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Evaluating CBTp for Paranoid Schizophrenia: Efficacy and Maintenance of Therapeutic Gains

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KEYWORDS

CBTp, paranoid schizophrenia, delusion, emotion regulation, anxiety, psychosis

ABSTRACT:

Background: Schizophrenia is a severe mental illness characterized by hallucinations, delusions, disorganized thinking, and cognitive impairments. While antipsychotic medications remain the primary treatment, Cognitive Behavioral Therapy (CBT) has emerged as a promising adjunctive intervention in schizophrenia.

Aim: The aim of the present study was to evaluate the efficacy of Cognitive Behavioral Therapy for psychosis (CBTp) and the maintenance of therapeutic gains in patients with paranoid schizophrenia.

Methods: Forty patients with a diagnosis of paranoid schizophrenia were selected for the present study and allocated in two groups: CBTp+TAU (Intervention) and TAU group (Control). Both group were assessed at three different phases i.e., baseline, post intervention and at follow up for different dimension of delusional belief, emotion regulation, anxiety, aggression, perceived stress, self-esteem, and perceived social support. Intervention group were provided with 25-30 session of CBTp.

Results: Result suggested significant improvement on various clinical and psychological parameters in CBTp+TAU group.

Conclusion: CBTp has been found to be moderately effective in many research studies. The finding of the present study also shows that CBTp is not only effective in improving psychotic symptoms but also affects other psychological construct through generalization mechanism. The gain through intervention were also maintained till follow up.

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1. Introduction

Mental illness has long been a complex puzzle for some of the greatest minds, who have continuously endeavoured to understand and resolve it through various approaches — a pursuit that continues to this day. Among many psychopathological symptoms hallucination and delusion is categorized under psychotic symptoms. Beside pharmacological interventions, psychological interventions have been proven to be effective in treating mental illness. Among bouquet of psychological intervention Cognitive Behaviour Therapy has made it mark like an evidence based therapy and now it has been used for the management of hallucination and delusion also. A sizable amount of research currently supports the effectiveness of cognitive behavioural therapy (CBT) in treating schizophrenia (Wykes et al., 2008). Randomized controlled studies (RCTs) have demonstrated long-lasting benefits with moderate effect sizes for both positive and negative symptoms at the conclusion of therapy (Gould et al., 2001). There is proof that these study results are cost-effective and durable in clinical settings (Turkington et al., 2006; Malik et al., 2009). Almost all of the trials have focused on individuals whose antipsychotic medication regimens have stabilized. Nevertheless, there are case series that indicate that patients who decline pharmacological treatment may benefit from cognitive behavioural therapy (Christodoulides et al., 2008). Lieberman et al. (2005) found out that very few about 30% of patient with schizophrenia who receives antipsychotic treatment are satisfied with the result in an initial eighteen months of treatment which led them to non-adherence to the medication. Conley and Buchman (1997) have reported that about half of the patient on pharmacological treatment with compliance to the medication still experience positive and negative symptoms.

In view of the promising efficacy of cognitive behaviour therapy in psychosis the present study aimed to evaluate the efficacy of CBTp in patient with paranoid schizophrenia in term of its effect on the clinical and psychological variable like, different dimension of delusional belief, emotion regulation, anxiety, self-esteem, aggression, perceived stress and perceived social support.

2. Material and Method:

The study was carried out in the inpatient department of Central India Institute of Mental Health And Neurosciences, Dewada, Rajnandgaon, and Chhattisgarh. The study was approved by the Institutional Ethical Committee of Central India Institute, Dewada, Rajanadgaon, Chhattisgarh. Each participant gave written informed consent for their participation in the study. The aim of the present study was to assess the efficacy and the maintenance of therapeutic gains of cognitive behaviour therapy on clinical and psychological parameters like different dimension of delusional belief, emotion regulation, anxiety, aggression, perceived stress and self-esteem, perceived social support in patients diagnosed with paranoid schizophrenia.

2.1 Research design

A hospital based pre-post treatment with follow up design was used in the present study

2.2 Sample size

A total of 40 patient with paranoid schizophrenia were selected using a purposive sampling technique. The patient who fulfilled inclusion criteria were selected for the present study. Both intervention and control group consist of 20 patient in each group. Both group were matched for clinical and sociodemographic variables.

2.3 Inclusion and Exclusion criteria

2.3.1 Inclusion criteria

- Patients with a diagnosis of Paranoid Schizophrenia according to ICD- 10 diagnostic criteria for research.
- Patients in the age group of 20-50 years.
- Patient educated at least up to 5th grade
- The patient who gave written informed consent

2.3.2 Exclusion criteria

- Patients having any co- morbid psychiatric illness.
- Patients having history of substance abuse.
- Patients having history of significant brain injury, and neurological problem.
- History suggestive of intellectual disability.

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2.4 Description of Assessment Tools:

2.4.1 Socio- demographic and Clinical Data Sheet:

Socio- demographic data profile of all patients was taken in a specially designed data sheet containing, age, sex, education, and socioeconomic status, marital status, past history, diagnosis, present mental status examination, detailed treatment history and physical examination.

2.4.2 Brown Assessment of Belief Scale (Eisen, J. L., Phillips, K. A., Baer, L., Beer, D. A., Atala, K. D., & Rasmussen, S. A. (1998) :

The Brown Assessment of Belief Scale evaluates insight and delusionality across disorders, assessing belief validity, others' perceptions, discrepancies, falsehood awareness, disproof attempts, and related delusions over seven days.

2.4.3 Psychotic Symptom Rating Scales-Delusion subscale (Haddock et al. 1999):

Haddock et al. (1999) developed the psychotic symptom rating scale (PSYRATS).This scale was developed to recognize the complexity of hallucination and delusions. It also measures the severity of these symptoms. It consists of two sets of scales, one for the auditory hallucinations and second for the delusions. The subscale of auditory hallucination has 11 items and to the scale for delusion has six items. Severity is rated using a 5-point scale. It has 6 item which analyses delusion on six dimension which are amount of preoccupation duration of preoccupation, conviction amount of distress, intensity of distress, disruption.

2.4.4 Difficulties in Emotion Regulation Scale (Gratz, K. L., & Roemer, L. (2004):

The Difficulties in Emotion Regulation Scale (DERS) is a scale which assesses emotion regulation problems. The scale has the following subscales: 1. Non acceptance of emotional responses 2. Difficulty engaging in Goal-directed behaviour 3. Impulse control difficulties 4. Lack of emotional awareness 5. Limited access to emotion regulation strategies 6. Lack of emotional clarity.

2.4.5 The Aggression Questionnaire (Buss, A. H. & Perry, M. P., 1992):

The Buss-Perry's Aggression Questionnaire (BPAQ) consists of 29 self-administered items rated on a 5-point Likert scale. The BPAQ includes four subscales: Physical Aggression (items 1-9), Verbal Aggression (items 10-14), Anger (items 15-21), and Hostility (items 22-29.)

2.4.6 Social Provision Scale (Cutrona, C. E., & Russell, D. W., 1987):

The Social Provisions Scale (SPS) is a 24-item scale that assesses the extent to which an individual's social relationships provide different dimensions of social support.

2.4.7 Perceived stress scale (Cohen, S., Kamarck, T., and Mermelstein, R., 1983):

The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It assesses perceived stress based on how unpredictable, uncontrollable, and overloaded life feels.

2.4.8 Rosenberg self-esteem scale (Rosenberg M. (1965):

Rosenberg self-esteem scale is a 10 item scale which is used to measure self-esteem. This scale demonstrates a Guttman scale coefficient of reproducibility of .92,

Indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability.

2.4.9 Hamilton Anxiety Scale (Hamilton, 1969):

The Hamilton Anxiety Rating Scale (HAM-A) is a 14-item questionnaire used by clinicians to evaluate the severity of a patient's anxiety.

2.4.10 Structure of the cognitive behaviour therapy for intervention:

2.5 Cognitive behaviour assessment of the delusional cognition was conducted with the following format.

2.5.1 Elaboration of delusional focus

The purpose of the delusional focus elaboration was to gather enough data to determine the onset of the delusions, their level of elaborateness based on adverse life experiences, pre-onset obsessions and fears, attitudes, and significant beliefs regarding the premorbid phase and other noteworthy life events.

2.5.2 Assessment of Cognitive Distortions

The therapist evaluated the frequency, range, and existence of general cognitive distortions related to the

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misinterpretation of ongoing events and particular scenarios that provide support for delusional ideas and lead to misinterpretation. These kinds of cognitive distortions include selective abstraction, catastrophizing, and all-or-none thinking.

2.5.3 Examining Emotional and Behaviour Responses to Delusional Interpretation

Examining the precise behavioural (avoidance, anger, sadness, etc.) and emotional (fear) effects of delusional ideas activated is another aspect of assessment. It is frequently the case that the different coping mechanisms patients use to deal with the fear, shame, rage, grief, and other emotions that their delusional beliefs generate keep them from receiving constructive criticism.

2.5.4 Ascertaining Key Evidence Taken to Support Delusions

The therapist noted all of the patient's present delusional beliefs and the supporting evidence for them, in addition to the patient's past delusional beliefs that are no longer believed. The therapist determined the origin of each belief, the contextual factors that existed at the time it was formed, and the immediate effects it had on the patient's life.

2.5.5 Assessing Cognitive Schemas(beliefs) Underlying Delusional Beliefs

The therapist identified the ideas about oneself and other people that give rise to delusional beliefs' themes. With regard to the patient's interpersonal situation, the content of delusions becomes more understandable. A system of faulty cognitive schemas that are progressively created over time, beginning in adolescence, appears to constitute the foundation for delusions. Delusion creation and content can be directly inferred from knowledge of the patient's dysfunctional attitudes and beliefs.

It was thought that by concentrating on this aspect of the underlying delusion, additional factors such as aggression, self-esteem, and the perception of social support would also be examined. After all, this particular cognitive behaviour assessment covered a wide range of underlying dysfunctional schemas that contributed to the genesis of many deviant coping strategies in addition to the development and maintenance of delusions.

2.5.6 Conducting a functional assessment

A functional assessment was also conducted. It provided a closer examination of what situations trigger distinct delusional interpretations and the factors that are central to the maintenance of and ongoing distress caused by , the delusional beliefs such as cognitive distortions, attentional vigilance, and behavioural responses focusing on avoidance and withdrawal and confrontational behaviours, reassurance seeking, neutralizing strategies.

2.5.7 Identify the triggers

The aim was to identify the situational triggers for experienced emotional distress (sad, anger, anxiety) due to delusions.

2.5.8 Assessing specific delusional appraisals

The goal was to comprehend how the patient interpreted experiences and occurrences. The goal was to find automatic negative thoughts, misinterpretations, and distortions of the present because of the existence of delusional beliefs. Completing a dysfunctional record on a specific situational antecedent that led to the activation of delusion during a session was beneficial.

2.5.9 Assessment of emotional and behavioural responses, functional impairment due to delusional appraisals

2.6 The treatment consisted of the following major parts.

2.6.1 Providing psycho education and normalization

2. 6.2 Socialising the patient to the cognitive model

2.6.3 Testing and correcting delusional interpretation in the patient.

2.6.4 Strategies for questioning the evidence in support of delusional beliefs:

I. Building alternative beliefs
II. Targeting non delusional core beliefs
III. Consolidating alternative beliefs
IV. Behavioural Experiments

3. Results

The present study aimed to examine the efficacy of cognitive behaviour therapy in paranoid schizophrenia.

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The statistical analysis result showed that there were no significant difference between the sociodemographic variables suggesting both group to be comparable. Mann Whitney test was applied to determine comparability on age and result showed that both group were having no significant difference (U=164.000, z= .987, p>0.05).

Table 1 showing comparison of sociodemographic variable for CBTp+TAU and TAU group

Sociodemographic variables		Group		Df	Chi value
		CBTp+TAU at Baseline	TAU At Baseline		
Gender	Male	16	13	1	1.129^{NS}
	Female	4	7		
Marital status	Married	14	12	1	.440^{NS}
	Unmarried	6	8		
locality	Rural	12	11	1	.102^{NS}
	Urban	8	9		
Employment status	Employed	13	15		
	Unemployed	7	5	1	.476^{NS}
Socioeconomic Status	Upper	10	7	2	.926^{NS}
	Middle	6	8		
	Lower	4	5		
Religion	Hindu	16	15	2	.366^{NS}
	Muslim	3	3		
	Other	1	2		

NS-Non significant

Table No. 2 is showing the comparison of the two group on dimension of delusion at baseline level. The result showed that there were no significant difference on any of the dimension of delusion at baseline and both group had same level of psychopathology on delusion.

Table No. 2 showing comparison of various dimension of delusion at baseline level between the CBTp+TAU and TAU groups

Variable	Group	N	Mean Rank	U	Z
Amount of Preoccupation	CBT+TAU	20	21.50	180.000	.628^{NS}
	TAU	20	19.50		
Duration of preoccupation	CBTp+TAU	20	18.83	166.500	1.038^{NS}
	TAU	20	22.18		
Conviction	CBTp+TAU	20	20.00	190.000	.350^{NS}
	TAU	20	21.00		
Amount of Distress	CBTp+TAU	20	21.68	176.500	.743^{NS}
	TAU	20	19.33		
Intensity of Distress	CBTp+TAU	20	19.50	180.000	.874^{NS}
	TAU	20	21.50		
Disruption	CBTp+TAU	20	21.00	190.000	.374^{NS}
	TAU	20	20.00		

Dimension of delusions: amount of preoccupation, duration of preoccupation, conviction, amount of distress, intensity of distress, disruption, * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBT+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No. 3 is showing the comparison of the two group on various dimension of delusion and emotion regulation at baseline level. The result showed that no significant difference on Brown Assessment of Beliefs Scale and any of the dimension of Difficulty in emotion regulation scale and both group had same level of impairment in emotion regulation and psychopathology in belief.

Table No.3 showing comparison of BABS and various dimensions of emotion regulation at baseline between the CBT+TAU and TAU groups

	Group	N	Mean Rank	U	Z
BABS	CBTp+TAU	20	19.90	188.000	.332^{NS}
	TAU	20	21.10		

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NONACCEPT	**CBTp+TAU**	**20**	**20.95**	**191.000**	**.251^{NS}**
	TAU	**20**	**20.05**		
GOALS	**CBTp+TAU**	**20**	**19.98**	**189.500**	**.290^{NS}**
	TAU	**20**	**21.03**		
IMPULSE	**CBTp+TAU**	**20**	**19.93**	**188.500**	**.316^{NS}**
	TAU	**20**	**21.08**		
AWARENESS	**CBTp+TAU**	**20**	**19.40**	**178.000**	**.601^{NS}**
	TAU	**20**	**21.60**		
STRATEGIES	**CBTp+TAU**	**20**	**21.65**	**177.000**	**.630^{NS}**
	TAU	**20**	**19.35**		
CLARITY	**CBTp+TAU**	**20**	**18.45**	**159.000**	**1.126^{NS}**
	TAU	**20**	**22.55**		

BABS:Brown Assessment of Beliefs Scale; NONACCEPT:Nonacceptance of emotional responses; GOALS: Difficulty engaging in Goal-directed behavior (GOALS);IMPULSE: Impulse control difficulties; AWARENESS: Lack of emotional awareness; STRATEGIES: Limited access to emotion regulation strategies; CLARITY: Lack of emotional clarity,* significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No.4 is showing comparison between the two group on different dimension of aggression, self-esteem and anxiety. Result suggested no significant difference on Physical Aggression between the two groups.

Table 4 showing comparison of various dimensions of aggression scale, self-esteem, anxiety at baseline between the CBT+TAU and TAU groups

variables	Group	N	Mean Rank	U	Z
Physical Aggression	**CBTp+TAU**	**20**	**20.65**	**197.000**	**.082^{NS}**
	TAU	**20**	**20.35**		
Verbal Aggression	**CBTp+TAU**	**20**	**20.48**	**199.500**	**.014^{NS}**
	TAU	**20**	**20.53**		
Anger	**CBTp+TAU**	**20**	**18.75**	**165.000**	**.965^{NS}**
	TAU	**20**	**22.25**		
Hostility	**CBTp+TAU**	**20**	**19.73**	**184.500**	**.422^{NS}**
	TAU	**20**	**21.28**		
Self-esteem	**CBTp+TAU**	**20**	**19.23**	**174.500**	**.699^{NS}**
	TAU	**20**	**21.78**		
Anxiety	**CBTp+TAU**	**20**	**17.85**	**147.000**	**1.449^{NS}**
	TAU	**20**	**23.15**		

Dimension of aggression: Physical Aggression, Verbal Aggression, Anger, Hostility, Self-esteem, Anxiety. * Significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No.5 is showing comparison between the two group on different dimension of social provision scale and perceived stress. Result suggested no significant difference on different dimension of social provision and perceived stress.

Table 5 showing comparison of various dimension of social provision scale and perceived stress at baseline between the CBT+TAU and TAU groups

	Group	N	Mean Rank	U	Z
Guidance	**CBTp+TAU**	**20**	**19.90**	**188.000**	**.331NS**
	TAU	**20**	**21.10**		
Reassurance of worth	**CBTp+TAU**	**20**	**20.02**	**190.500**	**.266NS**
	TAU	**20**	**20.98**		
Social integration	**CBTp+TAU**	**20**	**21.10**	**188.000**	**.337NS**
	TAU	**20**	**19.90**		
Attachment	**CBTp+TAU**	**20**	**18.73**	**164.500**	**1.009NS**
	TAU	**20**	**22.28**		
Nurturance	**CBTp+TAU**	**20**	**21.35**	**183.000**	**.498NS**
	TAU	**20**	**19.65**		
Reliable alliance	**CBTp+TAU**	**20**	**23.03**	**149.500**	**1.408NS**
	TAU	**20**	**17.98**		
Perceived stress	**CBTp+TAU**	**20**	**22.85**	**153.000**	**1.284NS**
	TAU	**20**	**18.15**		

Social provision scale dimensions: Guidance, Reassurance of worth, Social integration, Attachment, Nurturance and Reliable alliance;

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Perceived stress assessed by perceived stress scale, *Significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No.6 showing post intervention comparison on variable like conviction in delusional belief and emotion regulation between the two groups. The result showed that the CBTp+TAU differed significantly from the TAU group on brown's belief assessment scale, Difficulty engaging in Goal-directed behavior, Impulse control difficulties, Lack of emotional clarity, suggesting loosening of conviction on delusional belief and improvement in some dimension of emotion regulation in CBTp+TAU group as compared to TAU group post intervention.

Table No. 6, showing comparison on variable like belief and emotion regulation post assessment between the two group

Variables	Group	N	Mean Rank	U	Z
BABS	CBTp+TAU	20	15.93	108.500	2.544*
	TAU	20	25.08		
NONACCEPT	CBTp+TAU	20	17.93	148.500	1.416^{NS}
	TAU	20	23.08		
GOALS	CBTp+TAU	20	14.13	72.500	3.505***
	TAU	20	26.88		
IMPULSE	CBTp+TAU	20	15.45	99.000	2.756**
	TAU	20	25.55		
AWARENESS	CBTp+TAU	20	17.55	141.000	1.605^{NS}
	TAU	20	23.45		
STRATEGIES	CBTp+TAU	20	19.55	181.000	.519^{NS}
	TAU	20	21.45		
CLARITY	CBTp+TAU	20	13.65	63.000	3.726***
	TAU	20	27.35		

BABS:Brown Assessment of Beliefs Scale; NONACCEPT:Nonacceptance of emotional responses; GOALS: Difficulty engaging in Goal-directed behavior (GOALS);IMPULSE: Impulse control difficulties; AWARENESS: Lack of emotional awareness; STRATEGIES: Limited access to emotion regulation strategies; CLARITY: Lack of emotional clarity,* significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No.7 showing post intervention comparison on variable like aggression, perceived stress and self-esteem between the two groups. The result showed that CBTp+TAU differed significantly from the TAU group on verbal aggression , Anger , Hostility, perceived stress, self-esteem, suggesting reduction in aggression and perceived stress, and improvement in self-esteem in CBTp+TAU as compared to TAU group.

Table No. 7, showing comparison on variable like aggression, perceived stress, self-esteem and social provision post assessment between the two group

Variables	Groups	N	Mean Rank	U	Z
Physical Aggression	CBTp+TAU	20	17.75	145.000	1.499^{NS}
	TAU	20	23.25		
Verbal Aggression	CBTp+TAU	20	15.43	98.500	2.791**
	TAU	20	25.58		
Anger	CBTp+TAU	20	15.45	99.000	2.783**
	TAU	20	25.55		
Hostility	CBTp+TAU	20	16.15	113.000	2.367*
	TAU	20	24.85		
Perceived stress	CBTp+TAU	20	17.25	135.000	1.780^{NS}
	TAU	20	23.75		
Self esteem	CBTp+TAU	20	29.20	26.000	4.750***
	TAU	20	11.80		

Aggression scale dimensions: Physical Aggression, Verbal Aggression, Anger and Hostility; perceived stress and self-esteem; CBT+TAU; * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

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Table No.8 showing post intervention comparison on variable of social provision post assessment between the two groups. The result showed that CBTp+TAU differed significantly from the TAU group on Guidance ,Reassurance of worth, Social integration, Nurturance and Reliable alliance suggesting improvement in social provision in CBTp+TAU as compared to TAU group.

Table No. 8, showing comparison on variable like social provision post assessment between the two group

Variables	Groups	N	Mean Rank	U	Z
GUIDANCE	CBTp+TAU	20	26.63	77.500	3.370**
	TAU	20	14.38		
REASSURANCE OF WORTH	CBTp+TAU	20	26.83	73.500	3.497***
	TAU	20	14.18		
SOCIAL INTEGRATION	CBTp+TAU	20	24.80	114.000	2.396*
	TAU	20	16.20		
ATTACHMENT	CBTp+TAU	20	20.83	193.500	.182^{NS}
	TAU	20	20.18		
NURTURANCE	CBTp+TAU	20	27.70	56.000	3.962***
	TAU	20	13.30		
RELIABLE-ALLIANCE	CBTp+TAU	20	25.88	92.500	2.949**
	TAU	20	15.13		

Social provision scale dimensions: Guidance, Reassurance of worth, Social integration, Attachment, Nurturance and Reliable alliance; * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp for psychosis +TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No.9 showing post intervention comparison on different dimensions of delusion and anxiety between the two groups. The result showed that CBTp+TAU differed significantly from the TAU group on dimension like Amount of preoccupation, conviction, amount of distress, Intensity of distress, Disruption, and Anxiety, suggesting reduction in the amount of preoccupation with delusion, conviction, reduction in amount and intensity of distress, reduction in the disruption caused by delusional experience and anxiety in the CBTp+TAU group as compared to TAU group.

Table No. 9, showing comparison on various dimension of delusion and anxiety post assessment between the two group

Variables	GROUP	N	Mean Rank	U	Z
Amount of preoccupation	CBTp+TAU	20	16.25	115.000	2.478*
	TAU	20	24.75		
Duration of preoccupation	CBTp+TAU	20	18.30	156.000	1.249^{NS}
	TAU	20	22.70		
Conviction	CBTp+TAU	20	16.75	125.000	2.440*
	TAU	20	24.25		
Amount of distress	CBTp+TAU	20	16.18	113.500	2.485*
	TAU	20	24.83		
Intensity of distress	CBTp+TAU	20	13.70	64.000	3.938***
	TAU	20	27.30		
Disruption	CBTp+TAU	20	16.50	120.000	2.338*
	TAU	20	24.50		
Anxiety	CBTp+TAU	20	11.45	19.000	4.921***
	TAU	20	29.55		

Dimension of delusions: amount of preoccupation, duration of preoccupation, conviction, amount of distress, intensity of distress, disruption, anxiety assessed by Hamilton anxiety scale, * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual. Self-esteem scale;

Table No. 10 is indicting that follow up assessment held at 6 months, showed significant difference between the two group on variable like dimension of Difficulty in emotion regulation scale (DERS), IMPULSE: Impulse control difficulties, STRATEGIES: Limited access to emotion regulation strategies and CLARITY: Lack of emotional clarity suggesting that CBTp+TAU continued to improve on various parameters as compared to TAU. These findings also suggested a maintenance of gain through intervention and even a continuous growth in the emotion regulation.

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Table No. 10, showing comparison on variable like belief and emotion regulation at follow up between the two group					
Variables	**Group**	**N**	**Mean Rank**	**U**	**Z**
BABS	**CBTp+TAU**	**20**	**17.63**	**142.500**	**1.605^{NS}**
	TAU	**20**	**23.38**		
NONACCEPT	**CBTp+TAU**	**20**	**18.15**	**153.000**	**1.288^{NS}**
	TAU	**20**	**22.85**		
GOALS	**CBTp+TAU**	**20**	**18.52**	**160.500**	**1.087^{NS}**
	TAU	**20**	**22.48**		
IMPULSE	**CBTp+TAU**	**20**	**16.50**	**120.000**	**2.178***
	TAU	**20**	**24.50**		
AWARENESS	**CBTp+TAU**	**20**	**20.80**	**194.000**	**.163^{NS}**
	TAU	**20**	**20.20**		
STRATEGIES	**CBTp+TAU**	**20**	**16.68**	**123.500**	**2.080***
	TAU	**20**	**24.33**		
CLARITY	**CBTp+TAU**	**20**	**13.10**	**52.000**	**4.033*****
	TAU	**20**	**27.90**		

BABS:Brown Assessment of Beliefs Scale; NONACCEPT:Nonacceptance of emotional responses; GOALS: Difficulty engaging in Goal-directed behavior (GOALS);IMPULSE: Impulse control difficulties; AWARENESS: Lack of emotional awareness; STRATEGIES: Limited access to emotion regulation strategies; CLARITY: Lack of emotional clarity; * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No. 11 shows significant difference between the two groups on variable like dimension of aggression i.e., verbal aggression and anger. These findings suggested that CBTp+TAU continued to improve on various parameters as compared to TAU.

Table No. 11, showing comparison on variable of aggression at follow up between the two group					
Variables	**Groups**	**N**	**Mean Rank**	**U**	**Z**
	CBTp+TAU	**20**	**18.33**	**156.500**	**1.184^{NS}**
Physical Aggression	**TAU**	**20**	**22.68**		
Verbal Aggression	**CBTp+TAU**	**20**	**16.18**	**113.500**	**2.367***
	TAU	**20**	**24.83**		
Anger	**CBTp+TAU**	**20**	**14.48**	**79.500**	**3.303****
	TAU	**20**	**26.53**		
Hostility	**CBTp+TAU**	**20**	**18.15**	**153.000**	**1.284^{NS}**
	TAU	**20**	**22.85**		

Aggression scale dimensions: Physical Aggression, Verbal Aggression, Anger and Hostility; CBT+TAU; * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTP+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No.12 showed significant difference between the two groups on variable like Guidance, Reassurance of worth, social integration, attachment, nurturance, reliable alliance, anxiety and self-esteem at follow up. These findings suggested that CBTp+TAU continued to improve on various parameters of social provision, anxiety and self-esteem as compared to TAU.

Table No. 12, showing comparison on variable like social provision, anxiety and self-esteem, at follow up between the two group					
Variables	**Group**	**N**	**Mean Rank**	**U**	**Z**
Guidance	**CBTp+TAU**	**20**	**29.03**	**29.500**	**4.657*****
	TAU	**20**	**11.98**		
Reassurance of worth	**CBTp+TAU**	**20**	**30.10**	**8.000**	**5.240*****
	TAU	**20**	**10.90**		
Social integration	**CBTp+TAU**	**20**	**29.80**	**14.000**	**5.070*****
	TAU	**20**	**11.20**		
Attachment	**CBTp+TAU**	**20**	**28.35**	**43.000**	**4.286*****
	TAU	**20**	**12.65**		
Nurturance	**CBTp+TAU**	**20**	**30.50**	**.000**	**5.460*****
	TAU	**20**	**10.50**		
Reliable alliance	**CBTp+TAU**	**20**	**29.30**	**24.000**	**4.834*****
	TAU	**20**	**11.70**		

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Anxiety	**CBTp+TAU**	**20**	**11.55**	**21.000**	**4.878*** **
	TAU	**20**	**29.45**		
Self esteem	**CBTp+TAU**	**20**	**29.25**	**25.000**	**4.786*** **
	TAU	**20**	**11.75**		

Social provision scale dimensions: Guidance, Reassurance of worth, Social integration, Attachment, Nurturance and Reliable alliance; Anxiety and self-esteem; * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp for psychosis +TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

Table No. 13 shows significant difference between the two group on various dimension of delusional belief i.e., Amount of preoccupation, duration of preoccupation, intensity of distress, disruption and perceived stress at follow up. These findings suggested that CBTp+TAU continued to improve on these parameters as compared to TAU.

Table No. 13, showing comparison on variable like dimensions of delusion and perceived stress at follow up between the two group

Variables	Group	N	Mean Rank	U	Z
Amount of preoccupation	**CBTp+TAU**	**20**	**16.95**	**129.000**	**2.031***
	TAU	**20**	**24.05**		
Duration of preoccupation	**CBTp+TAU**	**20**	**16.75**	**125.000**	**2.132***
	TAU	**20**	**24.25**		
Conviction	**CBTp+TAU**	**20**	**17.80**	**146.000**	**1.579^{NS}**
	TAU	**20**	**23.20**		
Amount of distress	**CBTp+TAU**	**20**	**17.88**	**147.500**	**1.583^{NS}**
	TAU	**20**	**23.13**		
Intensity of distress	**CBTp+TAU**	**20**	**15.20**	**94.000**	**3.012****
	TAU	**20**	**25.80**		
Disruption	**CBTp+TAU**	**20**	**14.63**	**82.500**	**3.322****
	TAU	**20**	**26.38**		
Perceived stress	**CBpT+TAU**	**20**	**14.03**	**70.500**	**3.522*** **
	TAU	**20**	**26.98**		

Dimension of delusions: amount of preoccupation, duration of preoccupation, conviction, amount of distress, intensity of distress, disruption, perceived stress assessed by perceived stress scale; * significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level; NS: Non Significant, CBTp+TAU: Cognitive Behaviour Theray for psychosis combined with Treatment as usual; TAU: treatment as usual.

4. Discussion

The success rate of CBT in depression and anxiety disorder led researchers to examine its efficacy in psychosis. Interpersonal stressors, premorbid life events and traumas have been found to be crucial in the origin and maintenance of positive psychotic symptoms as hallucination and delusions (Morrison, 2001) and hence provided a clue for CBT's possibility in the management of psychotic symptoms. Negative schemas impacts every aspect of the human psyche and cannot be treated singularly. The same negative schema can manifest in one person as anxiety disorder and in other as psychosis. The factors that finally lead to certain kind of expression of these schemas is still a matter of scientific exploration. But it can be generalized that working on these negative schemas can positively change its psychopathological manifestations. Keeping in this view, the present study hypothesized that CBTp would help improving other psychological variables also through generalization. The present study found a significant reduction in different dimension of delusional belief i.e., preoccupation, conviction; amount of distress, intensity of distress, disruption and anxiety in CBT+TAU group as compared to TAU group post intervention. Besides, the CBT+TAU group showed significant improvement in difficulty engaging in goal-directed behaviour, impulse control difficulties, lack of emotional clarity, verbal aggression; anger, hostility, self-esteem, guidance, reassurance of worth, social integration, reliable alliance, suggesting improvement in emotion regulation, reduction in aggression and improvement in social provision in CBT+TAU as compared to TAU group post intervention. A follow up study was carried out with a gap of 6 months and findings suggested significant difference in amount of preoccupation, duration of preoccupation, intensity of distress, disruption, and perceived stress at follow up assessment. These findings suggested that CBT+TAU kept improving on various parameters as compared to

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TAU. It was also found out that the CBT+TAU group improved significantly on amount of preoccupation with delusion which was insignificant at post assessment which indicates that both group had similar level of preoccupation with delusion at post assessment but CBTp helped CBT+TAU group to work on it internally which showed outwardly also in the longer course of time. Significant difference between the two group in impulse control difficulties, limited access to emotion regulation strategies, lack of emotional clarity, verbal aggression, anger , guidance, reassurance of worth, social integration, attachment, nurturance, reliable alliance; anxiety, self-esteem were found at follow up which further suggested the generalizability of CBTp on other psychological dimensions also. The result showed that the CBT+TAU not only could maintain the gain from the intervention it showed a continuous course of improvement on various dimension studied in the present study as compared to the control group.

As of current scenario, CBTp status is debatable in terms of its effectiveness in psychosis as a number of meta-analysis study suggests a modest benefit from CBTp (Wykes et al., 2008; McGlanaghy et al., 2021; Shukla et al., 2022) but on the other hand there are studies which has found no significant improvement through CBT in psychosis (Jauhar et al., 2019).

5. Conclusion

The present study is an effort in the same direction as discussed above which was carried out with an aim to examine efficacy of cognitive behaviour therapy in patient with paranoid schizophrenia. It was not a randomized controlled research study which is one of its limitation. A randomized control design could have provided a better insight into the efficacy of CBTp. Besides, sample size was small and hence limits the possibility of generalization of the findings of the study. The application of CBTp across culture and its promising results has won it a status of a first line of treatment in New Zealand, Canada, Australia and United Kingdom (Norman et al., 2017; Galletly et al., 2016; NICE, 2014) and the findings of the present study is in the line of those study which has evidenced CBTp to be a successful treatment for psychosis. Besides, present study found CBTp to be efficacious on other psychosocial parameter as well which a promising finding in context of CBTp.

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References

1. Buss, A. H. & Perry, M. P. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology, 63*, 452-459.
2. Christodoulides, T., Dudley, R., Brown, S., Turkington, D., & Beck, A. T. (2008). Cognitive behaviour therapy in patients with schizophrenia who are not prescribed antipsychotic medication: a case series. *Psychology and Psychotherapy, 81*(Pt 2), 199–207.
3. Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 386-396.
4. Conley, R. R., & Buchanan, R. W. (1997). Evaluation of treatment-resistant schizophrenia. *Schizophrenia Bulletin, 23*(4), 663–674. https://doi.org/10.1093/schbul/23.4.663
5. Cutrona, C. E., & Russell, D. W. (1987). Social Provisions Scale [Database record]. APA PsycTests.
6. Eisen, J. L., Phillips, K. A., Baer, L., Beer, D. A., Atala, K. D., & Rasmussen, S. A. (1998). The Brown Assessment of Beliefs Scale: reliability and validity. The *American Journal of Psychiatry, 155*(1), 102–108. https://doi.org/10.1176/ajp.155.1.102
7. Galletly, C., Castle, D., Dark, F., Humberstone, V., Jablensky, A., Killackey, E., Kulkarni, J., McGorry, P., Nielssen, O., & Tran, N. (2016). Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the management of schizophrenia and related disorders. *Australian and New Zealand Journal of Psychiatry, 50*, 410–472.
8. Gould, R. A., Mueser, K. T., Bolton, E., Mays, V., & Goff, D. (2001). Cognitive therapy for psychosis in schizophrenia: an effect size analysis. *Schizophrenia Research, 48*(2-3), 335–342.
9. Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of*

Journal of Chemical Health Risks

www.jchr.org

JCHR (2025) 15(4), 1015-1026 | ISSN:2251-6727

Psychopathology and Behavioral Assessment, 26(1), 41–54.

10. Haddock, G., McCarron, j., Tarrier, N. & Faragher, E.B. (1999). Scales to measure dimensions of hallucinations and delusions: The psychotic symptoms rating scales (PSYRATS). *Psychological Medicine, 29*, 879-88.
11. Hamilton, M. (1969). Diagnosis and rating of anxiety. *British Journal of Psychiatry, Special Publication(3),* 76–79.
12. Jauhar, S., Laws, K. R., & McKenna, P. J. (2019). CBT for schizophrenia: A critical viewpoint. *Psychological Medicine, 49*(8), 1233–1236.
13. Lieberman, J. A., Stroup, T. S., McEvoy, J. P., Swartz, M. S., Rosenheck, R. A., Perkins, D. O., Keefe, R. S., Davis, S. M., Davis, C. E., Lebowitz, B. D., Severe, J., Hsiao, J. K., & Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Investigators (2005). Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *The New England Journal of Medicine, 353*(12), 1209–1223. https://doi.org/10.1056/NEJMoa051688
14. Malik, N., Kingdon, D., Pelton, J., Mehta, R., & Turkington, D. (2009). Effectiveness of brief cognitive-behavioral therapy for schizophrenia delivered by mental health nurses: relapse and recovery at 24 months. *The Journal of Clinical Psychiatry, 70*(2), 201–207. https://doi.org/10.4088/jcp.07m03990
15. McGlanaghy, E., Turner, D., Davis, G. A., Sharpe, H., Dougall, N., Morris, P., Prentice, W., & Hutton, P. (2021). A network meta-analysis of psychological interventions for schizophrenia and psychosis: Impact on symptoms. *Schizophrenia Research, 228*, 447–459.
16. Morrison, A. P. (2001). The interpretation of intrusions in psychosis: An integrative cognitive approach to hallucinations and delusions. *Behavioural and Cognitive Psychotherapy, 29*(3), 257–276.
17. National Institute for Health and Care Excellence. (2009). Core interventions in the treatment and management of schizophrenia in adults in primary and secondary care (Clinical Guideline CG82). Leicester: British Psychological Society.
18. National Institute for Health and Care Excellence. (2014). Psychosis and schizophrenia: Treatment and Management. (Clinical guideline 178).
19. Norman, R., Lecomte, T., Addington, D., & Anderson, E. (2017). Canadian treatment guidelines on psychosocial treatment of schizophrenia in adults. *The Canadian Journal of Psychiatry, 62*(9), 617–623.
20. Rosenberg M. (1965). Society and the Adolescent Self-Image. Princeton, NJ: Princeton University Press.
21. Shukla, P., Padhi, D., Sengar, K.S., & Singh, S. K. (2022). Efficacy of Cognitive Behavior Therapy in Managing Delusion in Patients with Schizophrenia. *Journal of Coastal Life Medicine, 10*, 546–554
22. Tandon, R., Gaebel, W., Barch, D. M., Bustillo, J., Gur, R. E., Heckers, S., ... & Carpenter, W. (2020). Definition and description of schizophrenia in the DSM-5. *Schizophrenia Research, 210*, 1-10.
23. Turkington, D., Kingdon, D., Rathod, S., Hammond, K., Pelton, J., & Mehta, R. (2006). Outcomes of an effectiveness trial of cognitive-behavioural intervention by mental health nurses in schizophrenia. *The British Journal of Psychiatry : the Journal of Mental Science, 189,* 36–40.
24. Wykes, T., Steel, C., Everitt, B., & Tarrier, N. (2008). Cognitive behavior therapy for schizophrenia: effect sizes, clinical models, and methodological rigor. *Schizophrenia Bulletin, 34*(3), 523–537. https://doi.org/10.1093/schbul/sbm114