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## EFFECT OF COGNITIVE BEHAVIORAL THERAPY ON STRESS AMONG ADULTS

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### ABSTRACT

Stress is a common occurrence in day-to-day life and sometimes it will be a reaction or sometime will be a stimulus. The main aim and objective of the study were to assess the level of stress among adults and effectiveness of cognitive behavioral therapy in reduction of stress. "The research design selected for the study was pre-experimental one group pretest and posttest research design". A non-probability convenience sampling techniques was used to obtain sample of 60 adult people who satisfied the inclusion criteria. The modified psychological stress assessment scale, which is a standardized measure for assessing the level of stress among adult people, was administered to conduct the pre-test and the post-test. This tool contains 30 items. This is a 4 point scale and the total score is 90. After assessing the pre test stress level, cognitive behavioral therapy was provided to each sample for 30 days for duration of 45 minutes per day each morning. After 30 days stress was measured by using same modified psychological stress assessment scale. Mean of the pre-test and post-test was (61.05) and (25.85) and standard deviation of the pre-test and post-test was (11.89) and (8.27). The Mean difference was (35.2). The calculated 't' value (25.29) was greater than the table value (1.67) at 0.05 level of significance. This showed that there was a significant difference between pre-test and post-test level of stress scores among adult people. Calculated chi square value was significant with age, educational status and other variables were not significant. From the

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results of the study it was concluded that the cognitive behavioral therapy was effective in reducing the stress level among adult.

**Keywords: Effect, Cognitive behavioral therapy, Stress, Adults**

## 1. INTRODUCTION

Stress is a typical physical, mental, and emotional reaction to circumstances that interfere with daily life [1]. People endure stress in varied degrees extremely regularly in all areas of their lives due to social complexity or personal high expectations. Stress has an impact on health by lowering resistance to disease and raising vulnerability to illness [2].

Cognitive behavioral therapy is a sort of psychotherapy therapy that aids individuals in recognising and altering harmful or unsettling thought patterns that have an adverse impact on their behaviour and emotions [3]. Some people have a tendency to feel pessimistic and unable to address difficulties when under stress. CBT encourages more rational thinking to increase coping skills with stress. CBT has its roots in the clinical application of concepts from learning theory, including classical and operant conditioning. In the 1950s, so-called "first-wave" behavioural treatment was created [4].

In the US, Aaron Beck used cognitive therapy for depressive patients utilising Ellison's model and Albert Ellis established rational emotive therapy to assist clients in changing their irrational thinking when confronting stressful circumstances [5].

Later, cognitive therapy and behavioural therapy were combined in theory and practise, giving rise to "second-wave" CBT in the 1960s. The first and second waves of CBT were attempts to create rigorous and well-defined approaches based on fundamental ideas that had been empirically proven [5]. Second-wave versions of CBT have been the preeminent psychotherapies globally since the 1960s. But more recently, a third-wave version of CBT has gained popularity, giving rise to fresh approaches to treatment like acceptance and commitment therapy, dialectical behaviour therapy, mindfulness-based cognitive therapy, functional analytic psychotherapy, and extended behavioural activation; additional variants may exist, but this is speculative [6].

In the field of psychosomatic medicine, cognitive restructuring has been shown to be effective in reducing psychosomatic symptoms [7], exposure therapy is suitable for a variety of anxious disease conditions like agoraphobia and panic disorder [8], and mindfulness can lessen the pain associated with stress in fibromyalgia patients [9]. With or without the assistance of doctors, a number of online and computer-based CBT programmes have also been created; these

can be accessible via tablets or smartphones [10]. In light of this, this study concentrated on the efficiency of CBT using a biopsychosocial approach and suggested methods to encourage its usage among both patient and non-patient populations.

The researcher also noted that it would be especially helpful for those under more stress, thus he chose adult stress sufferers for the study. They are able to communicate their difficulties by being forced to undergo CBT. In turn, this lowers their stress levels and keeps their minds relaxed. Therefore, the purpose of this study is to gauge the degree of stress among seniors and determine whether CBT has any impact on that level of stress.

## 2. MATERIALS AND METHODS

The study was carried out in the Mehsana district. Pre experimental one group pre test post test research design was chosen for the investigation. A non-probability convenience sampling method was employed to collect 60 samples of participants who met the inclusion criteria. The modified psychological stress assessment scale, which is a standardized measure for assessing the level of stress among adult people, was administered to conduct the pre-test and the post-test. This tool contains 30 items. This is a 4 point scale and the total score is 90. After assessing the pre test stress level, cognitive behavioral therapy was provided to each sample for 30

days for duration of 45 minutes per day each morning. After 30 days stress was measured by using same modified psychological stress assessment scale. The data were examined using the mean, standard deviation, 't' test and chi square test.

## 3. DATA ANALYSIS

Polite and Hungler (1999) described analysis as "a process of organizing and synthesizing data in such a way that research question can be answered and hypothesis tested. Interpretation is refers to process of making sense of the results and of examining the implication of the finding within a broader context. This chapter deals with the analysis and interpretation of data collected from old age home to determine the effectiveness of Dance therapy on stress among old age people. Modified psychological stress assessment scale used for assess the level of stress among old age people. Researcher used descriptive and inferential statistics (Manual) to calculate the analysis from the data.

## 4. RESULTS:

**Table 1** shows that prior to the administration of cognitive behavioral therapy, in pre-test (53.33%) of the samples had severe stress and (46.66%) had moderate stress. In the post-test there was marked improvement in the level of stress of the sample with (18.33%) moderate level of stress and (81.66%) mild stress.

**Table 2** shows that the Mean of the pre-test

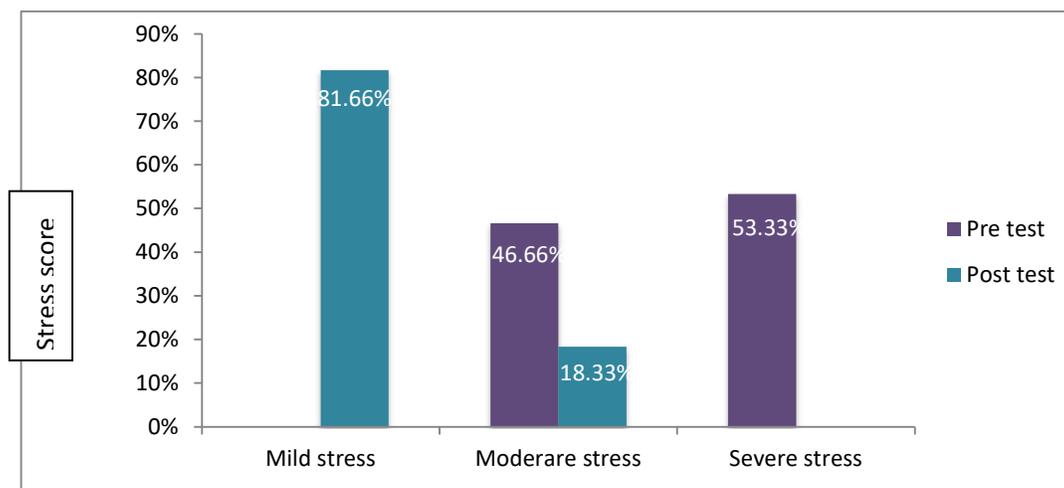
and post-test was (61.05) and (25.85) and Standard Deviation of the pre-test and post-test was (11.89) and (8.27). The Mean difference was (35.2). The calculated 't' value (25.29) was greater than the table value (1.67) at 0.05 level of significance. This showed that there was a significant difference between pre-test and post-test level of stress scores among old age people. Thus it was evident that cognitive behavioral therapy was effective on reducing the level of stress among adult people.

**Table 3**, According to chi-square analysis,

there was a correlation between age, educational attainment. The study came to the conclusion that there was a strong correlation between the post-test stress levels among seniors and the chosen demographic factors. Table 1 reveals that (53.33%) of the entire sample had severe stress and (46.66%) had moderate stress prior to the delivery of dance therapy. There was a noticeable change in the sample's stress level in the post-test, with moderate stress levels (18.33%) and light stress levels (81.66%).

**Table 1: Frequency and percentage distribution of pre-test and post- test level of stress scores among adult people**

Level of stress	Pre-test		Post-test	
	F	%	F	%
Mild stress ( 0-30 )	00	0%	49	81.66%
Moderate stress ( 31-60 )	28	46.66%	11	18.33%
Severe stress ( 61-90 )	32	53.33%	00	0%



**Figure 1: Pre-test and Post-test level of stress score among old age people**

**Table 2: Mean, S.D, Mean difference and 't' value of pre-test and post-test level of stress.**

Parameter	Mean	Standard deviation	Mean difference	't' value	Table 't' value	Level of Significance 0.05
Pre-test	61.05	11.89	35.2	25.29	1.67	S
Post-test	25.85	8.27				

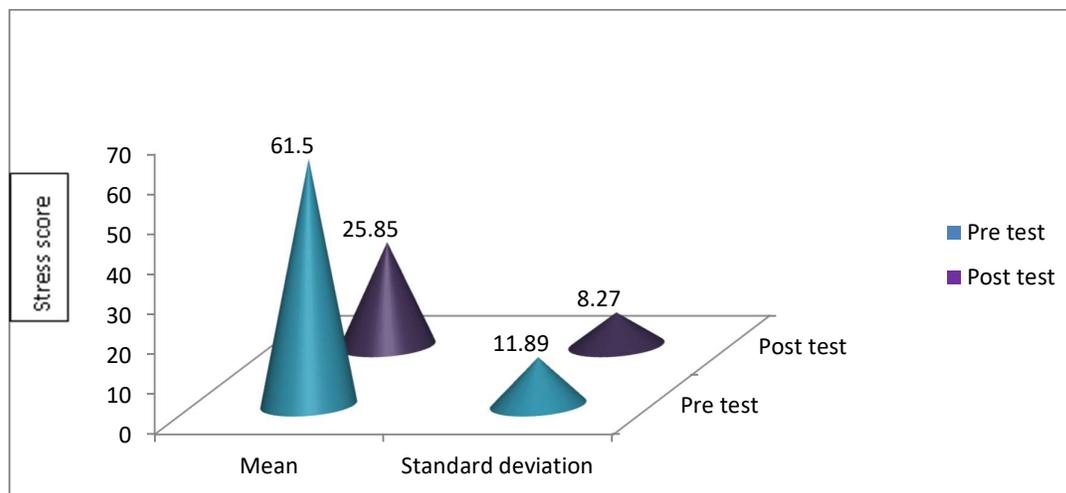


Figure 2: Effectiveness of dance therapy on reducing level of stress among old age people

Table 3: Association of post-test level of stress scores among adult people with their selected demographic variables  
S- Significant; NS- Non Significant

Variables	Category	Frequency	Post-test level of stress				Table value	Chi-Square test	Significant n=60 >0.05 %
			Mild (0-30)		Moderate (31-60)				
			N	%	N	%			
Age	61- 65	19	17	89.47%	2	10.5%	7.82	10.58	S
	66-70	23	20	86.9%	3	13.04%			
	71-75	12	10	83.33%	2	16.66%			
	76-80	6	2	33.33%	4	66.66%			
Sex	Male	24	18	75%	6	25%	3.84	1.18	NS
	Female	36	31	86.11%	5	13.8%			
Marital Status	Unmarried	9	7	77.7%	2	22.22%	7.82	0.51	NS
	Married	33	28	84.8%	5	17.8%			
	Widowed	13	10	76.9%	3	23.07%			
	Divorced	5	4	80%	1	20%			
Religion	Hindu	52	44	84.6%	8	15.38%	5.99	3.09	NS
	Christian	4	3	75%	1	25%			
	Muslim	4	2	50%	2	50%			
	Other	0	0	0%	0	0%			
Education	Uneducated	13	8	61.53%	5	38.46%	9.49	10.30	S
	Primary education	11	7	63.63%	4	36.36%			
	Secondary education	14	13	92.85%	1	7.14%			
	Higher Secondary education	16	15	93.75%	1	6.25%			
	Graduates	6	6	100%	0	0%			
Previous occupation	Government	9	6	66.66%	3	33.33%	7.82	3.62	NS
	Semi government	16	12	75%	4	25%			
	Private	25	23	92%	2	8%			
	Other	10	8	80%	2	20%			
Source of income	Pensioner	12	8	66.66%	4	33.33%	5.99	3.99	NS
	Support from children	32	29	90.6%	3	9.37%			
	Dependent on old age home	16	12	75%	4	25%			
	Others	0	0	0%	0	0%			

## 5. DISCUSSION:

The aim of the study was to evaluate the efficacy of cognitive behavioral therapy in lowering stress in adults. The results of the study demonstrate that cognitive behavioral therapy is effective in reducing stress in seniors. This strategy works well in nursing homes for the elderly to reduce stress.

A study conducted by Jinzi in china and the findings showed that the effectiveness of CBT in improving the psychological health among patients with COVID-19, also suggests that CBT should be focused on patients with chronic disease and those who have longer hospital stays. These results have important implications in clinical practice in improving psychological health in the context of COVID-19 pandemic [11]. Another study conducted by Mutsuhiro and his study findings indicated that indicated that CBT was effective for a variety of mental problems (e.g., anxiety disorder, attention deficit hypersensitivity disorder, bulimia nervosa, depression, hypochondriasis), physical conditions (e.g., chronic fatigue syndrome, fibromyalgia, irritable bowel syndrome, breast cancer), and behavioral problems (e.g., antisocial behaviors, drug abuse, gambling, overweight, smoking), at least in the short term; more follow-up observations are needed to assess the long-term effects of CBT [12].

Sara S done a study, she concluded that cognitive-behavioral treatments are effective on anxiety sensitivity and hope. Therefore, stress-management-based cognitive-behavioral training can reduce students' anxiety sensitivity and increase their hopes for coping with challenges [13]. To reducing stress another researcher proved that other therapies like dance therapy on stress and anxiety among working women by Manali B., et al. (2020) provides support for the findings of our study. Additionally, this study discovered that dance therapy was effective in helping working women reduce their stress and anxiety [14].

## 6. CONCLUSION:

The study's findings led to the conclusion that adult people experience high levels of stress. To lower the stress level, they need various measures. The study's findings show that there is a substantial relationship between demographic factors including age, education and whereas other factors are not significantly related to the level of stress. The 't' value was 25.29, greater than the table value at [p 0.05] level, indicating that adults' stress levels decreased as a result of CBT therapy. It is an effective strategy to lower stress levels.

## 7. Authors contribution statement

Prakash D conceptualized, designed and gathers data. Margaret J and R Ruckmani analyzed these data and inputs were given

by Punitha P and silambarasan K discussed the methodology, results and contributed to the final manuscript

### 8. Acknowledgement

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### 9. Conflict of interest

Conflict of interest declared none.

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