

# The Study to Assess the Effectiveness of Acceptance and Commitment Therapy on Depression and Bio Physiological Parameter among Client Diagnosed with Cancer in Saveetha Medical College and Hospital, Thandalam, Chennai

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## ABSTRACT

**Background:** The current study aims to evaluate the impact of acceptance and commitment therapy on bio physiological parameters and depression in patients at SMCH who have been diagnosed with cancer. **Methods and Materials:** It used a quantitative, quasi-experimental design. Using the purposive sampling method, a total of 60 samples were selected. The experimental group received exposure to acceptance and commitment therapy while the demographic variable, depression pretest and posttest, and biophysiological parameters were evaluated using structured questionnaires. After that, information was gathered and examined. **Result:** According to the study's findings, there is a statistically significant ( $P < 0.01$ ) correlation between posttest depression levels and specific demographic factors. **Conclusion:** According to the study's findings, acceptance and commitment therapy is crucial for lowering depression in hospitalised cancer patients.

**KEYWORDS:** Depression, Acceptance and commitment therapy, physiological parameter

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## INTRODUCTION

Cancer patients frequently experience problems with anxiety and depression. Cancer is one of the most stressful life events for a person, and stress is frequently a trigger for depression and anxiety [1]. These imbalances in mental health could lead to more problems and hinder cancer treatment. For instance, patients with untreated depression or anxiety may be less likely to continue their healthy habits and take their cancer treatment medication due to fatigue or a lack of motivation. Additionally, they might withdraw from friends and family, which would prevent them from seeking the necessary financial and emotional support to deal with cancer [2]. This could then lead to more stress and despondent emotions. Internationally, routinely checking for distress is advised to improve cancer treatment [3]. Without counting non-melanoma

skin cancer, there were nearly 12.7 million new cases of cancer diagnosed globally in 2020, and by 2030, this number is projected to rise to 21.3 million [4]. They had cancer in the following proportions: 7.8% stomach cancer, 8.0% colon cancer, 12.7% lung cancer, 10.9% breast cancer, and 7.1% prostate cancer [5]. Cancer patient survival rates have increased as a result of recent improvements in diagnosis and treatment. Mental health issues like depression are common among cancer patients and survivors [6]. This could make it more difficult for the patient to handle their cancer treatment and add to the stress of their condition. It could also lengthen their stay in the hospital, lower their quality of life, and increase their risk of committing suicide [7]. Studies have estimated the prevalence of depression in cancer patients over

the past few decades. The prevalence of depression overall among cancer patients is still unknown, though. Prevalence rates in earlier studies ranged between 0% and 58% [8]. It can be challenging to identify depression in cancer patients. Cancer symptoms and its treatment are similar to indistinguishable depression symptoms, such as exhaustion, loss of appetite, and sleep disturbance [9], making depression simple to overlook. A number of psychotherapies have emerged over the past 20 years and are collectively referred to as the third wave of cognitive behavioural therapies. These include mindfulness-based cognitive therapy, dialectical behaviour therapy, acceptance and commitment therapy, schema therapy, the cognitive behavioural analysis system of psychotherapy, and meta-cognitive therapy [10]. Acceptance, diffusion, the now, self, values, and committed action are among the six processes that make up ACT. The acceptance and mindfulness processes make up the first four components of acceptance and commitment therapy, while the commitment and behaviour change processes make up the final four. As a result, a simple definition of ACT is a cognitive and behavioural intervention that incorporates commitment, behaviour change, and processes for acceptance and mindfulness in order to produce psychological mutability [11]. The purpose of the current study is to evaluate the impact of acceptance and commitment therapy on depression in cancer patients.

#### Material and methods

A quantitative technique with a quasi-experimental study design was adopted. The setting was Saveetha Medical College and Hospital in Thandalam, Chennai. The current study was carried out after gaining ethical approval from the Saveetha Institute of Medical and Technical Science's institutional ethical committee

and an official authorization letter from the SMCH's director. Study Participants who matched the inclusion criteria, were accessible during the study time, were cooperative, and understood both Tamil and English the study's exclusion criteria are samples who are unwilling to participate. The data were acquired using a purposive sampling approach, with a sample size of 60. The investigator described the purpose of the study to each study participant and signed consent that was acquired from them. A pre-assessment semi-structured questionnaire was used to obtain demographic information and the level of depression from the samples. Biostatistics was used to analyse the data. Frequency and percentage were used to characterise the sample characteristics. A chi-square was used to correlate the amount of depression with the demographic characteristics they chose.

## RESULTS AND DISCUSSION

### Section A: Description of the demographic variables of the depression patient

According to the findings, most members of the experimental group were between the ages of 31 and 50, 83.3 percent of them were men, 56.7% were Hindu, only 36.7% had any kind of formal education, and 43.3% worked as coolies and lived in an urban area.

According to the findings, the majority of the participants in the control group were male, 100% were in the age ranges of 31–50 and 61–70, 36.7% identified as Christians, only 30.0% had no formal education, and 43.3% worked as coolies and lived in an urban area.

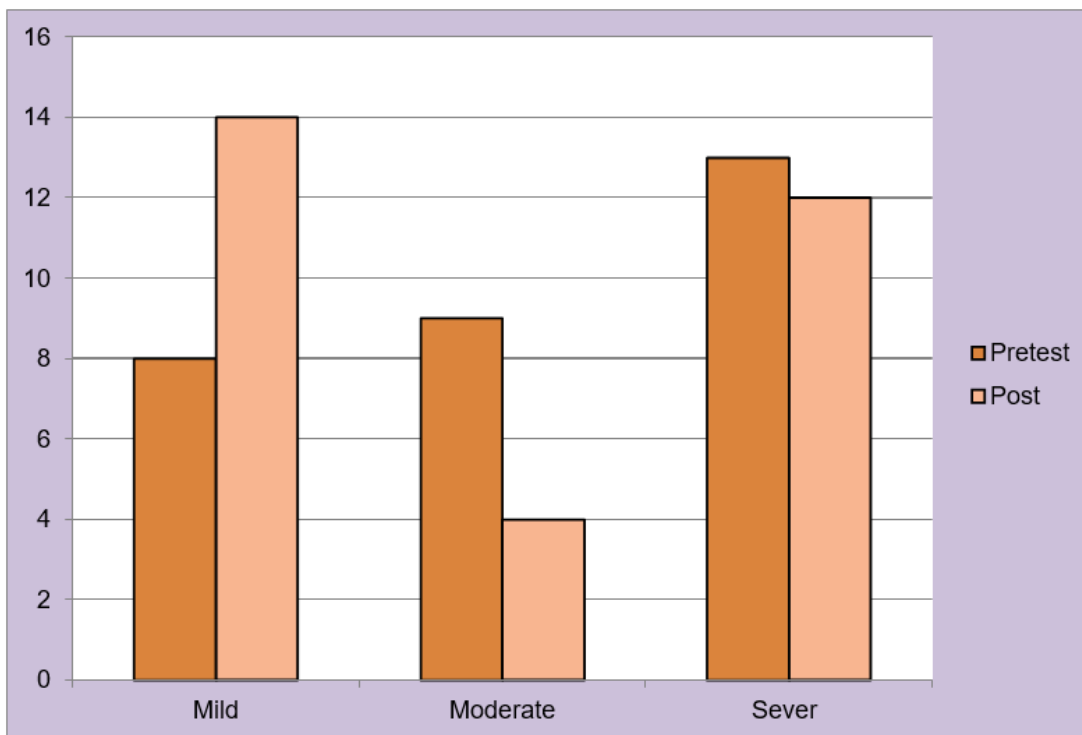
### SECTION B: Assessment of level of depression and bio physiology parameters in experimental and control group

**Table 1: Frequency and percentage distribution of pretest and post-test level depression in the experimental and control group.**

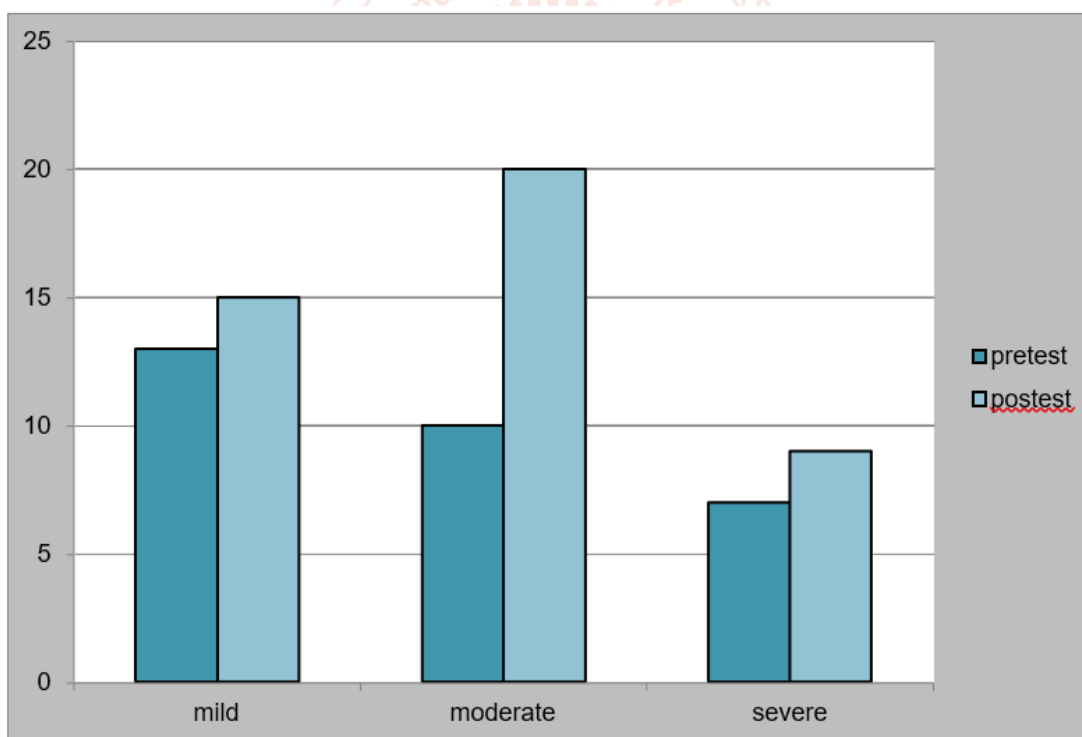
**n = 30**

Group	Depression	Mild depression		Moderate depression		Severe depression	
		No.	%	No.	%	No.	%
Experimental Group	Pretest	8	26.67	9	30.0	13	43.33
	Post Test	14	46.67	4	13.33	12	40.0
Control Group	Pretest	13	43.33	10	33.3	7	23.33
	Post Test	15	50.0	6	20.0	9	30.0

Table 1 shows that the majority of them, 43.3%, were in severe depression in protest among the experimental group. Posttest maximum in mild depression about 43.3% were in mild depression in the pretest, and 50.0 were in the same mild depression in the posttest in the control group.



**Figure 1: Percentage distribution of pretest and post-test level of depression in experimental**



**Figure 2: Percentage distribution of pretest and post-test levels of depression in the Control group**

**Table 3: Frequency and percentage distribution of pretest and post-test level bloodpressure in the experimental and control group.**

N= 30

Group	Blood Pressure (BP)	Normal		High BP		Low BP	
		No.	%	No.	%	No.	%
ExperimentalGroup	Pretest	17	56.7	8	26.67	5	16.67
	Post Test	13	43.33	5	16.67	12	40.0
Control Group	Pretest	14	46.67	9	30.0	7	23.33
	Post Test	16	53.33	7	23.33	7	23.33

In the experimental group, the majority of them had high blood pressure in the pre-test and normal blood pressure in the post-test, whereas in the control group, the majority of them had normal blood pressure in the pre-test and post-test.

### SECTION C:

Comparison of pretest and posttest levels of depression and bio-physiology parameters between the experimental and control groups. The result depicts that the pretest mean score was 1.40 with a standard deviation of 0.93, and the posttest mean score was 1.30 with a standard deviation of 0.98. The calculated paired 't' test value of  $t = 1.795$  was statistically highly significant.

### SECTION D: Association of level of stain intensity and stain area with selected demographic variables.

The result shows that the demographic variable gender shows a significant association.

### CONCLUSION

Cancer patients often experience anxiety and depression, which can hinder treatment and lead to fatigue and lack of motivation. A study evaluating acceptance and commitment therapy's impact on cancer patients found that it effectively reduced depression in cancer patients, highlighting the importance of maintaining healthy lifestyles and seeking support from loved ones.

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### AUTHOR'S CONTRIBUTION

All the authors actively participated in the work of the study. All authors read and approved the final manuscript.

### CONFLICT OF INTEREST

The authors declare no conflicts of interest.

### FINDING SUPPORT:

None

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