

COGNITIVE BEHAVIORAL THERAPY ON PANIC ATTACKS AMONG EMERGING ADULTS: A QUASI EXPERIMENTAL DESIGN

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ABSTRACT

The present research goal was to investigate the efficacy of Group Cognitive Behavioral Therapy (GCBT) in the elimination of panic attacks in emerging adults. Following a thorough literature review, a hypothesis was made that Group CBT would play a major role in reducing the high rate and intensity of panic attacks among university students in comparison with a control group. The study sample included 60 participants, who were further separated into two groups: an experimental group (n = 30) and a control group (n = 30). The participants were young adults aged 18-25 years, and they were recruited in the universities. Panic attack symptoms were measured by using the Panic Disorder Self Report. The Group Cognitive Behavioral Therapy (GCBT) sessions were applied to the experimental group, whereas the control condition did not have any psychological intervention within the research period. The data were analyzed through statistical tests, descriptive statistics, and independent sample t-tests. The findings revealed that the study participants in the experimental group exhibited a drastic change in the symptoms of panic attacks at the post-test as compared to the control group. The results indicate that Group Cognitive Behavioral Therapy (GCBT) has the potential of being a good psychological intervention in minimizing panic attacks in emerging adults.

I. INTRODUCTION

Panic attacks are sudden spurts of strong body arousal, accelerating heartbeat, lightheadedness, chest aching, and trembling, as well as mental and emotional ones like apprehension of losing control, fear of dying, and disastrous interpretations of physical sensations (Roy-Byrne et al., 2006). The panic disorder is characterized by the recurrence of panic episodes and their unexpectedness as well as enduring anticipation of such episodes in the future (Lack, 2024). Modern diagnostic models, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) have highlighted the clinical implications of waiting panic attacks by identifying them as a transdiagnostic phenomenon that may be experienced by a broad spectrum of mental disorders. The dissociation of panic disorder and panic attacks as a diagnostic specifier are indicative of a greater focus on panic symptoms as a clinically significant phenomenon on their own (Asmundson et al., 2014). There is early evidence that non-fearful panic can explain about 20-40 percent of panic disorder in medical populations and that such panic disorder is characterized by similar levels of functional impairment and clinical severity as those seen in typical panic disorder occurrences (Kushner & Beitman, 1990). The facts also suggest that the longer the untreated panic disorder exists, the more severe the symptoms will be, the more comorbidity with depressive disorders, and the more likely the person will have suicidal thoughts,

which is why timely and efficient intervention is necessary (Kim et al., 2026). It has been revealed that long-standing panic-related suffering has been suggested to confirm fear of body sensations over time, which leads to a self-reinforcing loop of vulnerability (Hunt et al., 2022). The recent conceptualizations point out the heterogeneity of the symptoms of panic. The cardio-respiratory, cognitive, vestibular, and mixed somatic dimensions have been seen as separate clusters of symptoms that are identified through empirical research (Meuret et al., 2006; Drenckhan et al., 2015). The operationally defined panic attacks can be interpreted as the presence and intensity of the symptoms of panic, as reported by the participants in the case of anxiety-inducing situations and observed over the course of the intervention. These symptoms can be understood as the main psychological disorder that is the focus of the cognitive behavioral therapy introduced in the present research (American Psychiatric Association, 2022).

Panic attacks and panic-related symptoms are one of the important mental health issues because of their pivotal onset, followed by strong physiological activation and dramatic influence on a person. The features of panic disorder include a repetitive, unpredictable panic attack that is followed by a constant worry about another attack and its effects, which may lead to the development of avoidance maladaptation and functional disability (Yilmaz et al., 2025). According to modern studies, the development of panic symptoms is common in the late adolescent and early adulthood when the body is exposed to critical developmental changes that make them more vulnerable to panic attacks (Wolitzky-Taylor et al., 2026). The complexity of the panic attacks is also supported by neurobiological research. Panic like defensive responses in animal models mediated by the dorsal periaqueductal gray are quite similar to those in humans and this supports fear-circuit dysregulation models with a translational perspective (Schenberg et al., 2001). The antidepressants used in the treatment of panic disorder were found to selectively decrease such panic-like reactions, which also indicates that it is not a one-time anxiety event but a long-term process of fear control (Guan & Cao, 2024). Panic disorder and panic attacks are linked with a significant individual and social cost. The epidemiological data suggest that the prevalence of anxiety disorders, such as the panic disorder, is one of the most common causes of disability on a global level, and the number of people affected by this issue is rising in adolescence and young adulthood (Xiong et al., 2022; Cao et al., 2024).

According to current reports on the situation worldwide, the number of adolescents and emerging adults with anxiety-related distress has been growing significantly over the last few years, and the rates of prevalence have been soaring in recent years among people of various sociocultural backgrounds (Tang et al., 2026). Although emerging adulthood is a period of personal growth and self-exploration, it is also a time of instability, lack of clear focus, and increased exposure to stressors, which can further increase susceptibility to anxiety-related psychopathology (Wolitzky-Taylor et al., 2026). The cognitive Behavioral Therapy (CBT) is the most commonly accepted psychological treatment of panic disorder and panic-related symptoms and has a strong empirical basis of efficiency (Hofmann et al., 2025). Although the focus used to be on individual CBT, the group-based one has been receiving more and more focus because it is cost-effective, can scale up, and has specific therapeutic processes, such as the normalization of symptoms, peer modeling, and social reinforcement (Bieling et al., 2022; Whitfield and Scott, 2018). CBT in the panic disorder problematizes the concept of panic attacks as the outcome of catastrophic interpretation of harmless physical signals, which cause escalating anxiety, physiological stimulation, and avoidance (Yilmaz et al., 2025). The interaction of cognitive and behavioral processes leads to the perpetuation of the panic cycle and thus, they are the key candidates of interventions. Objective and hypothesis of the study are given below;

Objective

- To assess the effectiveness of group cognitive behavioral therapy (GCBT) in reducing the frequency and severity of panic attacks among emerging adults.

Hypothesis

- There will be a significant reduction in the frequency and severity of panic attacks among emerging adults in the experimental group compared to the control group after 12 sessions of Group Cognitive Behavioral Therapy (GCBT).

II. METHOD

Participants

The present research was done in the Pakistani universities of Rawalpindi and Islamabad. The participants were screened to recruit them in various departments. The data was collected and the intervention sessions were performed in the quiet and confidential counseling rooms that were offered in the university setting. The current study used quasi experimental pretest posttest control group design. The research design was applicable in studying the efficacy of Group Cognitive Behavioral Therapy on the symptoms of panic attacks in a group of university students. The reason why the quasi experimental design was selected is because it is also suitable in investigating intervention effects in a real world situation whereby full randomization may not be achievable (Shadish, Cook, and Campbell, 2002). The sample size was 60 university students ($N = 60$) in the age group of 18 to 30 years old. These participants were randomly divided into two groups whereby 30 students were given to the experimental group and 30 students were given to the control group. The participant selection was done using purposive sampling technique. The participants were selected from public and private universities of Islamabad.

Measures

Following measures were used for data collection. **[1]** In order to give a clear description of the study sample, the participants were asked about their demographic variables. These were age (between 18 to 30 years), academic program and semester, gender, education level and name of university. Data on the family monthly income, family structure, and marital status (single, married, engaged or in a relationship) was also taken. **[2]** Panic Disorder Self-Report Scale is a publicly accessible self-report screening tool and was applied in academic research with the necessary reference to the original authors. The scale consisted of 24 items. The first 19 questions measured feelings of panic attacks, anticipatory anxiety, and behavior change; the last 20 and 21 questions measured feelings of distress, functional interference on a 0-4 Likert scale. Questions 22 to 24 provided further clinical data regarding the timing of the attack, the use of substances, and previous medical histories and were not used in the overall score. A score that was higher had a more severe panic symptom.

III. RESULTS

Table I: Frequency Distribution of Demographic Characteristics of Participants

Variables	Category	<i>n</i>	%
Gender	Male	26	43.3
	Female	34	56.7
Educational Level	Undergraduate	48	80.0
	Postgraduate	12	20.0
Type of University	Public	36	60.0
	Private	24	40.0
Family Income	Low	18	30.0
	Middle	30	50.0
	High	12	20.0
Marital Status	Single	55	91.7
	Married	5	8.3
Academic Stress Level	Low	10	16.7
	Moderate	32	53.3
	High	18	30.0
Previous Psychological Counseling	Yes	14	23.3
	No	46	76.7

Note. $N = 60$

Table II: Psychometric Properties of Study Variables at Pre-Test

Variable	Subscales	K	α
Panic Attacks (PDSS)		7	.85

Note. N = 60. K = number of items; α = Cronbach's alpha reliability coefficient

Table 2 displays the psychometric properties of the Panic Disorder Severity Scale (PDSS) at pre-test. The scale demonstrated good internal consistency ($\alpha = .85$), indicating satisfactory reliability. The mean score was 15.18 (SD = 5.36). The skewness (.39) and kurtosis (-.38) values were within acceptable limits, suggesting that the data were approximately normally distributed and suitable for parametric analyse.

Table III: Independent Sample t-test for Panic Attacks between Experimental and Control Group at Post-Test

Variables	Group	N	M	SD	t		Men		Women			
Panic Attacks	Experimental	30	9.12	4.11	4.21*	Panic Attacks	M	SD	M	SD	t(58)	p
	Control	30	14.68	5.06			109.82	15.0	110.42	15.5	.29	.76

Note. M = Mean; SD = Standard Deviation; t = independent sample t-test value

* $p < .05$

Table 3 displays the comparison of post-test panic attack scores between the experimental and wait-list control groups. Participants who received Group Cognitive Behavioral Therapy obtained significantly lower panic attack scores (M = 9.12, SD = 4.11) than participants in the control group (M = 14.68, SD = 5.06). The difference between the two groups was statistically significant, $t(58) = 4.21$, $p = .001$, indicating that Group Cognitive Behavioral Therapy was effective in reducing the frequency and severity of panic attacks among emerging adults. Therefore, Hypothesis was supported.

IV.DISCUSSION

The current research sought to investigate the efficacy of Group Cognitive behavioral Therapy (CBT) to minimize panic attacks in emerging adults. The research results are an empirical evidence of the efficiency of the CBT-based interventions to treat panic-based symptoms in university students. The findings showed that subjects in the Group CBT showed a considerable decrease in the symptoms of panic attacks than the control group. Comprehensively, the findings reflect the relevance of group psychological interventions in enhancing emotional regulation and alleviating distress caused by panic among young adults especially in university environments where students tend to develop significant amount of psychological stress. The hypothesis was confirmed by the results of the current study. The results showed that members of the experimental group who were administered Group Cognitive Behavioral Therapy (CBT) had significantly lower scores on panic attacks on post-test than those in the control group. This indicates that CBT had effectiveness in minimizing the rate and severity of panic attacks in the emerging adult university students. The fact the number of panic symptoms decreased in the experimental group is evidence of how effective the CBT methods of cognitive restructuring, psychoeducation, exposure to feared situations, and anxiety management strategies were in enabling individuals to alter their maladaptive thoughts and decrease avoidance behaviors related to panic attacks.

The results are in line with the prior studies that have proved Cognitive Behavioral Therapy to be an effective first-line intervention to treat panic disorder and panic-related symptoms. Indicatively, studies conducted by Barlow (2002) and Craske and Barlow (2007) stressed that CBT can be used to enable individuals to recognize and dispute catastrophic meanings to bodily sensations which tend to cause panic attacks. In the same manner, Clark et al. (1994) found out that CBT majorly minimizes the symptoms of panic through targeting dysfunctional beliefs when it comes to anxiety and panic sensations. In addition to this, group-based CBT interventions have also been found to generate significant changes in panic symptoms. Research by Norton and Price (2007) and McEvoy (2007) resulted in the conclusion that group CBT can be used effectively and cheaply to treat anxiety disorders (including panic disorder). Groups avenues enable the participants to share their experiences, build coping skills with the group, and get social

support, which additionally improves the outcomes in treatments. The current results are also consistent with the research that suggested that students of a university often report the symptoms of panic because of academic stress, future uncertainty, and developmental changes in emergent adulthood. In general, the results of the current research indicate that Group Cognitive Behavioral Therapy is an effective intervention to help minimize panic attacks in emerging adults, which facilitates the validation of the hypothesis.

V. CONCLUSION

The objective of the current research was to investigate the effectiveness of Group Cognitive Behavioral Therapy (CBT) to reduce the panic attacks among emerging adults. The research results proved that individuals who were given the Group CBT intervention experienced a substantial decrease in the frequency and severity of panic attacks with regard to the control group. These findings will be empirical evidence that CBT-based interventions are effective in the treatment of panic-related symptoms amongst university students. Generally, the results imply that Group Cognitive Behavioral Therapy is a helpful and successful intervention in emerging adults with panic attacks. The paper also highlights the importance of making psychological interventions available in the university to help students maintain good mental and psychological health. Deploying the evidence-based practice based on the use of CBT, schools and mental health experts can be instrumental in fostering psychological resilience and enhancing the quality of life in general in the emerging adults.

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