International Journal of Social Science
Citation: IJSS: 7(4): 489-493, December 2018
DOI: 10.30954/2249-6637.10.2018.8
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Cognitive Restructuring Therapy for Psychopathology of Patients with Schizophrenia

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ABSTRACT

Cogenitive restructuring, or cognitive re-framing, is a therapeutic processs, it is a staple of Cognitive Behavioral Therapy. Ccognitive Rrestructuring Therapy (CRT) aims to help to reduce positive and negative symptoms through cultivating more positive and functional thought & habits. Present study is aimed to reduce positive and negative symptoms patents with schizophrenia using cognitive restructuring therapy. Method: five (5) patients with Schizophrenia were chosen from different inpatient department of RINPAS, Kanke using the simple random sampling technique. After taking informed consent from the patient, socio-demographic and PANSS were administered. All the five patients were assessed in pre-level and then after intervention of 18 sessions, they were assessed at post-level. Data was analyzed with the help of Wilcoxon signed rank test was used for statistical analysis. Result & Discussion: Results showed the significant differences in the areas; Delusion, Hallucination, Suspiciousness, in pre & post assessment at significant level of 0.01. In the study, it was found that application of cognitive restructuring therapy in the cases of schizophrenia has some effective measures in the areas of their positive and negative symptoms. Both positive and negative symptoms are resolves after application of cognitive restructure therapy.

Keywords: Schizophrenia, PANSS, Psychopathology, CRT, CBT

As we know cognitive science is an inherently integrative discipline that encompasses aspects of cognitive psychology, artificial intelligence, neuroanatomy, philosophy of knowledge, linguistics, and anthropology (Gardner, 1987). In other words, it might include the therapy processes that help us to perceive, attend, remember, think, categorize reason and decide so on. As cognitive therapy (CT) a system of psychotherapy with an operationalized treatment based on cognitive theory, it has basic knowledge brought from elaborated theory of psychopathology and personality. It looks different to have cognitive therapy in schizophrenia although nowadays cognitive therapy used to avoid hallucination as well mood. The re-framing of cognitive structure makes an individual to re-enter into healthy thought and emotion. Cognitive restructuring, or cognitive re-framing, is a therapeutic process It is a staple of Cognitive Behavioral Therapy it's helps the client discover, challenge, and modify their negative, irrational thoughts (or cognitive distortions) and Cognitive restructuring aims to help people reduce stress through cultivating more positive and functional thought habits (Mills, Reiss, & Dombeck, 2008). Cognitive approaches to schizophrenia have certainly advanced the treatment of very serious condition. It's believed that it is important to adapt our knowledge of non psychotic condition to the understanding and treatment of schizophrenia. In a way, the formulation and treatment strategies advocate are an extension of those that have been successfully applied to Depression (Beck *et al.* 1979) and personality disorder (Beck, Davis, & Freeman 2015). However, one size doses not fit for all, and the important revision that

must make in the approach patient with schizophrenia. Basically, it is crucial to understand the neuro-cognitive and psychological cognitive aspect of schizophrenia as well as the uniqueness of schizophrenia as a psychiatric condition, so the usual neurotic phenomena do evidence of a kind of "deep change" when they become frozen into schizophrenia.

The cognitive theory has been empirically validated in hundreds of cognitive science studies. And the therapy itself has been found to be effective in hundreds of randomized controlled studies for a wide variety of psychiatric disorders, psychological problems, and medical conditions with psychological components (Beck, 2005). Research has shown that CT is highly effective in helping patients not only overcome their disorders but also in preventing relapse (Hollon, et, al., 2005).

Although many assumption related to use of any form of CBT/CT for schizophrenia is mixed but mostly directly pointing that it's not effective as first line of intervention although maintenance phase need a form of cognitive restructuring to maintain a healthy cognitive, emotional & behavioral in Psychosis (Kullar, Björgvinsson, 2010). An application would find a link between the depression and schizophrenia or application elaborates some techniques that help patient with schizophrenia.

In a study it's found that Cognitive Restructuring Therapy utilizes an evaluation process to facilitate clients' ability to identify. CR's strategy used to address implications of specific negative thoughts to help identify strongly held beliefs or catastrophic fears (Beck *et al.* 1979; Beck, 1995; Burns, 1989)

In a review study of articles suggest that cognitive restructuring is effective to reduce or eliminate positive and negative symptoms in schizophrenia patients (Bouchard *et al.* 1996). A number of meta-analyses have examined the efficacy of CT for psychosis, includes cognitive and behavioral methods such as skills training, problem solving, Socratic questioning, exposure, and coping strategy enhancements (Lincoln *et al.* 2012). The meta-analyses reviewed 34 studies showed a larger effect size for pre-post-treatment than treatment as usual. Beneficial effects were found for both positive and negative symptoms of schizophrenia, although the effects were larger overall for positive symptoms (Kingdon & Dimech, 2008).

METHODS

Sample: In this study the 5 patient with Schizophrenia is having at least 2yrs history taken for intervention from in-patient RINPAS, Kanke Ranchi, Jharkhand through simple random sampling. All the five patients were assessed in pre-level and then after intervention of 18 sessions, they were assessed at post-level. All patients consider 18 and above age range and there educational background above and including 10^{th} class. If the patients had co-morbidity they were excluded.

Research Design: A pre-test and post-test assessment is used with patients with schizophrenia using cognitive restructuring therapy. 18 sessions were given to the all the five patients and compared.

Measures

Socio-Demographic and Clinical Data Sheet

A self-prepared semi-structured data sheet will be used for the patient group. It will be divided into socio-demographic and clinical data for the patient group. The socio-demographic variables were name, age, sex, religion, marital status, education, occupation, and socioeconomic status etc. The variables in clinical data were duration of illness, diagnosis, duration of treatment etc.

PANSS (Kay, et al. 1988)

The PANSS consists of a semi-structured clinical interview and any available supporting clinical information from family members or hospital staff, and has 30 items which rate on a 7-point continuum (1=absent, 7=extreme). Scores are provided in separate clinical domains including positive syndrome, negative syndrome, general psychopathology and a composite score. Alpha-coefficient analysis has indicated high internal reliability and homogeneity among PANSS items, with coefficients ranging from 0.73 to 0.83 ($p<0.001$) for each of the scales. The split-half reliability of the

general psychopathology sale has been demonstrated to be 0.80 ($p < 0.001$).

Procedure

The sample consists of 5 in-patients diagnosed (at least 2 years ago) with schizophrenia as per ICD-10 (DCR) and meeting the inclusion and exclusion criterions were selected from different units of Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS). Detailed information regarding the research intervention program was provided initially to the participants who express willingness was recruited for the study. Positive And Negative Syndrome Scale (PANSS) was applied for baseline assessment, and cognitive restructuring therapy of 18 sessions was given in period of 3 months span. Three sessions per week cognitive restructuring therapy was provided to the participants. After completion of therapy sessions, pre test and post test were assessed again on the above said tools. Lastly data was analyzed with the help of SPSS.

Statistical Analysis

As a sample size in this study was small, hence the data didn't follow normal distribution so it was analyzed by using non-parametric test, using Wilcoxon Sign Rank test (for within group comparison).

RESULTS and DISCUSSION

Table 1: The Within Group Difference of Pre and Post Assessment of Positive Syndrome

Areas of Assessment	Pre-Assessment score Mean ± SD	Post-Assessment score Mean ± SD	Wilcoxon Signed Ranks Test		
PANSS	**Pre-Assessment score**	**Post-Assessment score**	**Sign**	**Mean rank**	**Z score**
Delusion	5.60 ± .516	3.70 ± .483	+	.00	2.23**
			-	3.00	
Conceptualization Disorganization	4.00 ± 1.63	3.10 ± 1.19	+	.00	1.85
			-	2.50	
Hallucination	5.20 ± .421	3.80 ± .632	+	.00	2.06**
			-	3.00	
Excitement	1.00 ± 0.00	1.00 ± .000	+	.00	.000
			-	.00	
Grandiosity	1.00 ± 0.00	1.00 ± .000	+	.00	.000
			-	.00	
Suspiciousness	5.700 ± .483	3.70 ± 1.15	+	.00	2.04**
			-	3.00	
Hostility	1.30 ± .948	1.10 ± .316	+	.00	1.00
			-	1.00	

***Significant at 0.01 level of confidence.*

Results showed the significant differences in this areas of; Delusion, Hallucination, Suspiciousness, in pre & post assessment at significant level of 0.01.

Table 2: The Within Group Difference of Pre and Post Assessment of Negative Syndrome

Areas of Assessment	Pre-Assessment score Mean ± SD	Post-Assessment score Mean ± SD	Wilcoxon Signed Ranks Test		
PANSS	**Pre-Assessment score**	**Post-Assessment score**	**Sign**	**Mean rank**	**Z score**
Blunted Affect	4.10 ± 1.19	2.70 ± 1.25	+	.00	1.00
			-	3.00	
Emotional Withdrawal	3.70 ± 1.49	2.60 ± 1.07	+	.00	2.06**
			-	3.00	
Poor Rapport	3.40 ± 1.34	2.10 ± 1.19	+	.00	2.04**
			-	3.00	
P/A Social Withdrawal	3.50 ± 1.58	2.20 ± 1.13	+	.00	1.84
			-	3.00	
Difficulty in a Thinking	3.80 ± 1.13	2.60 ± 1.26	+	.00	2.12**
			-	2.50	
Lack of Spontaneity	3.30 ± 1.63	2.40 ± 1.34	+	.00	2.06**
			-	3.00	
Stereotype Thinking	1.50 ± .971	1.30 ± .948	+	.00	2.04**
			-	3.00	

***Significant at 0.01 level of confidence.*

The table 2: The results shows significant difference in the areas of Emotional Withdrawal, Poor Rapport, Passive

and Aggressive (P/A) Social Withdrawal, Difficulty in a thinking, lack of Spontaneity and Stereotype thinking at 0.01 significant level of confident.

Present study was conducted to evaluate the significant of Cognitive Restructuring Therapy in the possible management of patient with schizophrenia, in context with improvement in their positive and negative symptoms.

In the study, it was found that application of cognitive restructuring therapy in the cases of schizophrenia has some effective measures in the areas of their positive and negative symptoms. Both positive and negative symptoms are resolves after application of cognitive restructure therapy. Although number of session also measure valuable output, as suggested by the studies that the application of Cognitive restructure therapy (CRT) has significant effect in improving the symptoms of depression and schizophrenia (Butler, *et al.* 2006). The CRT improved patients' positive and negative symptoms significantly, improvement shown in these areas of positive symptoms i-e delusion, hallucination and Suspiciousness and significant finding shown in negative symptoms in these areas i-e emotional withdrawal, poor rapport, difficulty in abstract thinking, lack of spontaneousity and stereotype thinking. Although all patients were on medication too so poor correlation with CRT and improvement of positive and negative symptoms was suggested.

Rector & Beck, (2001), concluded from his study that CBT has been shown to produce large clinical effects on measures of positive and negative symptoms of schizophrenia. The patient who got mixed treatment with CBT found effective and managed well, and in long term follow up studies it's also shown improvement.

Guadiano, 2005, studied different articles in article's review the 15 empirical studies that have used cognitive restructuring in the treatment of schizophrenia, more specifically for psychotic symptoms (delusions and hallucinations). Three elements are considered before investigating its effectiveness: Investigation revealed that schizophrenia is not reliably diagnosed and severity is low to moderate. In those studies, they were concluded that cognitive restructuring is effective to reduce or eliminate hallucinations or delusions in schizophrenia patients.

In a another study by Gould *et al.* (2004) found significant treatment effects in 5 controlled trials using cognitive therapy aiming to modify patients' distorted beliefs about delusions and hallucinations. In the last decade, there have also been reviews exploring several secondary outcomes of CRT for schizophrenia, especially negative symptoms. Rector and Beck completed an effect size analysis which found moderate to large pre-post treatment improvements on negative symptoms.

Finding of present study supports the use of cognitive restructuring therapy to reducing the psychopathology in terms of positive and negative symptoms. However the sample size was small so the parametric test was not done. Only male patient was included in the study so it could not be applied for female patient. Other limitation can be seen like original scale is developed in English country so its translation version could not be so much effective. Further research can be done adding more similar patient with high education.

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