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The Efficacy of Cognitive Behaviour Therapy in Managing Anxiety in Children with Learning Disability

R. Vatsala Mirnaalini
Post Graduate Student, Department of Psychology
Avinashililngam Institute for Home Science and Higher Education for Women, Coimbatore, India
Dr. N. S. Rohini
Professor and Head, Department of Psychology
Avinashililngam Institute for Home Science and Higher Education for Women, Coimbatore, India

Abstract:
A study was initiated with the goal to find the effectiveness of Cognitive Behavior Therapy in reducing anxiety in children with learning disability. To begin with, fifty one children in the age group of 9-15 years were selected by measuring their IQ level in the range 70 - 120. The sample comprised of children with Low Intelligence Quotient (IQ) to High Average IQ. Intelligence quotient was measured using Malin's Intelligence Scale for Indian Children (Malin, 1971). The learning disability children were identified based on the IQ range. They were assessed using Screen for Child Anxiety Related Disorders (Birmaher, 1997) to find the presence of anxiety. The findings reveal that the majority of the children suffered with separation anxiety disorder and the related anxiety disorders. Cognitive Behavior Therapy was introduced as psychological intervention strategy and reassessment was made after a week using Screen for Child Anxiety Related Disorders (SCARED) for the presence of anxiety in children with learning disability. Administration of Cognitive Behaviour Therapy had a significant impact in reducing the overall anxiety and the related disorders. The study was conducted in Rashmika Centre for Learning and Counselling, Coimbatore and Helikx, the Open School and Learning Centre, Salem.

Key words*: Cognitive Behavior Therapy, Learning Disability, Anxiety, Coimbatore, Salem*

1. Introduction

The increasing awareness about learning disability and the need to understand the psychological contribution relating to the emotional well-being and cognitive aspects are the core motivation of this study. Learning disability is basically a biological disorder, with difficulties associated with 3 P's: perceiving and processing the stimulus and performing the response.

Because of this difficulty in higher cognitive functioning, children with learning disability find academic learning very difficult. Despite being smarter and intellectually sound, they are enrolled in special schools with rehabilitation programs, because of their poor academic performance. This exposure, with the absence of mainstream education, troubles the children with many problems. As they are grouped based on their intellectual capacity and academic performance, neglecting the age factor, these children are troubled with challenges like lack of peer group, problems with bullying, lack of playmates and the influence of domination.

Besides the above complication, they are also dodged with the feeling of being odd and isolated. All these leads to low self-esteem, inferior feeling, fear, anxiety and depression further affecting their academic performance, personality and socializing skills.

2. Identification of Learning Disability

According to National Dissemination Center for Children and Youth with Disabilities (NICHCY,2009), learning disability is defined as "a disorder in one or more of the basic psychological processes involved in understanding or in using language spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations". The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities; or motor disabilities; of mental retardation; of emotional disturbance; or of environmental, cultural or economic disadvantage.

According to the definition, individuals with LD are of at least average intelligence, and the only way to determine whether a person is of average or above average IQ is to administer a formal test of intelligence (The National Centre for Learning Disabilities, 2014). Hence, MISIC (Malin's Intelligence Scale for Indian Children) Indian version of Wechsler Intelligence Scale for Children was administered and the sample size was determined to be fifty one in the age group of 9- 15 years. The reason for choosing children with Low average IQ is based on the age difference in the sample size.

3. Anxiety and Learning Disability

According to Vasudevan (2006), anxiety is a feeling of apprehension accompanied by physical and psychological symptoms leading to uncomfortability. It is a multisystem response to perceived threat or anger. Anxiety is mainly produced due to anticipation about the future and worrying about the past. Like fear, it can cause a state of physical disturbance; unlike fear, it is characterized by the absence of an apparent cause the circumstance that precipitates anxiety is hidden and unknown to the person.

Children with learning disability are bombarded with many challenges pertaining to academic adaptation. As the struggle to adapt rises, the apprehensive feeling builds up. So more the feeling of apprehension more is the development of anxiety. Children with LD are found to be more anxious than non-LD children (Gallegos, 2012). The manifested anxiety is exhibited through fear, physical ailments, feelings of insecurity, avoidance of schooling, which can be grouped as Panic disorder, Generalized anxiety disorder, Separation anxiety disorder, Social anxiety disorder and Significant school avoidance.

A learning disability is a neurological disorder that affects the brain's ability to receive, process, store, and respond to information. The term learning disability is used to describe the seemingly unexplained difficulty a person of at least average intelligence has in acquiring basic academic skills. These skills are essential for success at school and work, and for coping with life in general. "LD" does not stand for a single disorder. It is a term that refers to a group of disorders (National Association of Special Education Teachers [NASET], 2007).

Toddlers frequently experience separation anxiety when a parent or caregiver leaves the room. As children get older and attend daycare, preschool or kindergarten, they can experience separation anxiety when they are dropped off by mom or dad. Separation anxiety usually goes away as children become acclimated to their new environment and caregiver or teacher. But even beyond kindergarten, a child can have trouble being separated from a parent and may experience excessive distress or anxiety. Grade-schoolers who have separation anxiety disorder may be reluctant to go to school or sleep alone. Children with separation anxiety disorder may also fear that something bad will happen to their parents or themselves when they are not together. (Lee, 2012).

4. Management of Anxiety in Learning Disability

Oathamshaw (2009) describes a case study as an attempt to use cognitive behavioural therapy (CBT) to treat anger problems in a young man with mild learning disabilities. The skills necessary to engage in CBT were assessed in addition to an assessment of support available, motivation to engage in therapy and belief in ability to make changes. To use cognitive behavioural therapy (CBT) to treat anger problems in a young man with mild learning disabilities. The skills necessary to engage in CBT were assessed in addition to an assessment of support available, motivation to engage in therapy and belief in ability to make changes.

Willner (2009) posits that Cognitive Behavior Therapy (CBT) has been evaluated extensively and is now the first-line treatment of choice for many psychological disorders. It is increasingly being used with people with learning disabilities. There are many barriers to engagement with CBT for people with learning disabilities, which reflect limitations of ability and motivation. The limitations of ability reflect the fact that people with learning disabilities have to cope with cognitive deficits in addition to the cognitive distortions that are the target of CBT interventions. If barriers to treatment are recognized, significant steps can be taken to increase accessibility by adapting the therapy. Adaptations include involving careers, simplifications of the delivery of therapy (e.g. by using simple language and a slower pace), and simplifications of the model (e.g. by the therapist adopting a more directive, less collaborative, approach).

Willner (2009) reviews the evidence for the effectiveness of group-based anger management and the acquisition of anger coping skills, and the effectiveness of individual anger treatment, with some discussion of the status of CBT for other indications and the difficulties of conducting outcome research in this area. The evidence base to support these developments comes from uncontrolled trials of CBT in a variety of psychological disorders and eight to nine controlled trials of CBT for anger (plus a single controlled study in depression).

Sams, Collins and Reynolds (2006) examined the performance of people with learning disabilities on two cognitive therapy tasks. It was hypothesized that cognitive therapy task performance would be significantly correlated with IQ and receptive vocabulary, and that providing a visual cue would improve performance. Fifty-nine people with learning disabilities were assessed on the Wechsler Abbreviated Scale of Intelligence (WASI), the British Picture Vocabulary Scale-II (BPVS-II), a test of emotion recognition and a task requiring participants to discriminate among thoughts, feelings and behaviours. The results shows that emotion recognition was significantly associated with receptive vocabulary, and discriminating among thoughts, feelings and behaviours was significantly associated with vocabulary and IQ. People with learning disabilities with higher IQs and good receptive vocabulary were more likely to be able to identify different emotions and to discriminate among thoughts,Iteelings and behaviours.

Based on the above, a study was organized to find the efficacy of administering Cognitive Behaviour Therapy (CBT) to minimize the presence of anxiety in children with learning disability.

5. Purpose of the Study

A study was formulated to identify the types of anxiety present in children with learning disability and to find the effectiveness of cognitive behavior therapy in managing anxiety. Children with learning disability in the age group of 9-15 years were administered MISIC (Malin's Intelligence Scale for Indian Children) test and IQ score was measured. Fifty one children with learning disability, with scores ranging between low averages to high average were measured for anxiety using Screen for Child Anxiety Related Disorders (SCARED, 1997). Twenty-nine from Rashmika Centre for Learning and Counselling, Coimbatore and Twenty-two from Helikx, The Open School and Learning Centre, Salem) were selected.

Malin's Intelligence Scale for Indian Children (MISIC) by Dr. Arthur Malin was constructed based on the Wechsler's Intelligence Scale for Children by Dr. David Wechsler in 1949. MISIC consists of eleven subsets divided into Verbal and Performance groups as : Information, Comprehension, Arithmatic, Similarities, Vocabulary, Digit Span (Verbal) and Picture Completion, Block Design, Object Assembly, Coding, Mazes (Performance). The subtests were administered to the respondents and the raw scores were interpreted in percentile with respect to the table of scores given for respective years. Full intelligence quotient (IQ) is computed by summing up the verbal and performance scores and divide for average. The reliability coefficient for full scale IQ scores is .91 and the validity score is .63.

Screen for Child Anxiety Related Disorders constructed and standardized by Birmaher et al was used to screen the children for the presence anxiety disorders. The scale consists of 41 questions with three possible responses to each item namely 'Not True or Hardly Ever True', 'Somewhat True or Sometimes True', 'Very True or Often True'. The respondents were asked to tick anyone of the alternatives which suits them the most.

6. Procedure

The sample for the research comprised of fifty one students with learning disability from Rashmika Centre for Learning and Counselling (N=29) and Helix, The Open School and Learning Centre (N=22). The age range of the sample was between 9-15 years. Initially, the samples were assessed with Malin's Intelligence Scale for Indian Children for IQ score, and measured for anxiety using Screen for Child Anxiety Related Disorders (SCARED). After assessment an intervention strategy was evolved based on Cognitive Behaviour Therapy and was administered to the sample. After a week, the samples were reassessed for the presence of anxiety using SCARED questionnaire.

6.1. Psychological Intervention

The following intervention strategies were used to manage the presence of anxiety in children with learning disability:

6.2. Deep Breathing Practice

In Deep Breathing Practice the subjects were asked to sit erect, with head straight, palms on the lap and feet placed on the floor, one foot apart. They were instructed to breathe in slowly for 4 counts (4 seconds) and breathe out gradually for 6 counts (6 seconds). This was repeated 5 times with the subjects' eyes open and 5 times with their eyes closed. They were instructed to relax each part of the body calling attention from head to toe.

6.3. Relaxation Training

After Deep Breathing Practice, the subjects were asked to lie down flat, on a mat with the head straight, lips slightly apart, hands comfortably placed on the sides, palms facing upwards and legs stretched, with feet one foot apart. They were asked to close the eyes and have a folded handkerchief placed on the eyes to ensure complete darkness. Then they were given the following instructions:

"Breathe in slowly…breathe out gradually…" (This was repeated 3 times).

* "Now concentrate on the top of the head".

"Breathe in slowly… Breathe out gradually…

Top of the head…Relax…"

This was repeated 3 times, followed by the suggestions:

6.4. Autosuggestion

The following Autosuggestion was given (3 times each) when the subjects continued to be in the relaxed state.

"I am brave.

- I am confident.
- I am strong.
- I will study well.
- I have no fear.

The subjects were also given a list of autosuggestions to paste it in the mirror and practice it every day in the morning and at night.

6.5. Guided Imagery

Majority of the children had the aspiration to win "golden star" for their academic performance. This motive was used to frame a guided imagery sequence. In the therapy, the samples were asked to close their eyes and were guided with instructions that made them

imagine learning with enthusiasm, studying with interests, loving their teachers, enjoying their class tests and attaining the golden star with zealous.

6.6. Token Economy

The participants were given behavioral assignments to practice deep breathing and autosuggestion at home. For those who did the assignment regularly were given a star for each exercise i.e 2 stars per day. And towards the end of the intervention program the subjects were asked to redeem a sticker with a collection of 8-10 stars.

6.7. Cognitive Restructuring

In this, the subjects were asked to breathe in slowly (for 4 counts), tell out one of the positive thoughts given below and breathe out smilingly (3 times each).

- "I can remember my lessons"
- "I am worthy"
- "I will surely pass in the exams"

6.8. Tension Releasing Exercise

Tension releasing exercise helps people to throw out fear, anxiety, anger and worry, which lead to tension. In this, the subjects were asked to stand with feet one foot apart, close the palms and bring them towards the chest breathing in slowly; then breathing out forcefully through the mouth making a loud sound (Ha), throwing down the hands sideways. As they breathe out, they were given the following directions (3 times each).

- "Fear goes out"
- "Anxiety goes out"

6.9. Smile Therapy

In Smile Therapy, the subjects were asked to say (Eee) with a broad smile, breathe in slowly through the mouth, with a sound (without involving the vocal cords), close the mouth smilingly and breathe out gradually through the nose without any sound. This practice was given 5 times. Smile Therapy helped to prevent negative emotions such as fear, anxiety, worry, anger etc.

6.10. Laugh Therapy

Laugh also helps in preventing negative emotions and in developing positive perception. In this, the subjects were asked to stand, bend down the back and the head slightly, breathe in slowly lifting up the head and the back and start laughing loudly without any inhibition. They were encouraged to laugh louder and louder for a longer duration, using gestures, clapping hands etc. Laugh Therapy was given 5 times.

6.11. Duration of Psychological Intervention

Cognitive Behavior Therapy was given for one week and the duration of the session was for one and a half hour.

6.12. Re-Assessment

After a week of intervention, the samples were re-assessed using Screen for Child Anxiety Related Disorders (SCARED) for the presence of anxiety in children with learning disability.

6.13. Experimental Design

A single test group without control group was used in this study. The dependant variable "Anxiety" was measured before and after the intervention, the independent variable.

	Time Period I	Treatment	Time Period II
Test Area	Level of phenomenon Before Treatment Anxiety (x)	Psychological Intervention → Cognitive Behavior Therapy	Level of phenomenon After Treatment Anxiety (y)

7. Results and Discussion

Table I shows the level of anxiety in children with learning disability. Of the surveyed sample, 26 % were girls and the remaining 74% were boys. The children with learning disability are more prone to be anxious. Gender-wise analysis reveals that boys are more prone to anxiety than girls among the children with learning disability. Although boys have more anxiety than girls, it cannot be attributed to gender differences due to variation in the sample size. Studies done previously by Hawke, Olson, Willcut, Wadsworth and DeFries (2009) explored that the prevalence of reading difficulties was higher in males than females in the sample, and the ratio of males to females was greater in more affected samples.

Table II illustrates that the level of separation anxiety disorder (80%) is found to be more in children with learning disabilities, followed by generalized anxiety disorder (65%), panic anxiety disorder (59%), social anxiety disorder (37%) and significant school avoidance (25%) respectively.

The reason for the predominant occurrence of Separation Anxiety Disorder could be due to the enrollment of these children in special schools resulting in feelings of oddness, insecurity and isolation. Generalized anxiety disorder, being 65%, could be because of the pressure to understand the abstract concepts of learning and the trouble with perceiving and receiving methodology of teaching. The reason for Panic disorder in children with learning disability could be due to the fear in attaining their future goals. Social anxiety disorder could be due to the hindering factors manifested within separation anxiety disorder and generalized anxiety disorder.

Children with learning disability are not only troubled with a burden to perform better academically; they are also agitated with feelings of loneliness, being odd and isolated with poorly developed socializing skills and the necessity to adjust with the variation of age within the peer group. All these, contributes to the presence of anxiety within the child. Hence, in the study, learning disabled children were identified in the presence of anxiety and were administered an intervention program.

Table III indicates the mean difference in types of anxiety in children with learning disability before and after the intervention of Cognitive Behavior Therapy (CBT). It is observed that overall anxiety (t=4.80) and GAD (t=4.63) had reduced substantially after the intervention while Separation anxiety (t=3.50) reduced to a great extent, Panic disorder (t=2.83) also showed reduction. Significant school avoidance did not reveal any significant change in the children with learning disability and it can be attributed to the satisfaction they have in attending school that compensated for their disability. The data clearly indicate the efficacy of CBT in reducing anxiety symptoms.

Anxiety Disorders	**Gender**			
	Girls		**Boys**	
	N	**%**	**N**	**%**
Low Anxiety	2	4	13	25
High Anxiety	11	22	25	49

Table 1: Level of Anxiety in Children with Learning Disability
N=51

Level of Anxiety	**Anxiety Disorder**									
	Panic Anxiety Disorder		**Generalized Anxiety Disorder**		**Separation Anxiety Disorder**		**Social Anxiety Disorder**		**Significant School Avoidance**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Low	21	41	18	35	10	20	32	63	38	75
High	30	59	33	65	41	80	19	37	13	25

Table 2: Types of Anxiety Present in Children with Learning Disability
N = 51

Effect of Cognitive Behavior Therapy (CBT)		Mean	Difference	T
Pair 1	Anxiety (Before)	32.75	5.784	4.805**
	Anxiety (After)	26.96		
Pair 2	Panic Disorder (Before)	8.16	1.706	2.836**
	Panic Disorder (After)	6.45		
Pair 3	Generalized Anxiety Disorder (Before)	9.73	1.569	4.631**
	Generalized Anxiety Disorder (After)	8.16		
Pair 4	Separation Anxiety Disorder (Before)	7.61	1.608	3.520**
	Separation Anxiety Disorder (After)	6.00		
Pair 5	Social Anxiety Disorder (Before)	6.06	1.255	3.501**
	Social Anxiety Disorder (After)	4.80		
Pair 6	Significant School Avoidance (Before)	1.75	. 196	1.218^{NS}
	Significant School Avoidance (After)	1.55		

Table 3: Significance of Mean Difference in Anxiety among Children with Learning Disabilities Before and After Intervention
***= Significant at 0.01, NS = Not Significant*

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