Cognitive Behavior Therapy As Effective Treatment Of Major Depressive Disorder With Anxious Distress And Atypical Features: A Case Report

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ABSTRACT

This case study is designed to find out effectiveness of Cognitive Behavior Therapy in treating depression. Treatment of a 25 years old male client is described who suffered from Atypical Major Depressive Disorder with symptoms of anxious distress. The baseline assessment measures included Depression Anxiety Stress Scale and Schema Inventory which indicated severe depression, moderate level of anxiety, and extremely severe stress whereas a higher percentage of dysfunctional schemas and lower occurrence of healthy schemas indicated a dire need of cognitive therapy. Treatment was carried over 3 months comprising of 15 therapeutic sessions of cognitive behavioral therapy including the techniques of psycho-education, cognitive restructuring, problem solving, assertive training, and relaxation exercise. The post-test assessments showed a significant reduction in depression, anxiety, and stress level, reduction in maladaptive schemas, and increase in healthy schemas. Further, the symptom free state was maintained at 1-month follow-up showing normal levels of depression, anxiety and stress along with a further decrease in unhealthy schemas while inducing a progressive positive change in client which indicated that cognitive behavior therapy was found to be an effective

treatment for major depressive disorder with anxious distress.

KEYWORDS: Case report, cognitive behavior therapy, depression, Pakistan.

INTRODUCTION

Depressive disorder is characterized by a set of symptoms including lack of interest in pleasurable activities or sad mood almost every time within a day for at least 2 weeks. Other symptoms include disturbance in sleep and appetite, fatigue or loss of energy, difficulty in concentration, guilt feelings, suicidal ideation or attempt etc (American Psychiatric Association, 2013). Cognitive models of depression have been devised illustrating that depression can be related with faulty thought patterns or misinterpretations of past personal experiences. Another model relates depression with hopelessness and helplessness theory (Lata, 2000). Beck (1979) developed cognitive behavior therapy (CBT) for treating depression. In this treatment, the depressed mood is alleviated by working on three domains which include cognitive (to restructure the distorted/negative thoughts into more logical thoughts), behavior (to accelerate behaviors such as activity planning, assertive communication etc.), and physiology (calming down body through relaxation, imagery and meditation exercises to reduce agitation or anxiety). Studies show efficacy of CBT treatment for depression. For example, a review of meta-analysis by Butler and colleagues (2006) considered treatment outcome for CBT with wide range of psychiatric disorders and found large effect size for CBT with depression. Moreover, in treating adult depression, CBT was somewhat superior to antidepressants. Lata (2000) provided a review of studies showing efficacy of CBT for depression compared with drug treatment and placebo in controlled research settings. Weersing and colleagues (2006) showed effectiveness of CBT for adolescent depression. Studies have been conducted on several cultures e.g. Giosan, Muresan and Moldovan (2014) conducted case studies on clients from different cultures. Their results showed that standard and evolutionary-driven CBT techniques such as behavioral activation, challenging dysfunctional thoughts and fitness enhancing

practices increased client's compliance, perceived fitness, and positive expectations from the treatment. The positive clinical outcomes were found regardless of client's religious/cultural beliefs. Bennett (2009) adapted CBT program culturally and a group analysis showed significant pre- and post-differences in reducing negative cognitions related to depression and increasing general wellbeing of Maori clients in New Zealand. A large body of research have been found to show effectiveness of CBT for depression but very few studies are conducted in Pakistan, this case study is a step ahead to check out treatment outcomes of CBT for Pakistani culture.

METHODOLOGY

Research Design: Case study design or ABAB method was utilized in this research with multiple baselines across behaviours.

Participant: A single-subject case study method (n=1).

Case Details: Mr. B, a 25 years old single male had done B.E and worked as a plant engineer. He lived in Karachi, Pakistan and approached institute of clinical psychology for his presenting complaints of low mood, lack of interest, low energy level, easily getting tired of work, inability to concentrate in diploma class, increased appetite, weight gain, sleep disturbance, hopelessness and extreme sensitivity towards rejection.

Few months back he availed short-term counselling but his problems weren't resolved therefore, he was referred for psychological assessment and psychotherapy.

His symptoms intensified during past year which were precipitated after some negative experiences such as: break-up from his girl-friend, rejection of proposal which he sent for his cousin by his uncle to whom he was most attached with, failure in a subject of diploma course, death of his mother 10 years back, and past homosexual experiences at his early adulthood.

Cognitive Conceptualization of the Case:

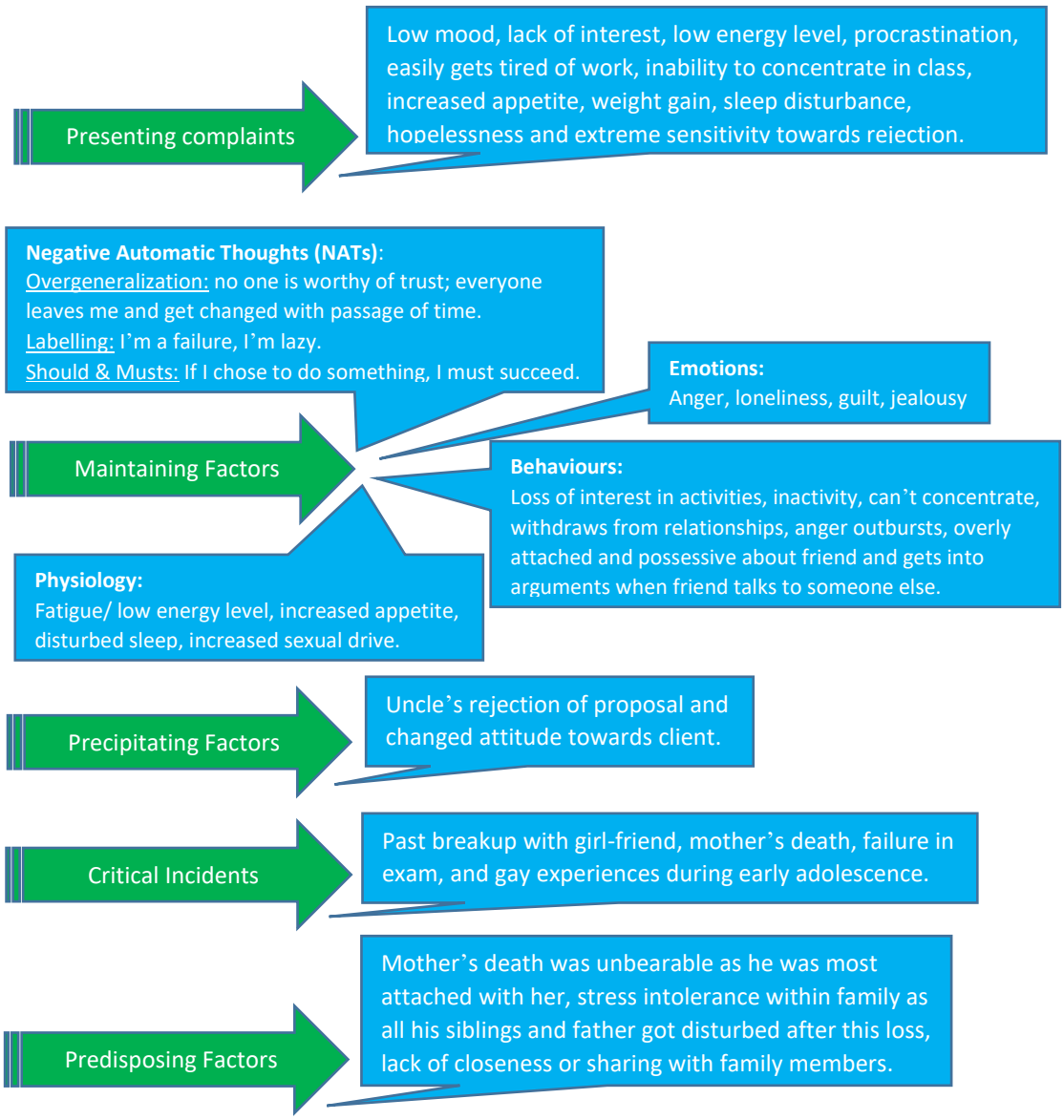


Figure 1: Cognitive Conceptualization of the Case

Measures:

Diagnostic Assessment:

For client's diagnostic assessment, following tools were administered:

- Intake Card and Case History Sheet of Institute of Clinical Psychology, University of Karachi.
- Bender Gestalt Test (BG-II; Raynolds, 2007), Standard Progressive Matrices (SPM; Raven, 2004), Human Figure Drawing Test (HFD; Machover, 1949), Thematic

Apperception Test (TAT; Murray, 1943), and Rorschach Inkblot Test (ROR; Exner, 2002)

Client's assessment findings revealed extreme feelings of guilt and worthlessness due to his past experiences. He felt lonely, became very possessive towards his friends, and felt sensitive towards their comments. He felt burdened with interpersonal demands and his inability to meet his expectations resulted in negative self-image. His constriction of emotions led to internal discomfort. Consequently, he couldn't maintain focus on his studies and work despite having average level of intelligence. His academic, psycho-social, and interpersonal functioning was poorly affected due to negative thoughts related to past failures. All this resulted in depressive symptoms, future apprehensions, and dysfunctional behaviors.

Client was diagnosed with "Major Depressive Disorder, Single episode, Moderate, with Anxious Distress and Atypical Features" according to DSM-5 criteria (American Psychiatric Association, 2013).

Therapeutic Assessment:

The pre-test, post-test and follow-up therapeutic assessments included:

Depression, Anxiety, Stress Scale (DASS; Lovibond and Lovibond, 1995):

It is a self-report measure to evaluate the severity of symptoms related to depression, anxiety, and stress. The three subscales contain 7-14 items and respondents rate on items on a 4-point rating scale ranging from 0 (didn't apply to me at all), 1 (apply to me some of the time), 2 (apply to me a good part of the time), and 3 (apply to me most of the time). A total score is obtained by adding all individual items on three subscales. The higher score indicates higher level of depression, anxiety, or stress. Further, cut-off scores are provided to categorize different severity levels including normal, mild, moderate, and severe. The DASS is a reliable and valid instrument which is widely used in clinical research to measure treatment outcomes and track changes in symptoms over time to evaluate the effectiveness of specific interventions (Lovibond and Lovibond, 1995).

Schema Inventory (Wright, Wright, & Beck, 2004):

The Schema Inventory is a psychological assessment tool used to measure cognitive schemas, which are enduring patterns of thought and belief that influence an individual's perception and interpretation of experiences. Schema Inventory is based on 20 items indicating healthy schemas and 20 items indicating dysfunctional schemas and the client is asked to search and check on each schema or underlying rules of thinking which they think they have. The inventory assesses various schema domains, such as Abandonment, Defectiveness/Shame, and Vulnerability to Harm or Illness etc. It is a reliable and valid tool which is used in clinical settings to identify maladaptive schemas and guide cognitive behavioural / schema-focused therapeutic interventions aimed at changing negative core beliefs (Wright, Wright, & Beck, 2004). In this research, the percentages of schemas were used to compare the presence/absence or changes in different schemas at pre-test, post-test and follow-up stages of cognitive behavioral therapy.

Procedure:

Throughout the conduction of case study, standard ethical guidelines of APA were followed such as the client provided written consent to participate in research and a written consent was permitted by the head of institute to publish this case study.

First of all, the intake / history and diagnostic assessment of client was completed which indicated the need of therapy. Cognitive conceptualization was demonstrated by therapist according to Beck's CBT model of depression (Beck, 1967). Pre-test evaluations included multiple baselines across behaviors, administered before 1 month of starting psychotherapy to checkout client's level of depression, anxiety, stress, and schemas. Depression Anxiety Stress Scale (DASS) and Schema Inventory (SI) were used respectively for baseline assessments.

Fifteen CBT sessions of 50 to 60 minutes each were provided over 3 months' period. Therapist utilized standard CBT techniques for Depression (Beck, Rush, Shaw, & Emery, 1979; Hollon & Otto, 2007). A few modifications in techniques were tailored by therapist

considering the individual needs of client according to DSM-5 diagnostic specifier of anxious distress (APA, 2013). The evidence-based CBT interventions included Psychoeducation (to make client aware about his symptoms/problems, its causes, and how he can resolve them through CBT techniques), Cognitive Restructuring (to change client's cognitive distortions of "Overgeneralization", "Should & Musts", "Self-blaming", & "Emotional reasoning" into more logical thoughts; and Socratic dialogues to modify client's unhealthy beliefs or schemas in order to adapt more healthy schemas), Behavioral Activation (Encouraged client to involve in joyful activities even when don't feel like it, in order to overcome lethargy/ feeling of hopelessness) and Activity Scheduling (to structure daily routines/ activities in order to gain a sense of purposefulness and fulfilment), Self-Monitoring (to track thoughts, emotions, and behaviors in order to identify triggers of depression), Relaxation Exercises (deep breathing and progressive muscle relaxation to decrease bodily tension, anxiety, agitation and aggression), Problem Solving (to deal with stress, reduce feeling of helplessness and develop skills of addressing real-life matters which lead to depression), Assertive Communication Skills (to improve his interpersonal relationships), and Homework Assignments (to use CBT techniques in real life situations outside therapeutic sessions and utilize CBT worksheets like Thought Record or Activity Schedules). After 15 CBT sessions, the post-test assessments were administered which indicated completion of therapy and hence the client was trained in CBT technique of Relapse Prevention (to develop skills of recognizing and managing primary signs of recurring depression with the help of 1-month Setbacks Form in which client identified possible unhelpful responses and modified them into the helpful ones). One-month follow-up indicated stable therapeutic outcomes and hence therapy was bilaterally terminated with the consent of therapist and client.

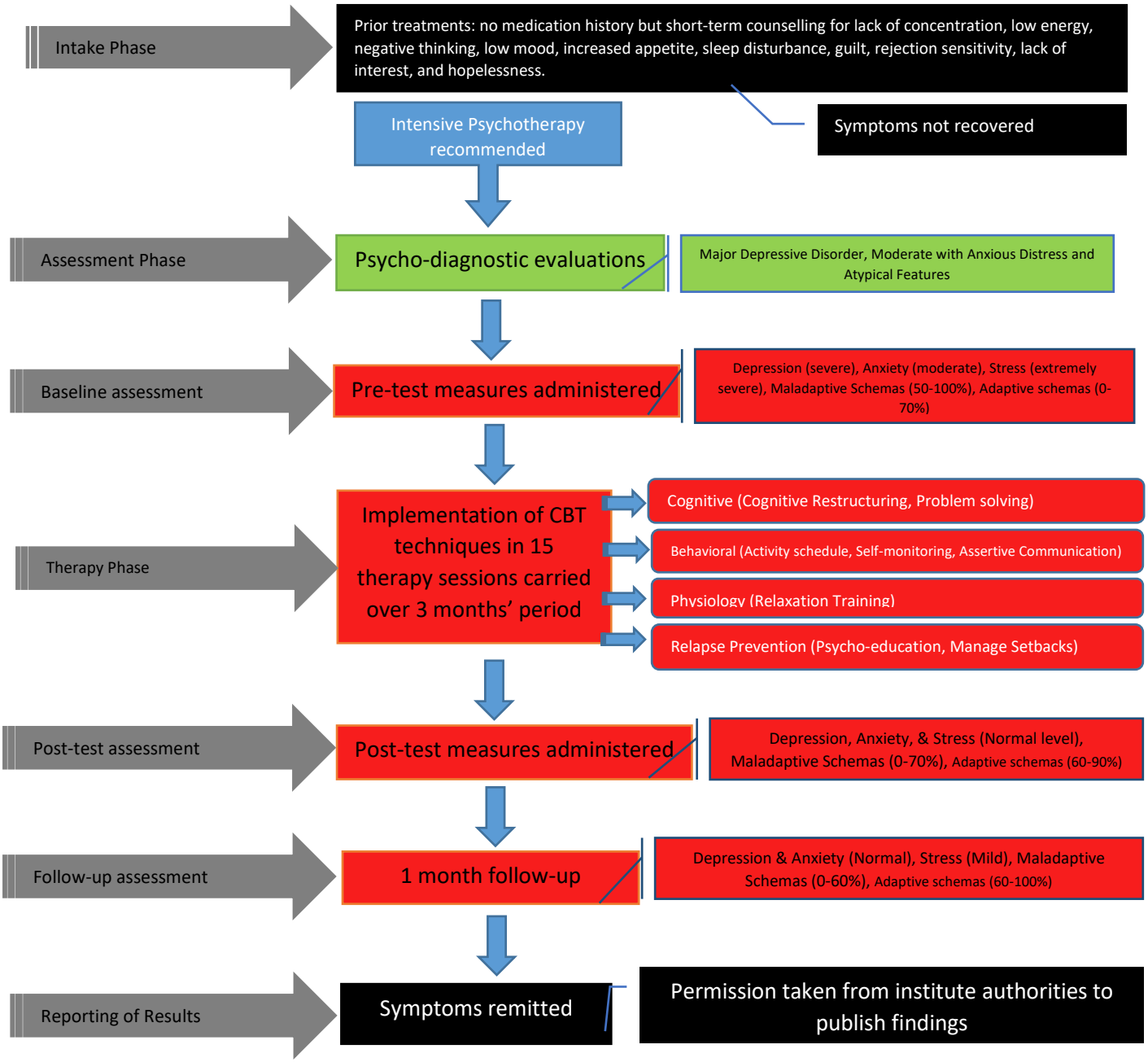


Figure 2: Timeline of Procedure followed in case study.

RESULTS

Table1: showing scores of DASS at different treatment levels

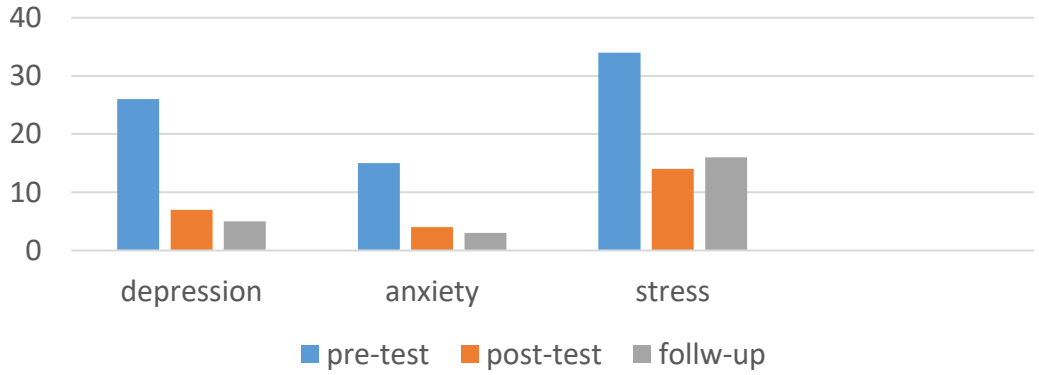
Sub-scale	Pre-test score	Post-test score	Pre-Post Difference	RCI	CSC	Follow-up score
Depression	26 (Severe)	7 (normal)	-19	-5.35	-42.8	5 (normal)
Anxiety	15 (Moderate)	4 (normal)	-11	-4.4	-22.0	3 (normal)

Stress	34 (extremely severe)	14 (normal)	-20	-3.04	-27.36	16 (mild)

DASS= Depression Anxiety Stress Scale

Graph 1:

Graph showing levels of depression, anxiety and stress at different treatment levels.



Analysis of results was based on the measurement of clinically significant change in pre and post assessment measures using the method of Jacobson-Truax (Jacobson, Roberts, Berns, & McGlinchey, 1999). In this method a Reliable Change Index—RCI is calculated through subtraction of post assessment score from the pre assessment score and then division with Standard Error of measurement. Hence, the RCI represents a statistically significant change (Jacobson & Truax, 1991). In next step, Clinically Significant Change—CSC is calculated through [CSC=(M1+M2)/2]. In this formula m1 represents the post-test average score of controlled group or healthy sample while m2 represents the average score of disturbed clients. Hence, CSC shows the size of change which is statistically meaningful as well as clinically significant. By using the above two values it can be determined if the client has demonstrated a significant change. For this purpose, first the pre and post difference of score on particular measure is divided by RCI and if the obtained quotient is equivalent to or larger than the CSC, it is interpreted that the client has demonstrated a significant change (Mursaleen, 2023). For client's DASS score, clinically significant change was calculated on all three subscales. As indicated in Result Table-1, the difference in client's pre-post score on depression is -19, which is much greater than the CSC of -42.8. On anxiety

subscale, the difference is -11, which is also larger than the CSC of -22.0. Further, on stress subscale, the difference is -20, which is greater than the CSC of -27.36 as well. Hence on all three subscales, the pre-post change is larger than the value of CSC, which indicates that the reduction in client's depression, anxiety, and stress score is both statistically significant and clinically substantial (Refer to Table-1 and Graph-1).

Table 2: showing changes in percentage of significant schemas at pre, post and follow-up stages.

Schema	Pre-test	Post-test	Follow-up
Dysfunctional Schemas			
If I choose to do something, I must succeed.	90%	50%	60%
If I make one mistake, I'll lose everything.	100%	50%	0%
I'll never be comfortable around others.	90%	70%	30%
I can never finish anything.	100%	60%	30%
No matter what I do, I won't succeed.	50%	0%	0%
The world is too frightening for me.	50%	50%	0%
Others can't be trusted.	60%	30%	0%
I'm unattractive.	60%	0%	0%
Never show your emotions.	50%	30%	0%
I'm lazy.	100%	50%	60%
If people really knew me, they wouldn't like me.	100%	60%	50%
Healthy Schemas			
The tougher the problem, the tougher I become	0%	80%	80%
I can learn from my mistakes and be a better person.	0%	90%	70%
I'm a good spouse/parent/child/friend/lover.	0%	60%	100%
I'm a solid person.	0%	50%	60%
They can knock me down, but they can't knock me out.	0%	80%	100%
I'm friendly.	70%	100%	100%
I can handle stress.	0%	70%	80%
Everything will work out all right.	60%	90%	100%

Table-2 clearly showed decreased percentage of dysfunctional schemas through pre-test to post-test and 1-month follow-up such as schemas of unrelenting standards (If I choose to do something, I must succeed), failure (If I make one mistake, I'll lose everything),

insufficient self-control (I'll never be comfortable around others), incompetence (I can never finish anything), insufficient self-discipline (I'm lazy), defectiveness/shame (If people really knew me, they wouldn't like me; No matter what I do, I won't succeed; I'm unattractive), Vulnerability to Harm or Illness (The world is too frightening for me), Mistrust/Abuse (Others can't be trusted), Unlovability (I'm unattractive), and Emotional Inhibition (Never show your emotions) were progressively weakened in strength. Whereas, the percentage of healthy/adaptive schemas was boosted from pre-test to post-test and follow-up stages. He started believing in personal capabilities which enhanced his cognitive state such as Resilience (The tougher the problem, the tougher I become; They can knock me down, but they can't knock me out), Growth Mindset (I can learn from my mistakes and be a better person), Positive Self-Image (I'm a good spouse/parent/child/friend/lover), Self-Esteem (I'm a solid person), Social Confidence (I'm friendly), and Stress Coping (I can handle stress).

DISCUSSION

The results obtained through clinical assessment tools showed that client's depression, anxiety, and stress level was significantly reduced from severe level to normal level. However, a mild level of stress was found at follow-up [Table-1 & Graph-1] because client had started working full time while undertaking all the household, study and work responsibilities. Shema inventory showed a progressive decrease in percentage of unhealthy schemas such as unrelenting standards, failure, insufficient self-control, incompetence, insufficient self-discipline, defectiveness/shame, Vulnerability to Harm or Illness, Mistrust/Abuse, Unlovability, and Emotional Inhibition. Moreover, a progressive increase in percentage of healthy schemas was evident such as Resilience, Growth Mindset, Positive Self-Image, Self-Esteem, Social Confidence, and Stress Coping [Table-2].

Furthermore, the clinical judgement of therapist and the subjective reporting of client showed that before treatment he had extreme feelings of loss and failure but after treatment, he started thinking that he has stable relationships, had improved focus towards self-grooming, and developed a sense of accomplishment. He was able to

suggest positive thoughts during the times of disturbance. His concentration level was improved up to 80%. Pre-treatment anxiety and nervousness turned up into trouble shooting and problem solving in up to 100% problematic situations. Before treatment he rated his anger level up to 100 % which reduced to 50% and the client stated that his awareness of emotions increased, and he became able to consciously control his anger. Moreover, the verbatim of client showed that he was able to manage his life and stressors without the need for therapy.

The above findings advocate those therapeutic interventions applied on client produced a positive change such as, the Psycho-education regarding client's problems in initial sessions produced insight in client and he appeared open to reveal more sensitive information to therapist and showed increased motivation to solve his problems. Cognitive restructuring helped client to challenge his thoughts and beliefs regarding worthlessness, failures and inability to do well. He identified cognitive distortions of "overgeneralization", "should & musts", and "labeling". With the help of evidence based Socratic questioning, he suggested more realistic and logical thoughts and was able to utilize this logical thinking in his daily life. Through assertive communication techniques he was able to effectively communicate his feelings and thoughts to others. He became aware of his self-sacrificing attitude and learned how to respect his rights and say no where appropriate. After utilizing assertive communication skills, he also developed more healthy thoughts about himself. Through relaxation exercise and positive visualization, he was able to manage his anxiety and make himself calm. He practiced relaxation at his home which helped him to maintain focus on his study material and work-related tasks. He also reported reduced aggression as he learned problem solving skills and practices relaxation to bring his body at calm estate.

The overall outcomes indicated that client's level of depression, anxiety, stress, negative schemas, and faulty perceptions reduced with the application of cognitive behavioural techniques. These findings are in line with previous clinical literature (Ara, 2018; Bennett et al., 2009; Bruijniks et al., 2019; Butler et al., 2006; David et al., 2018; Giosan et al., 2014; Lata, 2000; Van Den

Heuvel et al., 2019; Weersing et al., 2006; Widnall, 2020). Hence, it can be further affirmed that cognitive behavior therapy is an effective therapeutic approach for treating A-typical depression with anxious distress. However, certain limitations of this case study may be considered by future researchers such as single participant design and use of self-report measures. Further, this research can be considered as preliminary evidence from Pakistan to standardize community based manualized treatment of atypical depression with anxious distress.

CONCLUSION

The objective measures and subjective reporting showed that standard CBT techniques such as cognitive restructuring, developing communication skills, problem solving, and relaxation exercise significantly reduced the symptoms of depression, anxiety, and stress. Further, it reduced the negative schemas, and faulty perceptions. Moreover, the outcomes of treatment were stable at 1 month follow-up duration despite increase in daily life stressors. It is strongly recommended that clinicians in Pakistan should consider cognitive behavioral therapy as first line of treatment while treating major depressive disorder with anxious distress and atypical features. Further clinical research should be conducted which shows effectiveness of CBT techniques through more rigorous research designs and utilize larger sample to generalize the findings. In addition, research is encouraged which facilitates standardization of cognitive behavioral treatment in Pakistani.

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