EFFICACY OF COGNITIVE BEHAVIOR THERAPY AND RELAXATION TREATMENT PROCEDURE WITH GENERALIZED ANXIETY DISORDER: A CLINICAL CASE STUDY

Sara Latif and *Hidna Iqbal
Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan

The case study describes in detail the management of Generalized Anxiety Disorder in a young man (22 years) employing Cognitive behavior therapy (CBT) and Relaxation treatment procedure. The clinical treatment was carried out over a period of 4 months constituting 12 sessions of 45 minutes at Center for Clinical Psychology, University of the Punjab, Lahore. The client came with the complaints of constant worry/ apprehensions, difficulty in making decisions, lack of concentration, headaches, muscle tension and difficulty falling asleep Cognitive Behavior Therapy and Relaxation Treatment Procedure will reduce the cognitive symptoms (intensity and duration of constant worry/ apprehensions), the behavioral symptoms (enhancing concentration and decisions making skills) and the physical symptoms (headaches, muscular tension and disturbed sleep patterns) of Generalized Anxiety Disorder. ABA research design was employed. In Phase-A, psychological assessment was done that revealed 300.02 (F41.1) Generalized anxiety disorder and V61.29 (Z62.898) Child affected by parental relationship distress. Mr. X. Case conceptualization was done on CBT model for GAD (Wells, 1990). During the treatment phase (Phase- B), Mr. X was given CBT and RTP. Comparison of pre and post assessment showed marked decrease in the severity and duration of symptoms which reflect that CBT and RTP in combination are an effective mode of treatment for the symptoms of GAD.

Keywords: Generalized Anxiety Disorder, Cognitive Behavior Therapy, Relaxation Treatment Procedure

Feeling uneasiness, worry and nervousness in response to a stressor is adaptive for an individual (Hidalgo & Sheehan, 2012). Nevertheless, if anxiety exacerbates to an extent that it occupies an

***Correspondence concerning this article should be addressed to** Hidna Iqbal, Lecturer, Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan. Email: hidna.ccpsy@pu.edu.pk
Sara Latif , MS Scholar, Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan. Email: imaginative_sara@live.com

individual disproportionate to the amount of stressor, becomes persistent and hampers functioning, then it is classified as an Anxiety disorder (American Psychiatric Association, 2013).

According to DSM-5, Generalized Anxiety Disorder (GAD) is diagnosed when worry/ apprehensions about numerous events become persistent, uncontrollable and is associated with physical symptoms such as restlessness, fatigue, irritability, muscle aches, poor concentration and sleep disturbance. Moreover, such physical symptoms and excessive worry impairs functioning in various domains and causes distress (APA, 2013).

GAD is the most prevalent disorder in United States as its life time prevalence was reported to be 5.1% (Kessler, Keller, & Wittchen, 2001). In Pakistan, the prevalence of Anxiety and Depressive disorders was found to be 34% (Mirza & Jenkins, 2004). Another study was carried out in Karachi, Pakistan that revealed 39.4% women and 23.3% men have high levels of anxiety (Khan et al., 2007). Afzal, Sarfaraz, and Sarda (2014) found that GAD was prevalent among 7% men and 9% women in adolescents and 12% men and 14% women in young adults of Lahore, Pakistan.

The major factors that contribute in the development of GAD were identified as 76% exams, 79% fear of failure, 82% work load, and 64% long study hours (Afzal, Sarfaraz, & Sarda, 2014). Other factors that cause GAD are Genetic factors (Lieb, Isensee, Sydow, Von, & Wittchen, 2000); Cultural factors such as poverty, interpersonal relationship problems (McNally, 1997); Neurobiological factors such as disturbance in functioning of neurotransmitters and fluctuations in normal activity of amygdala (Lieb et al., 2000); Psychological factors including personality traits and childhood traumatic experiences (Brown, 2007).

Prior studies show that the most effective mode of treatment for GAD is Cognitive Behavior Therapy (CBT) (Sofronoff, Attwood, & Hinton, 2005; Covin, Ouimet, Seeds, & Dozois, 2008). Covin, Ouimet, Seeds, and Dozois (2008) carried out a meta-analysis to see the effectiveness of CBT for GAD. They found that CBT had better outcome for young adults in individual treatment. It is a promising focused intervention for the treatment of anxiety disorders. It is reliable, acceptable and feasible intervention that produces significant improvement in psychopathologies like anxiety disorders. The sessions are structured with special focus on the thoughts, feelings and behaviors of an individual (Glasofer, 2015). Likewise, Relaxation Treatment

Procedure (RTP) helps an individual to become aware of the tension in his body, to identify it at early stage, to counteract it and prevent headache, muscle aches and fatigue. It is portable and helps to become relaxed readily and quickly in anxiety provoking situations (Holzman & Turk, 1994).

There is dearth of indigenous literature contrary to West that has ample evidence emphasizing the efficacy of CBT plus RTP in the treatment of GAD (Norton, 2012; Borkovec & Ellen, 1993; Borkovec et al., 1987). However, there is extreme paucity of empirical support for these interventions in Pakistan (Mirza & Jenkin, 2004). Inflation in prevalence rates of anxiety in Pakistan suggest that the need of the hour is to conduct intervention based studies and comparison of interventions to gain more knowledge about its relative and differential effectiveness (Mirza & Jenkin, 2004).

Thus, clinical studies pertaining to the treatment of GAD would be highly beneficial in Pakistani context. Therefore, this outcome study was designed to assess the efficacy of CBT and RTP in the treatment of GAD.

Objective

The objective of the study was to assess the efficacy of CBT and RTP in optimizing treatment outcomes for GAD.

Hypothesis

- Cognitive Behavior Therapy and Relaxation Treatment Procedure will reduce the cognitive symptoms (intensity and duration of constant worry/ apprehensions), the behavioral symptoms (enhancing concentration and decisions making skills) and the physical symptoms (headaches, muscular tension and disturbed sleep patterns) of Generalized Anxiety Disorder.

Method

Research Design

Single case ABA research design was used to assess the efficacy of CBT and RTP in the treatment of Generalized Anxiety Disorder.

Sample

The sample comprised of a single client (N=1) with age of 22 years.

Sample characteristics/ case description. Mr. X. was 22 years old young single man who was a student of BS (IT) and first born among 6 siblings. He came to Center for Clinical Psychology with the presenting complaints of constant worry/ apprehensions, difficulty in making decisions, lack of concentration, headaches, muscular tension and disturbed sleep patterns.

Mr. X. reported that he had seen strained home environment since his childhood. He reported uncongenial relationship between his mother and paternal grandmother. Whenever disputes broke among them, his mother used to get angry, went to her parent's house leaving behind her children. Mr. X. reported being the eldest and most sensitive among the siblings, he instantly gets apprehensive whenever there was a dispute at home. He described himself as a "worry bug" and had been this way as long as he could remember.

In 2009, after doing Matriculation, he moved to Tehsil for further studies. There he got more concerned regarding issues at home. He often found it difficult to control his worry about multiple reasons that includes his studies, grades, losing friends, disputes at home, parent's expectations and lack of attentiveness during lectures. He found his preoccupations overwhelming him and he started staying alone most of the time engrossed in his worrisome thoughts. He had started comparing his home's environment with his friend's and started thinking and analyzing about himself, past events and his future. He reported that in the lectures and exams he found it hard to concentrate and got blank as he encountered great difficulty in controlling these worries. According to him, such worrisome thoughts intrude when he tried to relax, during work, in classes, exams and when out with friends.

Once in his Chemistry lecture, he started feeling uncomfortable and experienced intense pain in stomach. His mind started drifting away, face was blushing, his body got warm and he started shivering and sweating badly. He left the class and started walking in the ground. As per Mr. X., he often used to experience headache and pain in neck muscles due to excessive apprehensions. He felt exhausted all the time with constant muscle tension and body aches. He noticed that he was frequently irritated and often had anger outbursts. His grades gradually

declined and he started bunking his classes and left his prayers. Furthermore Mr. X. also reported disturbed sleep patterns.

Mr. X's family history revealed that his mother was much vulnerable to stress and used to get apprehensive instantly. Personal history depicted that Mr. X had neurotic traits (nail biting) till 12 years of age. He left nail biting when he was in 5th class and his teacher told that biting nails cause intake of germs which affects health. As a child, he reported himself to be sensitive, concerned and caring by nature. As he grew older, he became more responsible because of being the eldest and often gets worried regarding his home environment. His premorbid personality depicted that he was not good at problem solving skills and used to share his problems and stressors with his uncle. He also makes decisions by consulting his significant others. Mr. X educational history showed that he was a bright and hardworking student and his parents had great expectation from him which often make him anxious.

Mental Status Examination (MSE) revealed his appearance being well dressed, combed hairs and fair hygiene. Mr. X maintained appropriate eye contact, movement and expressions were normal and he seemed compliant. He reported that his mood was low and according to therapist his mood seemed euthymic. No obsession, compulsion, delusions, hallucination were reported and no suicidal thoughts were identified. His abstract reasoning, orientation, memory, insight and judgment were intact. However, he got distracted 2-3 times during the interview during which upon enquiry he reported that he had experienced some thoughts related to other issue.

Assessment Measures

Symptom checklist revised (Rahman, Dawood, Jahangir, Mansoor, Rehman, & Ali, 2009). In order to assess the presence of Depression and Anxiety, Symptoms Checklist-R was administered. It consists of 6 subscales. Depression subscale (24 items) and Anxiety subscale (29 items) were administered. The correlations found for Depression scale was 0.73 and for Anxiety scale was 0.47. Each scale record responses on a 4 point scale where o= not at all and 3= most of the time. Mr. X score on both subscales was above cutoff and was 'Significant'.

Table 1
Mean, SD, Cutoff Score and Significance Level of Depression and Anxiety Subscales

Subscales	*M*	*SD*	Cutoff.	Obt. score	Sig./ Non-Sig
Depression	17	10	37	54	Sig
Anxiety	22	17	56	79	Sig

Note. M = Mean; SD= Standard Deviation; Obt. Score= Obtained Score; Sig = significance level of disorder; Non-sig = non-significance level of disorder.

Severity measure for generalized anxiety disorder adult (APA, 2013). It is a 10-item measure that assesses the severity of Generalized Anxiety Disorder in individuals age 18 and above. Each item asks the individual to rate his symptoms during the past 7 days. Each item on the measure is rated on a 5-point scale (0=Never; 1= occasionally; 2=Half of the time; 3=Most of the time, and 4=All of the time). The total score ranges from 0 to 40, with higher scores indicating greater severity of Generalized Anxiety Disorder (APA, 2013). Mr. X obtained raw score was 27 which placed him in 'Severe' category.

On the basis of chief complaints, MSE and psychological assessment, diagnosis of 300.02 (F41.1) Generalized Anxiety Disorder; V61.29 (Z62.898) Child Affected by Parental Relationship Distress was given to Mr. X.

Procedure

Case conceptualization. Mr. X. case was conceptualized on Cognitive Behavioural model for GAD (Wells, 1990) that shows person having GAD uses worry/ ruminations as a processing strategy. Any trigger/ external event (Brother's message that he was not able to come home in the vacations) activates tacit positive meta-beliefs about the importance of worry (why he is not coming? There should be some problem, I should be concerned for him) which lead to Type 1 Worry. It further activates negative meta-belief (My mind is drifting, It is taking control over me, I should avoid thinking or should I contact my brother) which results in Type II worry (meta-worry). It is associated with thought control (I need to control my thoughts), behavior (started walking) and emotion (anxiousness, worry)

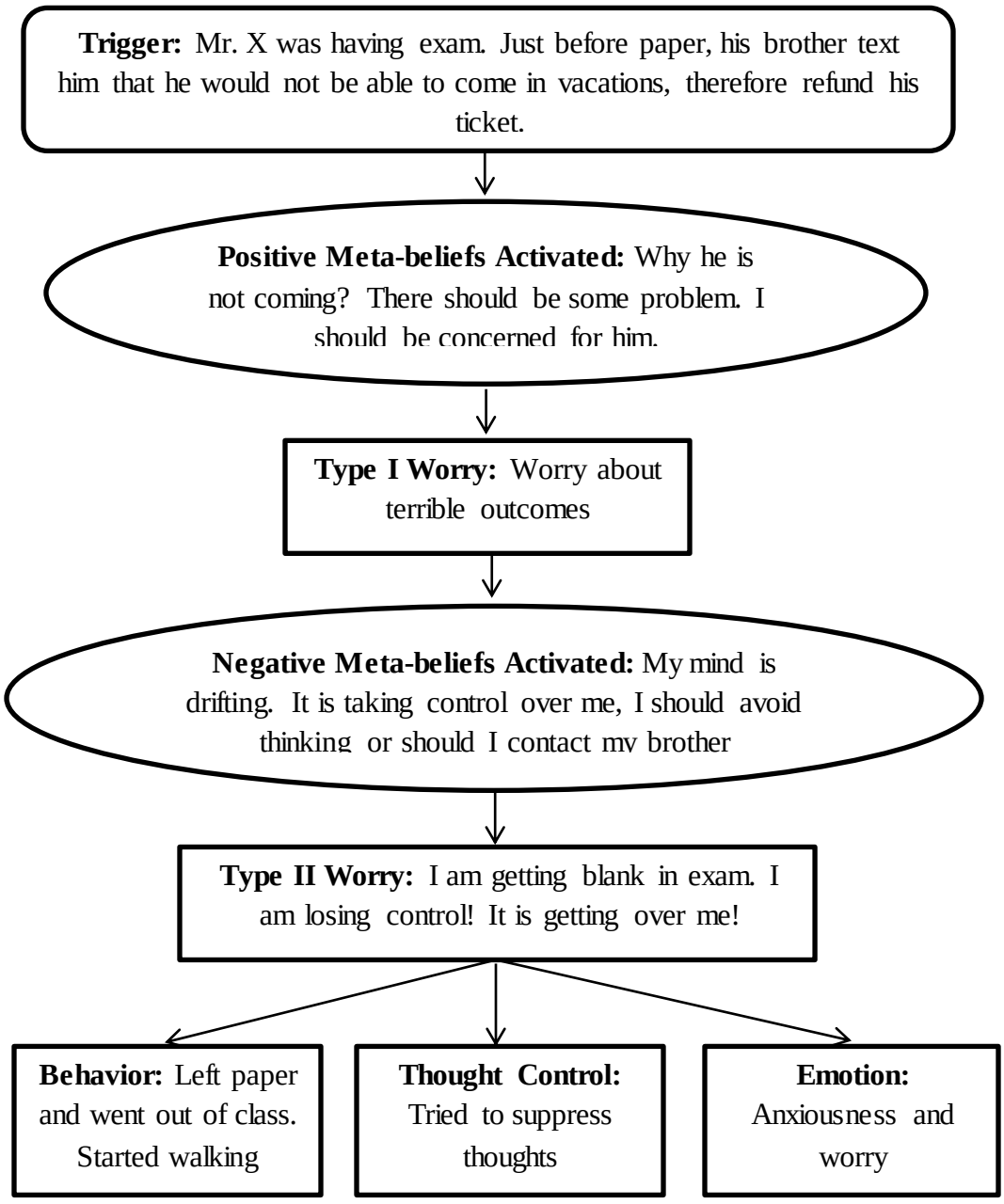

Figure 1. Case Conceptualization on the model of CBT for GAD (Wells, 1990).

Intervention. The study was carried out at Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan. CBT and RTP were followed for Mr. X. The total numbers of sessions conducted were 12; each session was of 45 minutes – 1 hour, once a week.

Initial sessions focused on assessing the client's concerns and difficulties, preparing a problem list and prioritizing it as per severity, intensity and duration of the symptoms. Moreover the goals of the therapy were defined and the significance of homework assignment was discussed. Mr. X was explained the rationale of homework, its efficacy and how it would help him to remain connected to therapy throughout the week.

Mr. X cognitions assessed about the self, others and the future were explained through ABC model of CBT. Likewise, worry cycle was explained to him through Cognitive Behavioural Model of GAD (Wells, 1990). Moreover, each exercise /technique's rationale was explained to him before implementing it. He was also explained the etiology of aches, fatigue and sleep problem and how the experience of chronic, unremitting aches often becomes a source of stress itself and thus serves to exacerbate or maintain aches.

The RTP put forward by Holzman and Turk (1994) was followed for 12 sessions. It is based on the assumption that in order to exercise control over your anxiousness, emotions and physical wellbeing, it is essential to relax your body. For this, one needs to recognize tensions in your body then relax body in general and let the tension to go in specific muscles. RTP is comprised of Deep Breathing, Breathing Exercise and Relaxing Imagery, Discrimination Training, 8 Muscle Group Relaxation, Relaxation by Recall, 4 Muscle Group Relaxation and Cue Controlled Relaxation.

Deep Breathing aims to reduce the stress response by replacing the tension in muscles with relaxation and breaking the physiological-arousal cycle that is producing aches. Mr. X was explained about the types of breathing patterns i.e. Thoracic (chest) breathing and Diaphragmatic (abdominal) breathing and was told that when he experiences constant worry/ apprehensions he became anxious. He often may not be aware that his breathing gets shallow (thoracic/ chest breathing). Thus, such breathing upsets the oxygen and carbon dioxide level in the body and results in muscle tension, headache, fatigued eyes and other physical sensations. Furthermore, he was told that deep breaths nourish the lungs with proper oxygen which in turn cause relaxation.

Then, the deep breathing exercise was demonstrated and practiced during the session and was assigned as homework.

Breathing Exercise and Relaxing Imagery uses coping procedure for dampening physiological arousal. Mr. X was asked to do positive imagery while doing breathing exercise; Discrimination Training helps to become more aware of the tension in body; 8 Muscle Group Relaxation was practiced to reduce the number of muscle contraction to a total of 8 muscles groups (hands and lower arms, legs and thighs, abdomen, chest, shoulders, back of neck, eyes and forehead) so that it becomes "more portable and more readily usable"; Relaxation by Recall, 4 Muscle Group (arms, chest, neck and face) Relaxation and Cue controlled Relaxation were done to become relaxed readily and quickly in most situations.

The Socializing experiment (Suppression experiment and 'What if' experiment) and Behavioral experiments (Controlled worry periods, Worries vs. Facts exercise, Up and down worrying experiment) were used for addressing Mr. X apprehensions, to deal with his excessive worries and to challenge his beliefs about uncontrollability and the dangers of worrying. Further, to address attention and concentration problem 'Attention Training Technique' was done and Sleep Hygiene Principles were given to improve his sleep patterns.

Mr. X was asked to keep a detailed record of the worrisome thoughts he experienced and exercises he used to practice. Each session commenced with the feedback of the previous session and review of the homework assigned. At the end of each session, Mr. X was provided written material to address his queries and to facilitate practice of techniques at home.

Table 3
Summary of Sessions and Therapeutic Techniques Used

Session # 1	**Session # 7**

• Introduction of Therapy protocol
• Case Conceptualization
  o Assessing Client's concerns and difficulties
  o Problem prioritizing
  o Setting initial treatment plan/ goals
• Homework (Dysfunctional Thought Record- DTR)
	• Feedback of the previous session & Homework review
	• Socializing experiment ('What if' experiment)
	• 8 muscle group relaxation
	• Homework

Continued

Table 3
Summary of Sessions and Therapeutic Techniques Used

Session # 2	**Session # 8**
• Feedback of the previous session & Homework review • Symptom Checklist Revised (Depression and Anxiety Scales) • RTP (Deep Breathing) • Homework (WTR & Deep Breathing Chart)	• Feedback of the previous session & Homework review • Behavioral experiment (Controlled worry periods) • Relaxation by Recall • Homework (Relaxation by Recall)
Session # 3	**Session # 9**
• Feedback of the previous session & Homework review • Severity measure for Generalized Anxiety Disorder • Assessment of Cognitions (Self, Other and Future) • ABC model of CBT • Breathing exercise and Relaxing imagery • Homework (Breathing exercise and Relaxing imagery)	• Feedback of the previous session & Homework review • Attention training technique (ATT) • Homework (Attention training technique (ATT)
Session # 4	**Session # 10**
• Feedback of the previous session & Homework review • Normalization and Socialization (Cognitive Behavioral model of GAD) • Sleep hygiene principles • Homework (Sleep hygiene principles)	• Feedback of the previous session & Homework review • Behavioral experiment (Up and down worrying experiment) • 4 muscles group relaxation • Homework (4 muscles group relaxation)
Session # 5	**Session # 11**
• Feedback of the previous session & Homework review • Verbal strategies for eliciting type II worry • Discrimination Training • Homework	• Feedback of the previous session & Homework review • Worries vs. Facts exercise and Cue Controlled relaxation • Homework (Worries vs. Facts exercise)

Continued

Table 3
Summary of Sessions and Therapeutic Techniques Used

Session # 6	**Session # 12**
• Feedback of the previous session & Homework review • Socializing experiment (Suppression experiment) • Verbal attribution (evidence of thoughts) • Homework (Breathing exercise and Relaxing imagery)	• Feedback of the previous session & Homework review • Post rating of the problematic symptoms • Therapy Blue Print • Terminated Therapy and helped the client to maintain changes

Ethical Considerations

- Mr. X was briefed about the procedure of therapy ABA, no. of sessions, timings of the sessions, audio recording of the sessions and informed consent was taken from him for his volunteer participation in the case study.
- Permission was taken from the authors of Symptom Checklist – Revised to use in case study and Severity Measure for Generalized Anxiety Disorder (2013) provides free access in clinical use.
- Confidentiality of data information and anonymity of participants was maintained
- Results were reported accurately and genuinely.

Results

Therapy protocol that was introduced to Mr. X and case conceptualization done to assess his current problems and to inform therapeutic techniques helped Mr. X to identify his problems and to prioritize them on the basis of intensity, frequency, duration and its impact on his life. It also facilitated the therapist and Mr. X to set treatment goals. The ABC model of CBT helped him in understanding the Beliefs and consequences relationship. Cognitive Behavioral model of GAD helped Mr. X in understanding how worry maintains his problems. Mr. X reported that the Relaxation Treatment Program helped him to overcome stress, and ease out the discomfort, physical and mental fatigue. Moreover, sleep hygiene principles had improved his sleep. Attention Training Technique helped him to improve his attention and concentration. Further, the client provided his feedback that Socializing experiments and Behavioral experiment were

helpful to him in challenging his beliefs about uncontrollability and dangers of worrying.

Table 3
Post Treatment Raw Score, Average Total Score and Severity Level of Generalized Anxiety

Obtained raw score		Average total score		Severity	
Pre	Post	Pre	Post	Pre	Post
27	17	3	2	Severe	Moderate

Table 4
Subjective Ratings of the Client from 0-10 at Pre and Post Treatment Level

Symptoms/ Complaints	Pre Rating (0-10)	Post ratings (0-10)
constant worry/ apprehensions	10	6*
difficulty in making decisions	10	7
lack of concentration	10	6*
Sleep problem	8	3*
Headache, pain in neck muscles,	6	3
stomach ache	6	3

Note. * $p<.05$.

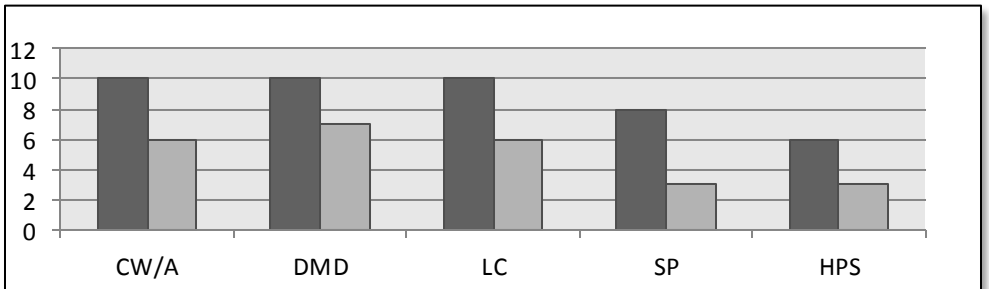

Figure 2. *Comparison of pre and post assessment ratings on five symptoms. Black bars show pre ratings on 0-10 scale and Grey bars show post ratings, where CW/A = Constant Worry or Apprehensions, DMD= Difficulty Making Desicions, LC= Lack of Concentration,*

Pre and post assessment analysis revealed Mr. X had made progress in several areas. The therapy was fruitful with him. Mr. X was very much satisfied with his treatment.

Therapist's Reflection

Therapeutic alliance done through building positive relationship between Mr. X and the therapist, ensuring confidentiality about his personal life and whereabouts and engaging him in the therapy by negotiating the goals and discussing the tasks to reach to the goal were the key features that helped in his progress. Moreover, Mr. X level of motivation and compliance towards therapy was also a great advantage. The way he followed and practiced every single technique, his compliance to homework assignments and his optimism towards the outcome of therapy were helpful in improving his conditions. With the help of the therapist, he was able to understand the worry cycle and the role played by thoughts in influencing his emotions and physiological responses. Furthermore, the empathy and active listening from the therapist's side may also have helped him in managing his problem.

Discussion

The present study aimed to investigate the efficacy CBT and RTP in the treatment of GAD. The case was conceptualized on Cognitive Behavioural model for GAD (Wells, 1990). The results of the study revealed that GAD symptoms can be managed with CBT and the Relaxation Treatment Procedure acts as an adjunct in the efficient management of physiological symptoms of GAD. These findings are consistent with the previous literature that Applied Relaxation Procedure and CBT constitute active components in the treatment of GAD (Norton, 2012; Borkovec & Ellen, 1993). Likewise, it was found that Relaxation Program with Cognitive Behavior Therapy produces significantly greater improvement than relaxation plus non-directive therapy (Borkovec et al., 1997).

Furthermore, Stewart and Chambless (2009) also carried out a study to investigate the efficacy of Cognitive Behavior Therapy with GAD in adults. They also found that CBT is effective in all clinical conditions. Their findings are consistent with the present study as Mr. X was 22 years young man and post assessment revealed significant improvement in his symptoms. Hofmann, Asnaani, Vonk, Sawyer, and Fang (2012) carried out meta-analyses to examine the efficacy of CBT with GAD. They included 269 meta-analytic studies and reviewed 106 studies with representative sample. They examined the effectiveness of CBT with various disorders. They also concluded similar findings i.e. they found CBT to be most effective for Anxiety Disorders.

Predisposing factors that were responsible for the development of GAD in the client were adverse early life experiences. The client had seen non congenial family relationships and strained home environment in his childhood. It is consistent with psychodynamic approach of Freud who stressed the importance of early life experiences in the development of childhood neurotic traits (Tyson, 2002). It is proclaimed that when a child is left by his caregiver and is not reassured of her arrival, results in Anxious-ambivalent attachment. It results in maladjustment and intense distress later in life (Bowlby, 1960 as citied in Marris, 1958).

Factors that precipitated the development of GAD were living away from home and stress about home issues. As per client, he was the eldest born among 6 siblings and he reported himself to be serious, responsible and organized. His family members also had high expectations from him regarding his studies. It is consistent with Adler's view that the order in which a person is born intrinsically affects his personality (Adler, 1964). According to him, first born children are typically believed to be serious, responsible and anxious (Adler, 1964).

Factors that were maintaining his problem were anxious self-talk, high stress life style, and worry about worry. Borkovec and colleagues (2004) proposed in their theory named avoidance theory of worry in which they highlighted that worry evade undesirable experiences/ emotions temporarily and therefore keep the person engage in worrisome thoughts. Thus, in this case, excessive apprehensions in multiple domains serve as another form of avoidance at cognitive level.

Conclusion

Hence, it can be concluded in the light of aforementioned factors, that the client's problem started from his early childhood. Certain other factors precipitated and were maintaining his problem. Through proper case conceptualization and implementation of CBT and Relaxation Treatment Program, there was a significant decline in the intensity of symptoms.

Limitations and Strengths

The duo of CBT and RTP was the major strength of the study as it facilitated Mr. X to deal with his worrisome thoughts/ apprehensions and physiological symptoms side by side. Moreover, structured sessions, therapeutic alliance, Mr. X acquiescence towards therapy was also a

source of great advantage. However, Mr. X prognosis could be improved by involvement of his family in sessions but as the client was boarding person, his family was not available.

Implications

Further research is required in Pakistan to investigate the relative and differential effectiveness of CBT and RTP in the management of GAD and other clinical disorders.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Afzal, S., Sarfraz, H., & Hassan, S. (2014). Prevalence of generalized anxiety disorder in adolescents and youth in Lahore urban community Pakistan. *Health Medicine*, *8* (10), 1184. Retrieved from http://connection.ebscohost.com/c/articles/99327536/prevalence-generalized-anxiety-disorder-adolescents-youth-lahore-urban-community-pakistan

Adler, A. (1964). *Problems of neurosis.* New York: Harper and Row.

Brown, T. A. (2007). Temporal course and structural relationships among dimensions of temperament and DSM-IV anxiety and mood disorder constructs. *Journal of Abnormal Psychology, 116(*2*),* 313–328. doi:10.1037/0021-843X.116.2.313

Borkovec, T. D. & Ellen, C. (1993). Efficacy of applied relaxation and cognitive-behavioral therapy in the treatment of generalized anxiety disorder. *Journal of Consulting and Clinical Psychology, 61(*4), 611-619. Retrieved from http://psycnet.apa.org/journals/ccp/61/4/611/

Borkovec, T. D., Andrew, M., Alycia, C., Seda, E., Richard, L., & Ruth, N. (1987). The effects of relaxation training with cognitive or nondirective therapy and the role of relaxation-induced anxiety in the treatment of generalized anxiety. *Journal of Consulting and Clinical Psychology, 55(*6*),* 883-888. Retrieved from http://psycnet.apa.org/journals /ccp/55/6/883/

Comer, J. R. (1984). *Abnormal psychology*. (5th ed.). USA: Catherine Woods.

Covin, R., Ouimet, A. J., Seeds, P. M., & Dozois, D. J. A. (2008). A meta-analysis of CBT for pathological worry among clients with GAD. *Journal of Anxiety Disorders, 22 (*1*),* 108-116. Retrieved from http://www.sciencedirect.com/science/article/pii/S0887618507000175

Glasofer, D. R. (2015). *Cognitive behavioral therapy for GAD: what to expect*. Retrieved from https://www.verywell.com/cognitive-behavioral-therapy-for-gad-what-to-expect-1393177

Holzman, A. & Turk, D. (1994). *Pain management: A handbook of psychological treatment approaches.* New York: Pergamon Press.

Kessler, R. C., Keller, M. B., & Wittchen, H. U. (2001). The epidemiology of generalized anxiety disorder, *Psychiatric Clinics of North America, 24(1),* 19-39. doi: 10.1016/S0193-953X(05)70204-5

Hidalgo, R. B., & Sheehan, D. V. (2004). Generalized anxiety disorder. *Clinical Neurology, 106,* 343-62. doi: 10.1016/B978-0-444-52002-9.00019-X

Hofmann, G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: a review of meta-analyses. *Cognitive Therapy Research. 36(*5*),* 427–440. doi: 10.1007/s10608-012-9476-1

Khan, H., Kalia, S., Itrat, A., Khan, A., Kamal, M., & Khan, M. A. (2007). Prevalence and demographics of anxiety disorders: a snapshot from a community health centre in Pakistan. *Annals of General Psychiatry, 6 (1),* 30-35 doi:10.1186/1744-859X-6-30.

Khan, M. S., Ahmed, U., Adnan, M., Khan, M. A., & Bawany, F. I. (2013). Frequency of generalized anxiety disorder and associated factors in an urban settlement of Karachi. JPMA. *The Journal of the Pakistan Medical Association, 63(*11*),* 1451-1455. Retrieved from http://jpma.org.pk/full_article_text.php?article_id=5207

Lieb, R., Isensee, B., Sydow, K. von & Wittchen, H.-U. (2000). The Early Developmental Stages of Psychopathology Study (EDSP): a methodological update. *European Addiction Research 6*(4), 170–182. Retrieved from http://www.qucosa.de/fileadmin/data/qucosa/ document s/10000/Lieb-Isensee-vonSydow-Wittchen-2000.pdf

Mirza, I., Jenkins, R. (2004). Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: Systematic review. *British Medical Journal, 328* (7443), 794-798. doi.org/10.1136/bmj.328.7443.794

Marris, P. (1958). *Widows and their families.* London: Routledge

McNally, R. J. (1997). Atypical phobias. In G. C. L. Davey (Eds.), *Phobias: a handbook of theory, research and treatment*. Chichester, England: Wiley.

Norton, P. J. (2012). A Randomized Clinical Trial of Transdiagnostic Cognitve-Behavioral Treatments for Anxiety Disorder by

Comparison to Relaxation Training. *Behavior Therapy, 43 (*3*),* 506-517. doi: 10.1016/j.beth.2010.08.011

Rahman, N. K., Dawood, S., Jahangir, N., Mansoor, Q., Rahman, N., & Ali, S. (2009). Standardization of symptoms checklist revised on psychiatric and non- psychiatric sample in Lahore city, *Pakistan Journal of Clinical Psychology, 8(2),* 21-32.

Rebecca, S. E. & Chambless, D. L. (2009). Cognitive–behavioral therapy for adult anxiety disorders in clinical practice: A meta-analysis of effectiveness studies. *Journal of Consulting and Clinical Psychology, 77*(4), 595- 606. doi.org/10.1037/a0016032

Sofronoff, K., Attwood, T., & Hinton, S. (2005). A randomized controlled trial of a CBT intervention for anxiety in children with Asperger syndrome. *Journal of Anxiety Disorders, 46 (*11*),* 1152-1160. doi: 10.1111/j.1469-7610.2005.00411.x

Wells, A. (1990). *Cognitive Therapy of Anxiety Disorders: A Practice Manual and Conceptual Guide.* New York: John Wiley & Sons.