects of rational emotive behavior therapy and psychoeducation among schizophrenic patients. Patients of age range 18 to 59 years with mean age of 34.65 and standard deviation of 11.31 were selected from Neuro-psychiatric hospital, Nwafia. One instrument was used for the study: the Brief Psychiatric Rating Scale developed by Overall and Gorham (1962) and validated in Nigeria. The study was an experimental study and repeated measure design was used. Pair wise t-test was employed as the statistical tool for data analyses. The result indicated a significant reduction in psychiatric symptoms in patients treated with REBT compared with the control at $t(19) = 10.19, P < .0001$. The second hypothesis which stated that schizophrenic patients who received REBT plus psychoeducation will show significantly lower psychiatric symptoms when compared with the control was confirmed at $t(19) = 12.11, p < .0001$. The third hypothesis which stated that schizophrenic patients who receive REBT plus psychoeducation will show reduced psychiatric symptoms when compared with those that receive REBT alone was confirmed at $t(19) = 7.21, p < .0001$. This reveals that the combination of REBT and psychoeducation yielded better results. This study therefore recommends a combination of rational emotive behavior therapy and psychoeducation in the treatment of psychiatric symptoms among schizophrenic patients.

Keywords: *REBT, Psychoeducation, Schizophrenic patients*

Introduction

Schizophrenia is believed to be the most devastating mental ill health condition prevalent across the globe, hence much research effort has been, and is being expended on its prevention and treatment (WHO, 2011). It is a severe psychotic illness which seems to manifest as a predominant negative symptoms (PNS), with its onset in early adulthood. It is usually characterized by delusions, hallucinations, disordered thought processes and bizarre behaviors. Sometimes it is also associated with advanced deterioration in personal, domestic, social and occupational competence. According to Mueser and McGurk, (2004) schizophrenia is among the leading causes of long-term disability in the world,



and it is also the single most important cause of chronic psychiatric disability. So far, no society or culture anywhere in the world has been found to be free from schizophrenia and there is evidence that this puzzling illness represents a serious public health problem (WHO, 2011).

The treatment of schizophrenia seems to have improved since the advent of antipsychotic drugs. However, though drug therapy is significantly effective, some patients still relapse and get re-hospitalized while still on medication (Illot, 2005). Unfortunately, only approximately 20% treated schizophrenics make a full recovery, 20% have relapses with no intervening deterioration, 40% have relapses with some deterioration, and about 20% remain chronically ill and show little recovery (Kingdon & Turkington, 2005). Furthermore, there are also patients who refuse antipsychotic drugs because of the risk of side effects, the belief that they can handle themselves without drugs or a disagreement with the clinician about the nature of the symptoms (Nordentoft & Austin, 2014). This suggests strongly that the predominant treatment paradigm has been largely ineffective. Efficacy of the different treatment paradigms especially REBT and psychoeducation have been studied in the developed world and subsequent application of research findings seem to have benefited patients and other stake holders (Huhn, Tardy & Spine, 2014). There is obvious paucity of such research in Nigeria and as a result, there is need to explore the approaches (REBT and Psychoeducation) and not depend on medications alone.

The Association of Behavioural and Cognitive Therapies (ABCT) (2017), opined that antipsychotic drugs though they improve the outlook of the schizophrenic patients do not cure the illness. However, effective psychological treatment like Rational Emotive Behavioral Therapy (REBT) is needed to complement drug interventions for psychiatric symptoms (Bieling, McCabe, & Antony, 2006). The major goal of Rational Emotive Behaviour Therapy (REBT) is to dispute irrational/ faulty interpretations and to help patients modify beliefs that maintain maladaptive behaviours and emotions. Ellis (2001a) emphasized the negative role of dysfunctional cognitions in human beings and stated that prevention from indulging in irrational beliefs would improve people's ability to direct their energy toward self-actualization. Therefore, thinking in terms of absolute imperatives is the reason for disturbance and maladaptive behaviour in human beings. Despite the effectiveness of REBT, there is a need to explore if its combination with another therapy such as psychoeducation will be more effective.

Psychosocial treatment is very important for people with schizophrenia and it includes a number of approaches such as social skills training, REBT, cognitive

remediation and social cognitive training (Kern, Glynn, Horan, & Marder, 2009). According to this model of treatment, the goals of treatment for an individual with schizophrenia are as follows: to have few or stable symptoms, to avoid hospitalization, to manage his/her own funds and medication and finally, to be either working or in school at least half of the time (Cassidy, Hill & O'Callaghan, 2001).

Psychoeducation is a treatment paradigm in which the patients are taught about the illness, the causative factors, preventive measures, side effects of drugs and symptoms of relapse. It is assumed that increased knowledge enables patients with schizophrenia to cope more effectively with their illness. Psychoeducational interventions involve interaction between the information provider and the mentally ill person (Xia, Merinder & Belgamwar, 2011). Also, Nosé, Barbui and Tansella, (2003) opined that clients who understand their illness, medications and treatment expectations consistently demonstrate better adherence. Psychoeducation is among the most effective of the evidence-based practices that have emerged in both clinical trials and community settings. Because of the flexibility of the model, which incorporates both illness-specific information and tools for managing related circumstances, psychoeducation has broad potential for ameliorating many forms of illnesses and varied life challenges (Lukens & McFarlane, 2004). Psychoeducational programs were developed to improve adherence to pharmacotherapy by reducing irrational beliefs towards drugs and their side effects, increasing tolerance to the inevitable and unwanted effects, and promoting coping strategies and problem-solving skills to help face everyday problems associated with the disorder. Studies on the real effectiveness of these programs have found protective effects against the risk of relapse (Petretto, Prettil, Zeaddas, Veltro, Rocchi, Sisti, et.al., 2013).

Degme~i, Po`gain and Filakovi, (2007) determined the differences in compliance between two groups of patients, one who went through psychoeducation about schizophrenia and the other group without the education about schizophrenia. Group of 30 patients were during the hospitalization educated about the schizophrenia and the treatment of the disease, while the control group of 30 patients did not receive psychoeducation. On admission to the hospital, on the release from the hospital and after three months of release from the hospital, patients were rated with Brief Psychiatric Rating Scale and Clinical Global Impression, compliance was rated with Compliance Assessment Inventory, attitude towards drugs with Drug Attitude Inventory, and social functioning of the patients with Global Assessment of Functioning. Knowledge about the disease was assessed with specially designed questionnaire with 12 questions. Results of the study revealed the importance of education on the compliance, as



well as on the positive attitude towards the drug treatment, which is one of the most important predictors of successful treatment of the schizophrenia.

An Indiana study by Lysaker, Davis, Bryson and Bell (2009) showed an improvement in vocational outcomes when weekly CBT group and individual sessions were used over standard vocational support for patients with schizophrenia spectrum disorders. The individuals receiving CBT worked more weeks and more hours and had better work performance over the 26-week study compared to those receiving standard vocational support. Tanaka, Yano, Takata and Nishimura (2010) evaluated the effects of cognitive behavioural therapy for patients with Schizophrenia in Japan. The study involved 12 patients with schizophrenia who met the diagnostic criteria for schizophrenia in DSM-IV TR at the day care centre of the Department of Psychiatry, Fukuoka University Hospital, Japan. The subjects were divided into two groups of 6 patients. One group had treatment as usual which is drug therapy (control group) and another group had therapeutic intervention of CBT for 5 weeks. The following 10 assessments were used for the evaluation, 1) Positive and negative symptom scale (PANSS), 2) Schedule for assessment of insight (SAI) 3. the Calgary Depression Scale for Schizophrenia (CDSS) 4. Event related Potential 5. Wisconsin card sorting test 6) Subtests concerned with attention and concentrations in the Wechsler Memory Scale- Revised, 7) Word fluency test, 8) Trail making test, 9) Stroop test, 10) WHOQOL 26. These assessments were conducted before and after interventions and changes before and after interventions in assessments were compared between the 2 groups. No significant difference was detected between the two groups with respect to any background index. No significant difference was detected between the groups with respect to any assessment before the intervention. The between group comparison of change after intervention in each assessment showed some significant difference. The CBT group showed a significant decrease in the CDSS score in comparison to the control group. The CBT group showed a significant increase in the average score of QOL in the physical aspect subtest in comparison to the control group. Cognitive behaviour therapy was suggested to improve symptoms, insights into disease, depression and quality of life in patients with schizophrenia.

Guo, Zhai, Liu, Fang, Wang, Wang et.al (2010) in China also demonstrated the advantages of medications plus psychosocial intervention over medication alone. In the psychosocial intervention, each month, patients and their families received 1 day of 4 types of evidence based interventions, psychoeducation, family intervention, skills training and REBT. After 1 year, the patients in the group receiving the extra interventions were more compliant with their medications, had fewer re-hospitalizations and experienced better quality of life. Another

study in Germany by Becholf, Wanger, Ruhrmann, Harrigan, Putzfeld, Pukrop. et.al. (2012) revealed that the use of a psychological intervention involving cognitive behavior therapy (CBT), group skills training, cognitive remediation and multifamily psychoeducation among young people at risk of schizophrenia revealed delayed onset of psychosis for at least 2years.

Morrison, Hutton, Wardle, Spencer, et.al. (2014) examined the effects of Cognitive therapy (CT) for people with a schizophrenia spectrum diagnosis not taking anti psychotic medication. Twenty participants with schizophrenia spectrum disorders received CT in an open trial. Diagnosis was established using case notes and a standardized checklist (ICD-10); all diagnoses were reviewed by a consultant psychiatrist. All participants were identified by psychiatrists, care coordinators and other relevant mental health staff within participating mental health trusts at the two sites (Manchester and Newcastle/North East). The primary outcome which was psychiatric symptoms were measured using the Positive and Negative Syndromes Scale (PANSS), which was administered at 3-monthly intervals for a period of 9 months (end of treatment) and 15 months (follow-up).

Secondary outcomes were dimensions of hallucinations and delusions, self-rated recovery and social functioning. Results revealed significant beneficial effects on all primary and secondary outcomes at end of treatment and follow-up, with the exception of self-rated recovery at end of treatment. Cohen'sd effect sizes were moderate to large (for PANSS total, $d=0.85$, 95% confidence interval (CI) 0.32–1.35 at end of treatment; $d=1.26$, 95% CI 0.66–1.84 at follow-up). A response rate analysis found that 35% and 50% of participants achieved at least a 50% reduction in PANSS total scores by end of therapy and follow-up respectively. No patient deteriorated significantly.

Hofmann, Asnaani, Vonk, Sawyer and Fang, (2012) identified 269 meta-analytic studies and reviewed of a representative sample of 106 meta-analyses examining CBT for the following problems: substance use disorder, schizophrenia and other psychotic disorders, depression and dysthymia, bipolar disorder, anxiety disorders, somatoform disorders, eating disorders, insomnia, personality disorders, anger and aggression, criminal behaviors, general stress, distress due to general medical conditions, chronic pain and fatigue, distress related to pregnancy complications and female hormonal conditions. Additional meta-analytic reviews examined the efficacy of CBT for various problems in children and elderly adults. The strongest support exists for CBT of anxiety disorders, somatoform disorders, bulimia, anger control problems, schizophrenia and general stress. Eleven studies compared response rates between CBT and other



treatments or control conditions. CBT showed higher response rates than the comparison conditions in 7 of these reviews and only one review reported that CBT had lower response rates than comparison treatments. In general, the evidence base of CBT is very strong.

Obi-Nwosu and Okeke (2013) examined the comparative effects of REBT and music therapy on depression. Ten clinically depressed inmates of the Psychiatric Rehabilitation Center Obosi served as the participants. Age ranged from 18 to 64 years with a mean age of 41.7 and SD of 15.9. Two instruments, self rating depression scale and a Sony DVD player were used for the study. The design was pretest –post test within subject experimental design. The result revealed that rational emotive behaviour therapy (REBT) significantly reduced depression among patients at $P < .01$ level of significance.

Matsuda and Kohno (2016) also evaluated the clinical utility of the Nursing Psychoeducation Program (NPE) for improving the acceptance of medication of inpatients with schizophrenia as well as their knowledge regarding their illness and the effects of medication on it. The study was a quasi-experimental study involving a convenience sample and was performed at the acute treatment units of two Japanese psychiatric hospitals. The subjects were recruited from among the inpatients being treated at the acute treatment units and were assigned to either the experimental or control group. The experimental group took part in the NPE, and the control group received the standard treatments for schizophrenia. Data were collected using structured questionnaires namely the Medication Perception Scale for Patients with Schizophrenia (MPS), Drug Attitude Inventory–10 Questionnaire (DAI-10), and Knowledge of Illness and Drugs Inventory. Forty-three patients (13men and 30women) agreed in writing to participate in this study. During pre-/post intervention comparisons, the total MPS score, the ‘efficacy of medication’ subscale score, and the total DAI-10 score exhibited significant group × time interactions. Psychoeducation programs for patients with schizophrenia have been shown to have the following positive effects: to induce improvements and in medication adherence.

As a result of the paucity of the research in this area in the Nigeria context, the present study addressed these questions:

1. Will schizophrenic patients who receive rational emotive behavior therapy show lower psychiatric symptoms than the control?
2. Will schizophrenic patients who receive rational emotive behavior therapy plus psychoeducation show lower psychiatric symptoms than the control?

3. Will schizophrenic patients who receive rational emotive behaviour therapy plus psychoeducation show lower psychiatric symptoms when compared with those that receive REBT alone?

The major purpose of this study is to compare the efficacy of rational emotive behavior therapy and rational emotive behavior therapy plus psychoeducation among schizophrenic patients.

Methods

Participants

Participants in the study were 20 diagnosed schizophrenic patients drawn from the Neuro-Psychiatric Hospital, Nawfia in Njikoka Local Government Area of Anambra State. It is the only public psychiatric institution in Anambra state. Non-probability sampling was used to select participants. The participants comprised of 11 males and 9 females, aged from 18 to 59 years, with a mean age of 34.65 years and standard deviation of 11.31. The participants met the DSM 5 diagnostic criteria for schizophrenia and were duly diagnosed by a psychiatrist employed by the hospital. Patients with dementia and head injuries were excluded from the study.

Instrument

One measurement instrument was used for this study namely the Brief Psychiatric Rating Scale (BPRS), developed by Overall and Gorham (1962). The Brief Psychiatric Rating Scale (BPRS) is an 18 item instrument designed to measure the positive, negative and affective symptoms of individuals who have psychotic disorders especially schizophrenia. Items are rated from 1 (not present) to 7 (extremely severe). The BPRS includes items that address somatic concern, anxiety, emotional withdrawal, conceptual disorganization, guilt feelings, tension, mannerisms and posturing, grandiosity, depressive mood, hostility, suspiciousness, hallucinatory behaviours, motor retardation uncooperativeness, unusual thought content, blunted affect, excitement, and disorientation. The BPRS has shown good reliability and validity and it has been extensively used in Nigeria (Afe, Emedoh, Ogunsemi & Adegbohun, 2016, Olagunju, Adegbaju & Uwakwe, 2016). Afe, Emedoh, Ogunsemi and Adegbohun (2016) obtained an inter-rater reliability of 0.75.

Procedure

Prospective participants were approached, after ethical clearance was obtained from the hospital. After due information regarding the study was discussed with the patients and their caregivers, those who consented to participate were then



enlisted. Participants were informed that the study and treatment was about the status of their health and were assured of confidentiality. They were also informed of their right to withdraw at any time. The participants were assessed with the instrument to determine the severity of the psychiatric symptoms prior to treatment. This served as the control condition and served as a baseline before therapy. The participants received REBT for 4 weeks. At the end of the 4 weeks, they were reassessed with the instrument to determine the treatment progress. Furthermore, the participants received psychoeducation for an additional 4 weeks. At the end of the 8th week, the patients were reassessed again to examine the overall effectiveness of the therapies. The therapy sessions were twice a week and lasted for 60 minutes per session with a total of 16 sessions.

Design and Statistics

The research was an experimental study. The design was a repeated measure design. Based on the design, one way repeated measure ANOVA was used to test the hypotheses. A Bonferroni post hoc analysis for comparison of means was used to detect the exact source of main effect.

Results

Means, Standard Deviations of the treatment conditions

Treatment conditions	Mean	N	Std. Dev	Std. Error
Control	59.65	20	12.02	2.68
REBT	45.40	20	13.91	3.11
REBT&PE	29.80	20	9.83	2.19

The result from Table 1 shows that the mean scores for psychiatric symptoms for the control (59.65) were higher when compared with the REBT treatment condition ($X=45.40$). Also, the mean score of the control condition was also higher($X=59.65$) when compared with the REBT plus psychoeducation treatment condition($X=29.80$). The table above further revealed that the mean score of the REBT treatment condition was higher ($X= 45.40$) when compared with the REBT plus psychoeducation treatment condition (29.80).

Table I1: Summary Table of the Pair Sample T-test

Treatment Conditions	Mean difference.	Std.Dev.	T	Df	Sig
Control-REBT	14.25	6.24	10.19	19	.00
Control-REBT&PE	29.85	11.01	12.11	19	.00
REBT-REBT&PE	15.60	9.66	7.21	19	.00

P<.0001

Table 11 therefore revealed that the first hypothesis which stated that schizophrenic patients who received REBT which manifest lower psychotic symptoms when compared with the control was confirmed at (t (19) =10.19, P<.0001. The second hypothesis which stated that schizophrenic patients who received REBT plus psychoeducation will manifest lower psychiatric symptoms when compared with the control was also confirmed at t (19) =12.11 p < .0001. Furthermore, the third hypothesis revealed a significant difference in the manifestation of psychiatric symptoms among schizophrenic patient who received REBT and REBT Plus psychoeducation, the third hypothesis was confirmed at t (19) = 7.21 p<.0001.

Discussion

The present study investigated the effects of Rational Emotive Behaviour Therapy (REBT) and REBT plus psychoeducation on psychiatric symptoms among schizophrenic patients. The first hypothesis of the present study was confirmed. Schizophrenic patients who received REBT manifested lower psychiatric symptoms than the control. This implies that REBT as a psychological treatment paradigm was very effective in reduction of psychiatric symptoms among schizophrenic patients. A possible explanation for the reduction in psychiatric symptoms could be due to cognitive restructuring or disputing of the irrational beliefs and replacing them with more moderate and functional beliefs. This finding is supported by the works of Hofmann, Asnaani, Vonk, Sawyer and Fang (2012), Kråkvik, Gråwe and Stiles (2013) which reported that REBT significantly reduced psychiatric symptoms among schizophrenic patients. The findings are consistent with the ABCDE model, Ellis(1999)states that people's emotional reactions are mediated by their belief system and as a result, disputing the irrational beliefs leads to new and positive emotions and forming a new philosophy of living.



The second hypothesis of the present study was also confirmed. Schizophrenic patients who received REBT plus psychoeducation manifested lower psychiatric symptoms than the control. This strongly suggested that both treatment paradigms (REBT and psychoeducation) when combined together was effective in reducing psychiatric symptoms of schizophrenic patients. There is a gap in empirical studies to support the findings. The effectiveness of the therapies could be traceable to both their cognitive and behavioural components. REBT has strong cognitive and behavioural implications in that while an irrational thought is being identified and disputed, a rational thought and a new behaviour emerges mimicking the effect of group psychoeducation (learning and relearning) as was carried out by in the study done by Obi-Nwosu & Okeke, (2013). Furthermore, teaching the patients about schizophrenia which entailed educating them on the causative factors of the illness and treatment modalities, drug adherence, relapse awareness and prevention were very essential and effective in the treatment process. In other words, educating the patients on all the basic knowledge of adjustment in life and living a balanced life in combination with the use of antipsychotic drugs is very effective. This is consistent with previous research Abadi (2005), Agara & Onibi (2007) and Matsud & Kohn (2016). These scholars are all of the view that psychoeducational approaches which stem from behavioural theory which states that human behavior can be learned and unlearned but with cognitive implications are useful in the treatment of schizophrenic patients. This is because learning entails a relatively permanent change in behaviour. It implies that negative behaviours are unlearned and replaced with positive alternatives to enhance stable psychological health of the patient. Patients who are exposed to effective teachings and behaviour management strategies like practicing social interactions with people in the society, initiating and maintain conversation. They also maintain good hygiene, maintaining a normal voice tone and eye gaze, and many others will respond positively even in the face of illness.

The hypothesis which stated that schizophrenic patients who receive REBT plus psychoeducation will show significantly lower psychiatric symptoms when compared with those that receive REBT alone was confirmed. This implies that psychoeducation moderates the effectiveness of REBT on psychiatric symptoms. This finding is supported by the second hypothesis. There is a gap in empirical studies to support the findings but the biopsychosocial model is in tandem with the results of the present study. The model posits that psychiatric symptoms can be manifested as a result of biological, psychological and social problems as they manifest in an individual's environment. As a result, the treatment of those psychiatric symptoms can be reduced through a combination of therapies,

psychological (REBT) and social (psychoeducation) means. The result of the study showed that there exists a relationship between REBT and psychoeducation in the treatment of psychiatric symptoms because of both cognitive and behavioural components of both therapies.

Kim, Chio and Park (2017) asserted that a novel bio-psychosocial-behavioral treatment model in schizophrenia is needed to target non-dopaminergic mechanisms rather than dopamine mechanism and be consistent with staging care, personalized care, preventative care, reducing cognitive deficits, and integrating psychiatric care. The recent trend in psychiatric treatment is to provide a combinational treatment which includes all form of psychotherapy. The combined approach has been proved to be more efficacious in targeting all areas of patient's illness and its functionality is quite suitably than any single therapy-based approach. In combinational approach, psychoeducation invariably or even inadvertently comes into picture as an adjunctive psychotherapy. Psychoeducation seems to be a crucial adjunctive psychotherapy in the field of psychological health. Optimal care to individuals with chronic overwhelming mental illness has to be multidimensional in nature and should incorporate all kinds of therapeutic services to address every aspects of illness (Bhattacharjee, Rai, Singh, Kumar, Munda & Das, 2011).

Finally, the results in this study indicated that the combination of REBT and psychoeducation in adjunct to drug therapy are very effective in reducing psychiatric symptoms among schizophrenic patients than using REBT and medications alone.

Implications of the Study

Theoretically, despite the fact that past studies have been explicit on the effects of REBT and psychoeducation on psychiatric symptoms among schizophrenic patients, this study has also added to the body of knowledge on the construct because to the best of the researcher's knowledge such research has not been carried out in the hospital used.

Practically, the findings have implication for clinicians. First, the study made it clear that REBT in combination with psychoeducation leads to reduction in psychiatric symptoms. Specifically, psychoeducation should be carried out with patients as a treatment model to equip them. Mental health service providers should also integrate these interventions for caring for schizophrenic patients. This will have the potential to help influence health policy makers in improving mental health regulation to the benefit of schizophrenics and their families.



From the findings of this study, the following recommendations were made:

1. Mental health policy in Nigeria should be updated to ensure that all psychiatric facilities have full complements of psychological services.

2. Psychoeducation is recommended to be incorporated as part of regular treatment paradigm in the hospitals, especially for schizophrenics.

This study has some limitations.

The sample size might be considered small and a convenience sampling used. This may affect the generalization of the result. Despite the limitations, the strength of this work lies in the fact that it came from a population and culture not yet well studied.

In conclusion, the result revealed that psychoeducation plays a moderating role on the effect of rational emotive behavior therapy in the reduction of psychiatric symptoms among schizophrenic patients. This will contribute to better understanding and treatment of psychiatric symptoms in our society.

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