The Effectiveness of Cognitive Behaviuor Thearpy on Academic Stress Among High School Students

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Abstract:

This investigated study is the effectiveness of cognitive behaviour therapy (CBT) on academic stress among high school students. Depression is related to academic stress. The effect of CBT on these variables is studied. The present study is an attempt to study: whether CBT is effective in decreasing academic stress and depression? The sample for study included 60 girls and boys of high school students. (N=400). All the subjects meeting exclusion and inclusion criteria were assessed using a scale for assessing academic stress (Sinha, Mahindra, and Sharma, 2001), From 130 subjects who met research criteria were randomly assigned to experimental and control group (each group 30 subjects). The experimental group subjects received 13 sessions CBT interventions and the control group received no intervention. Conclusion: Findings indicate that CBT is a useful technique to alleviate of academic stress and depression among high school students.

Keywords: *Stress, Academic Stress, Depression, Cognitive Behavior Therapy*

1. Introduction

The same stressful situation is not stressful for all people, and all people do not experience the same negative thoughts and feelings when stressed. One of the models of stress that is useful in understanding stress among students is person –environment (P-E) model (French, 1973). The core element of the theory depicts three basic distinctions central to P-E fit theory. The first and most basic distinction is between the person and environment. The second distinction is between objective and subjective representations of the person and environment. The third distinction is between fit defined in terms of abilities-environmental demands and needs- environmental supplies. According to one variation of this model stressful events can be appraised by an individual as 'challenging' or 'threatening'. When students appraise their education as a challenge, stress can bring them a sense of competence and an increased capacity to learn.

A critical issue concerning stress among students is its effect on learning. Stress is associated with impairment of health, and negative emotional experiences which is detrimental to quality of life and sense of wellbeing (Sinha, 2000). Out of number of stresses faced by adolescents and young adults, academic stress emerges as significant mental health problem in recent years. It has been estimated that 10% to 30% students experience academic related stress that affects their academic performance, psychological adjustment along with their overall emotional and physical wellbeing. Information load, high expectations, academic burden or pressure, unrealistic ambitions, limited opportunities, high competitiveness are some of the important sources of stress which creates tension, fear, and anxiety. Poor academic performance, diminished popularity, depression, attention difficulties, somatic complaints, and substance abuse are commonly observed problems among the victims of academic stress without being aware of alternative means to cope with problems.

The present study is an attempt to investigation of the effectiveness of CBT on academic stress, depression among high school students.

2. Key Concept and term used

2.1 Stress

According to Manktelow (2003) Stress, a universal phenomenon is considered to be a condition in which people respond physiologically, psychologically, behaviourally and socially to life changes. These changes may be occurring through family of related experiences, pathways, education, and outcomes caused by a range of different events or circumstances.

2.2 Academic stress

Academic stress is a significant source of stress for many students covering not only examinations but also other academically related stressors such as fear of logging behind in the home work, writing assignment, working on individual and group projects, time pressure, lack of financial support, concern about academic ability, scheduling classes and required motivation to study.

2.3 Depression

Depression is the most common psychiatric disorder. It is a disabling condition that adversely affects a person's family, work or school life, sleeping and eating habits, and general health. Incidence of depression has increased every year in the past century, and now one out of six people will experience a depressive episode (First, Frances & Pincus, 2004). Depression is typically characterized by low mood, low self-esteem, and loss of interest or pleasure in normally enjoyable activities.

2.4 Cognitive Behaviour Therapy

A Cognitive Behaviour Therapy is a form of psychotherapy for modifying everyday thoughts and behaviours, with the aim to positively influence emotions. The general approach developed out of behaviour modification and cognitive therapy, and has become widely used for the management of psychological disorders. The particular therapeutic techniques vary according to the particular kind of client or issue, but the technique commonly include keeping a diary of significant events and associated feelings, thoughts and behaviours; questioning and testing assumptions or habits of thoughts that might be unhelpful and unrealistic; gradually facing activities which may have been avoided; and trying out new ways of behaving and reacting.

3. Need of the Study

Though, CBT is effective in reducing stress, depression and increased academic performance, for the following reasons present study is attempted. There are several factors which may leads to academic stress in the students. Number of changes occurs rapidly during the adolescent period namely physical, physiological, psychological, cultural, interpersonal, biochemical and hormonal and so on. If the individual is poorly equipped to handle this crisis, he may find it extremely difficult to adjust to these rapidly changing events. Each of these factors individually or in combination may result in creating stress in the individual. The individual may experience stress, adjustment problem, anxiety and depression. Further, biochemical and hormonal changes that take place endogenously can lead to increased sexual interest, curiosity and sexual activity may create more anxiety, stress, self-doubt and adequacy about himself leading to further increase in stress. Because of activation and release of sexual hormones may cause the young one to show different types of behaviour that represent their gender identity. During this period the bodily changes that occurs can have influence their self-esteem while comparing themselves with other peers may also lead to development of negative self-esteem which may contribute to severe stress and anxiety about themselves.

Present study aims at studying the high school children in Ranchi, because these adolescents are exposed to new subjects for the first time, (e.g. Physics, Chemistry, Geometry, Algebra and so on) and in the process of learning and mastering the subject contents may create new set of stresses and anxieties. Increased interest and excessive use of computer, internet, mobile, mass media, spending more time for these and less time for academic activity may play an important role in increasing stress and depression.

4. Objectives of the study

1. To study the effectiveness of cognitive behaviour therapy on academic stress among high school students.
2. To study the effectiveness of cognitive behaviour therapy on depression among in high school students

5. Hypothesis

1. Cognitive behaviour therapy is effective in decreasing Academic Stress.
2. Cognitive behaviour therapy is effective in decreasing Depression.

6. Methodology and tools used for the study

The present study is an experimental study with two groups' pre-test post-test design. Study was conducted using the following research tools:

6.1 Academic Stress

In this study academic stress is operationally defined as stress measured by Scale for Assessing Academic Stress (SAAS, Sinha, Sharma and Mahendra, 2001).

6.2 Depression

In this study depression is operationally defined as depressive symptoms measured by Children Depression Inventory (CDI, Kovacs, 1992).

6.3 Cognitive Behaviour Therapy

CBT was operationally defined as the psychotherapeutic approach based on learning principle in which intervention consists of identifying and modifying the maladaptive, mediating and maintaining cognitive, perceptual, behavioural, affective, physiological and environmental factors. Modification implies eliminating / reducing the maladaptive behaviour (academic stress and depression).

6.4 Results and discussion

Table:1 Effect of intervention on academic stress

Table for Pre-treatment, post treatment means and SD scores for experimental and control groups on academic stress				
Groups	**Times**	**Academic Stress**		**MD**
		M	**SD**	
Experimental	Pre -treatment	21.79	2.75	7.49
	Post-treatment	14.57	2.57	
Control	Pre -treatment	21.76	2.94	0.50
	Post-treatment	21.23	3.03	

Table 1, indicates that there was a change (reduction) observed between pretreatment and post-treatment sessions mean score in academic stress.

1. For experimental group academic stress pre-treatment score was 21.79 which was reduced to 14.57 in posttreatment assessment (MD= 7.49).
2. For control group academic stress pre-treatment score was 21.76 which was reduced to 21.23 in post-treatment assessment (MD= 0.50).

Table 2: for Pre-treatment, post treatment means and SD scores for experimental and control groups on subscales of academic stress

Groups	Times	Cognitive		Affective		Physical		Social interpersonal		Motivational	
		M	SD	M	SD	M	SD	M	SD	M	SD
Exp.	Pre	5.37	0.99	4.6	0.67	2.73	0.98	4.37	0.85	4.97	1.40
	Post	3.33	1.06	2.97	0.92	2.13	1.00	3.00	0.79	2.9	1.12
MD		-1.9		2.04		1.63		1.63		2.07	
Ctrl.	Pre	5.23	0.97	4.53	0.81	2.73	1.10	4.07	1.14	5.03	1.41
	Post	5.03	1.09	4.43	0.68	2.80	1.06	3.93	1.28	4.90	1.24
MD		0.20		0.10		0.08		10		0.13	

Table 2, indicates that there was a change observed between pre-treatment and post-treatment mean score in subscales of academic stress.

1. In Cognitive factor subscale of academic stress pre-treatment score was 5.37 which was reduced to 3.33 in post-treatment assessment (MD= 1.9). In Affective factor subscale pre-treatment score was 4.6 which was reduced to 2.97 in post-treatment assessment (MD= 2.04). In Physical factor subscale pre-treatment score was 2.73 which was reduced to 2.13 in post-treatment assessment (MD= 1.63). In Social/interpersonal pre-treatment score was 4.37 which was reduced to 3.00 in post-treatment assessment (MD= 1.63). In Motivational pre-treatment score was 4.97 which was reduced to 2.9 in post-treatment assessment (MD= 2.07) indicating a decrease in motivational symptoms of academic stress.

2. For control group Cognitive factor pre-treatment score was 5.23 which was reduced to 5.03 in posttreatment assessment (MD= 0.2). In Affective factor pre-treatment score was 4.53 which was reduced to 4.43 in post-treatment assessment (MD= 0.10). In Physical factor pretreatment score was 2.73 which was increased to 2.80 in post-treatment assessment (MD= 0.08). In Social/interpersonal factor pre-treatment score was 4.07 which was reduced to 3.93 in post-treatment assessment (MD= 0.10). In Motivational pre-treatment score was 5.03 which was reduced to 4.90 in post-treatment assessment (MD= 0.13) indicating no change.

Table: 3 Effect of intervention on depression

Pre-treatment, post treatment total mean and SD scores on depression				
Groups	Times	Depression		
		M	SD	MD
Experimental	Pre-treatment	27.53	3.47	6.63
	Post-treatment	20.90	2.93	
Control	Pre-treatment	26.30	3.70	0.40
	Post-treatment	25.90	3.97	

Table 3, indicates that there was a change (decrease in the level of depression) observed between pre-treatment and post-treatment mean score in academic stress. 1) For experimental group pre-treatment depression score was 27.53 which was reduced to 20.90 in post-treatment assessment (MD= 6.63). 2) For control group pre-treatment depression score was 26.30 which was reduced to 25.90 in post-treatment assessment (MD= 0.40) indicating no change.

Table 4: Pre-treatment, post-treatment mean and SD scores on depression subscales in experimental and control group

Groups	Time	Negative mood		Interpersonal problems		Ineffectiveness		Anhedonia		Negative self-esteem	
		M	SD	M	SD	M	SD	M	SD	M	SD
Exp.	Pre	6.60	2.12	5.43	1.59	4.83	1.46	5.07	1.14	5.57	1.76
	Post	4.70	1.93	4.33	1.09	3.30	1.10	4.47	1.86	3.90	1.24

MD		1.9		1.10		1.53		0.60		1.67	
Ctrl.	Pre	6.53	1.98	5.23	1.77	4.33	1.71	5.03	1.56	5.43	2.07
	Post	6.33	1.92	5.20	2.09	4.30	1.62	5.30	1.70	5.23	2.09
MD		0.20		0.03		0.03		0.27		0.20	

Table indicates that there was a change (decrease) observed between pretreatment and post-treatment mean score in subscales of depression.

1. For experimental group in Negative mood subscale pre-treatment score was 6.60 which was reduced to 4.70 in post-treatment assessment (MD= 1.9); In interpersonal problems subscale of depression pre-treatment score was 5.43 which was reduced to 4.33 in post-treatment assessment (MD=1.10); In Ineffectiveness subscale of depression pre-treatment score was 4.83 which was reduced to 3.30 in post-treatment assessment (MD= 1.53); In Anhedonia subscale of depression pre-treatment score was 5.07 which was reduced to 4.47 in post-treatment assessment (MD= 0.60); and for Negative self-esteem pretreatment score was 5.57 which was reduced to 3.90 in post-treatment assessment (MD= 1.67).

2. For control group negative mood pre-treatment score was 6.53 which was reduced to 6.33 in post-treatment assessment (MD= 0.2)., interpersonal problems pretreatment score was 5.23 which was reduced to5.20 in post-treatment assessment (MD= 0.03), ineffectiveness pre-treatment score was 4.33 which was increased to 4.30 in posttreatment assessment (MD= 0.03), Anhedonia pre-treatment score was 5.03 which was reduced to 5.30 in post-treatment assessment (MD= 0.27), negative self-esteem pretreatment score was 5.43 which was reduced to 5.23 in post-treatment assessment (MD= 0.2) indicating no change.

The effect of CBT on academic stress and depression was statistically significant. In other words, subjects have shown reduction in academic stress and depression in experimental group from pre to post assessment. Further, the difference between two groups with regard to academic stress and depression was statistically significant. In other words, the experimental group showed significant change (reduction in academic stress and depression) after treatment whereas the control group did not. As a conclusion, the present study showed the effectiveness of CBT interventions decreasing academic stress and depression among high school students. As shown, the present findings are concordance with the previous research findings and confirm CBT interventions as an effective technique for obtaining positive consequences regarding to the studied variables. It should be mentioned that studying more samples with using other CBT techniques like relaxation training may lead to more extensive results.

Suggestion for further researches

According to research findings and limitations, it is suggested that:

1. Further study may focus on joint participation of students and their parents in intervention programs because some of the students have some interpersonal problems with their parents.

2. Similar study using large sample may be done, so that findings become more generalized.

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