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Efficacy of Unified Protocol for Trans-diagnostic Treatment of Emotional Disorder Program for Panic Disorder Patients in Peshawar

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ABSTRACT

The present study aimed to examine the efficacy of the Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders (UP-TTED) in reducing the severity of panic disorder among patients in Peshawar. A pre-test–post-test control group experimental design was employed. A total of 40 participants diagnosed with panic disorder according to DSM-5 criteria were recruited through purposive sampling from the outpatient department of Naseerullah Khan Baber Memorial Hospital, Peshawar. Participants were randomly assigned to an experimental group (n = 20) and a control group (n = 20). The experimental group received twelve weekly sessions of cognitive-behavioral therapy based on the Unified Protocol, while the control group received pharmacological treatment only. The Panic Disorder Severity Scale (PDSS) was administered at baseline and after three months. The findings revealed a statistically significant reduction in panic disorder severity in the experimental group compared to the control group, suggesting that the Unified Protocol is an effective transdiagnostic intervention for panic disorder.

Keywords: *Panic disorder, Unified Protocol, Trans-diagnostic treatment, Cognitive Behavioral Therapy, PDSS*

INTRODUCTION

Panic disorder is a chronic and debilitating anxiety disorder characterized by recurrent and unexpected panic attacks followed by persistent concern about future attacks and maladaptive behavioral changes (American Psychiatric Association, 2013). Panic attacks involve sudden surges of intense fear accompanied by physical symptoms such as palpitations, shortness of breath, chest pain, dizziness, and fear of losing control or dying (Roehr, 2013).

People with Panic Disorder routinely visit the emergency room and general practitioners, and they frequently present with gastrointestinal distress, dizziness, and unexplained cardiac problems. Panic Disorder often appears in the middle of adolescence and around age 40. However, the age of onset is typically between 20 and 24. In primary care settings, one of the most frequent diseases that is misdiagnosed and not acknowledged is Panic Disorder. Even though both panic disorder and generalized anxiety disorder share many of the same physical and somatic symptoms,

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panic attacks that are accompanied by palpitations or chest tightness may seem more likely to be misdiagnosed as heart attacks due to their sudden and severe onset. Panic Disorder may be related to low levels of education, ignorance, and poverty. Males are twice as likely to suffer from the condition as females (Simon et al, 2005).

In Pakistan, panic disorder remains underdiagnosed and undertreated due to stigma, limited mental health resources, lack of awareness, and misinterpretation of symptoms as physical or supernatural phenomena (Aslam, 2017). Patients frequently seek repeated medical consultations without receiving appropriate psychological treatment, resulting in chronic distress and functional impairment.

Cognitive-behavioral therapy (CBT) is considered a first-line psychological treatment for panic disorder. CBT focuses on modifying catastrophic misinterpretations of bodily sensations and reducing avoidance behaviors that maintain panic symptoms (Austin & Richards, 2001). However, disorder-specific CBT protocols may be challenging to implement in settings where comorbidity is high and resources are limited.

The Unified Protocol for Transdiagnostic Treatment of Emotional Disorders (UP-TTED) was developed to address shared emotional mechanisms underlying anxiety and mood disorders (Barlow et al., 2011). The Unified Protocol is a structured, CBT-based intervention that operationalizes the transdiagnostic approach by targeting emotional avoidance, cognitive inflexibility, and maladaptive emotion regulation strategies.

Despite strong international evidence supporting the efficacy of UP-TTED, empirical research from Pakistan, particularly in public sector hospitals, is scarce. This lack of localized evidence represents a significant research gap. Therefore, the present study aimed to evaluate the efficacy of UP-TTED in reducing panic disorder severity among patients attending a tertiary care hospital in Peshawar.

LITERATURE REVIEW

Panic disorder is associated with significant psychological distress and high comorbidity with other anxiety and mood disorders (Berenz et al., 2019). CBT has consistently demonstrated efficacy in reducing panic frequency and severity. However, disorder-specific approaches may not adequately address comorbid conditions.

The Unified Protocol targets shared mechanisms across emotional disorders, including heightened emotional reactivity, avoidance of internal sensations, and maladaptive cognitive appraisals. Randomized controlled trials have demonstrated that UP-TTED produces outcomes comparable to diagnosis-specific CBT protocols, with lower attrition rates (Barlow et al., 2017).

Meta-analytic evidence further supports moderate to large effect sizes for UP-TTED across anxiety and depressive disorders (Osma et al., 2022). However, research examining UP-TTED within Pakistani clinical settings is limited, highlighting the need for context-specific evidence.

The UP also goes beyond standard CBT by emphasizing the importance of ideas, feelings, and actions in producing inner emotive capabilities, as well as the function of emotion (s) regulation in altering those experiences. As a result, the UP stresses the adaptive and functional character of emotions, assists in increasing emotional tolerance, and aims to detect and rectify dysfunctional efforts to manage emotional experiences.

The primary edition of the Unified Protocol management booklet comprised of meetings concentrating on the originator cognitive reevaluation, highlighting two main rational tricks: assessing the likelihood of undesirable event occurrence (making inferences) and overthinking, the inhibition of psychological prevention and amplified emotive alertness, acknowledgment and alteration of nonfunctional beliefs (Craske & Barlow, 2006).

Steele et al. (2018) claim that different disorders across the range of anxiety and mood disorder categories can be accommodated within a single-dimensional classification system. A research-based, emotion-focused CBT called UP emphasizes the main causes behind psychological disorders, such as avoiding new experiences, being sensitive to worry, having a bad mood, and having trouble controlling emotions. By supporting an approach-focused perspective on emotions, the UP reduces reoccurrences and, as a result, minimizes the frequency of negative experiences. The Integrated Diagnostics manual "Treatment of Emotional Disorders" CBT techniques concentrate on the temperamental characteristics that underlie all anxiety, depression, and related diseases.

There are five primary modules UP. Two techniques found in the UP are cognitive reappraisal and exposure, although environmental elements are less important than responses to the feelings itself, such as bodily activation, palpitation, etc. The 5 main therapy modules that make up the UP are increased cognitive flexibility, interceptive and situational emotion-focused exposures, knowledge of and tolerance for emotional-related somatic sensations, and detection and prevention of emotional avoidance behaviors. The five main subjects are preceded by two introductory courses that discuss the adaptability of sensations and provide a background for comprehending sensitive capabilities. The second module presents the course while the first focuses on increasing motivation. Gains from the UP continued 18 months following therapy and have been demonstrated to be beneficial in lowering anxiety-related general symptoms. Using traditional single-disorder approaches can cause clinical practitioners time- and money-consuming issues. The trans-diagnostic UP approach resulted in comparable improvement in symptoms on patients' initial diagnosis in contrast to the Single Disorder Protocol lately completed experiment equating the UP to gold-standard SDPs for generalized anxiety disorder (GAD), social anxiety disorder (SAD), panic disorder (PD), and obsessive-compulsive disorder (OCD). The fact that the attrition rates were lower under the UP condition than the SDP condition is intriguing (Steele et al., 2018).

The main ways to handle panic episodes in Panic Disorder are Cognitive-Behavioral Treatment (CBT) and medications. CBT deals with changing thoughts and behaviors linked to panic attacks. It shows that before a panic attack, people might have strong mental reactions to physical events, and CBT helps with these reactions. It also addresses the fear of causing anxiety

during a panic attack. CBT is a short treatment, usually around 20 to 24 sessions. Medicines are another common option to reduce anxiety in biological therapy.

Barlow and colleagues (Barlow et al, 2011) describe the unified protocol of transdiagnostic treatment for emotional disorders (UP) as a type of therapy that concentrates on emotions. The UP is based on cognitive-behavioral therapy (CBT) and consists of different modules. These modules are part of the treatment and address how individuals react to emotions and handle negative feelings.

There is substantial evidence supporting the effectiveness of the Unified Protocol (UP) across various formats, clinical populations, settings, and nations. The viability of UP has been demonstrated in different formats, including online, group, and individual settings. It has shown positive outcomes in diverse clinical populations, such as individuals with eating disorders, anxiety, Obsessive-Compulsive Disorder (OCD), bipolar disorder, trauma, and depressive disorders. The effectiveness of UP has been observed in various healthcare settings, including public health services, ambulatory care, and inpatient care. Furthermore, research studies from multiple nations, including the United States, Japan, Brazil, Spain, Iran, Denmark, and Romania, have consistently shown positive results for the Unified Protocol (Simon &Fischmann, 2005).

In the current study, the researcher intends to test the efficacy of a unified protocol for the Transdiagnostic treatment of emotional disorders program for panic disorder patients. It is a 12-session CBT-based treatment that lasts three months. This procedure is utilized as a therapy method for panic disorder. This research study aims to find out the efficacy of a unified protocol of the Transdiagnostic therapy of emotional disorder program for panic disorder patients of Peshawar over three months. This research is set up as a pre-and post-test to see how effective this unified protocol is.

Objectives

i. To check the prevalence of panic disorder in Peshawar

ii. To see the efficacy of a unified protocol for Transdiagnostic treatment of emotional disorder of panic disorder patients.

Hypotheses

i. In pre-assessment there will be no significant difference in panic disorder severity between experimental and control groups.

ii. The experimental group will show a significant decrease in the severity of panic disorder after receiving unified protocol transdiagnostic treatment than pre assessment.

iii. In post-assessment comparison the experimental group will show a significant decrease in panic disorder severity than the control group

RESEARCH METHODOLOGY

Sample

The sample size comprised of (N=40) 40 diagnosed patients with panic disorder from mild to moderate intensity through purposive sampling technique ranging from 15-40 years of both genders. Among total, 20 participants (n=20) were included in the experimental group and 20 (n=20) in the control group (n=20). The study was conducted at Outpatient department (OPD) of Naseerullah Baber Memorial Hospital Peshawar.

Inclusion criteria

Participants from 15 to 40 years of ages were included in the study. Participants having mild to moderate severity on panic disorder severity scale were included.

Exclusion criteria

Participants who were less than 15 and older than 40 age were excluded. Participants having severe intensity on panic disorder severity scale were not included in the study.

Instruments:

Demographic sheet:

A demographic sheet was used to collect the necessary patient information, including gender, age, education, and marital status.

Panic Disorder Severity Scale (PDSS): (Shear et al., 1997)

The Panic Disorder Severity Scale (PDSS) is a tool designed by Shear and colleagues in 1997. This scale consists of seven questions. It evaluates five main symptoms of panic disorder, including those with or without agoraphobia, and additionally, two questions about how panic affects a person's work and social life. Five questions are related to symptoms, and two questions are based on how the symptoms affect the person's work and social life. The scale is used to measure the severity of panic disorder in individuals who have already been diagnosed with the panic disorder.

The questions or items in the scale evaluate seven dimensions of panic disorder and related symptoms. The seven dimensions i.e. is panic frequency, panic distress, anticipatory anxiety, agoraphobic fear/avoidance, interoceptive fear/avoidance, work impairment/distress and social impairment/distress.

Assessment on this tool takes 5 to 10 minutes in administration. It is a helpful way for quickly determining the degree of panic disorder, additionally measure the intensity of the numerous panic symptomatology.

A clinician interviews the patient, asking about the past month. For each response, the clinician rates the severity on a scale of 0 to 4. It consists of 7 items with Likert scale from 0-4, where 0= means no symptoms, 1= mild, 2= moderate, 3=severe, and4= extreme. Higher numbers indicating more severe symptoms. Total score range from 0 to 28 for raw score. The final score is the average of the ratings on the seven items. Higher sums indicating greater severity of panic disorder. Internal consistency is 0.64 and test retest reliability is 0.84.

Procedure

The researcher used the pre-post experimental design. Participants diagnosed with panic disorder were randomly allocated to two groups; one group received the UP intervention, and the participants of the control group were on medication. Participants were enrolled in the study after having given their informed consent. Written Informed consent was taken by the participants in Urdu. The participants were informed about the whole research process, including its nature and goals. Their privacy and confidentiality were ensured before data collection.

The sample was chosen from the outpatient department (OPD) of the Naseerullah Baber Memorial Hospital, Peshawar, who consulted a psychiatrist and psychologist for help with the symptoms of panic attack disorder. These subjects were then split into two groups through a purposive sampling technique.

The study participants were initially assessed using the panic disorder severity scale to measure the severity and frequency of panic attack disorder as a pretest without delivering any interventions (UP or medications). The PDSS was used to assess seven domains of panic disorder and related symptoms, i.e. panic frequency, panic distress, panic-oriented emotional distress, phobia aversion of circumstances, phobia aversion of sensory events, and difficulty in occupational and psychosocial adjustment.

The same scale was used for post-testing. The sample was randomly assigned to the control and experimental groups. The first was determined as a control, while the second was the experimental group. Each group consisted of 20 participants. Over the course of three months, the experimental group was expected to complete 12 CBT sessions in accordance with the unified protocol plan for treating panic disorder. Each session consists of 60 minutes once a week, carried out at Naseerullah Baber Memorial Hospital, Peshawar. The participants in the experimental group, after a formal assessment session, received a total of 12 therapeutic sessions, which were purely based on UP, while the control group was just asked to take medication. Both groups took a post-test after three months. Over the course of three months, there were a total of 12 sessions that the experiment's participants were expected to attend, one session per week. Medication was the sole psychopharmacological intervention given to or used on participants in the control group. After 3 months, both groups were post-tested on the same scale, i.e., Panic Disorder Severity scale to assess the differences between two groups.

The experimental group received therapeutic sessions which is based on UP consists on different modules. The module of UP covered in these 12 therapy sessions are: Motivation enhancement and setting goals for treatment, Understanding emotions: three component model of

emotions, Recognizing and tracking emotional responses, Emotion awareness training, Cognitive appraisal and Reappraisal, Identifying and evaluating automatic appraisal, Understanding behaviors, Awareness and tolerance of physical sensations, Interoceptive and situational emotion exposures, Accomplishments, maintenance and relapse prevention. In each module different techniques and worksheet are used which was tailored according to the subject understanding. The worksheets were practiced during the sessions and also given as a homework for practice.

Session wise Unified protocol for panic disorder with module and with their goals is mention below.

Unified Protocol Modules and Goals

- Motivation enhancement and goal setting
- Understanding emotions (three-component model)
- Emotion awareness training
- Cognitive appraisal and reappraisal
- Identification of emotion-driven behaviors
- Awareness and tolerance of physical sensations
- Interceptive and situational exposure
- Relapse prevention and maintenance

RESULTS

Table 1

Descriptive statistic of the scales in current study data

Scale	No of items	*M*	*SD*	*S*	*K*	*Coefficient Alpha*
PDSS	07	20.87	2.70	.073	.893	.78

Note. PDSS = Panic Disorder Severity Scale

Table 1 presents the measure of internal consistency of PDSS 7 items, which shows the high reliability of the scale. The scale has coefficient alpha greater than .70.

Table 2

Mean scores, Standard Deviation, and t-values of the experimental and control groups of panic disorder patients before interventions

Variables	Pretest Experimental group (n = 20)		Pretest control group (n =20)				95% CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(38)*	*p*	*LL*	*UL*	
Panic disorder severity scale	20.90	2.673	20.85	2.814	37.8	.954	-1.70	1.807	0.018

Table 2 represent that in Pre-test condition, the significant value for the comparison is t = 0.58, p=0.737, which means that the variability in the two conditions is not significantly different. Cohen's d value shows small effect size.

Table 3

t-values showing differences on pre- test and post-test of the experimental group on Panic Disorder Severity Scale.

Variables	Pre test (n = 20)		Post test (n =20)				95% CI		Cohen's d
	M	*SD*	*M*	*SD*	*t(19)*	*p*	*LL*	*UL*	
Panic Disorder Severity Scale	20.90	2.673	4.50	1.906	21.5	.000	14.805	17.995	7.064

Table 3 presents the differences between the pre- and post- tests of experimental group. Individuals who received unified protocol scored low on PDSS rating scale at post-test which shows significant difference between pre and post scores. Cohen's d value shows large effect size.

	Posttest Experimental group (n = 20)		Posttest control group (n =20)				95% CI		Cohen's d
Variables	*M*	*SD*	*M*	*SD*	*t(38)*	*p*	*LL*	*UL*	
Panic disorder severity scale	4.50	1.90	13.15	2.41	38	0.001	-10.0	-7.25	3.98

Table 4

Mean scores, Standard Deviation, and t-values of the experimental and control groups of panic disorder patients after interventions

The table 4 shows that there exists a significant mean difference between the two groups in posttest conditions where the t value is t= <0.001, p=0.407. As a result, there exist a statistically significant difference between the post-intervention group and the post-control group. The difference between the mean values of the post-control and post-intervention groups is 13.14 and 4.5 respectively, showing that in post assessment comparison of the experimental group, there is a significant decrease in panic disorder severity than the control group. The Cohen's d value is 3.9800, which signifies a substantial difference between the two groups being compared.

DISCUSSION

Unified Transdiagnostic treatments for disorders that share similar characteristics and react to shared satisfying methods are the most recent advancement in Therapeutic interventions that are established on some of the most recent scientific and health analyses. This UP program is intended to help those with emotional problems. All anxiety and mood disorders, such as panic disorder with or without agoraphobia, social anxiety disorder, generalized anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder, and depression, are included in this category.

The goal of this research was to look into and investigate the effects of a unified protocol for the Transdiagnostic treatment of emotional disorders in panic disorder patients. After analysis of the collected data, it is highlighted that our research findings support the proposed hypothesis.

To establish the appropriateness of the chosen PDSS scale for the current investigation, the researchers first evaluated its reliability and psychometric properties using a representative sample of the general population. The resulting descriptive statistics presented in Table 1 revealed that the scale exhibited acceptable levels of kurtosis and skewness, indicative of a normally distributed measurement tool. Moreover, the internal consistency of the PDSS scale demonstrated high reliability, with a coefficient alpha of .78.

For assessing 1st hypothesis of the current study, the initial assessment of significance values for the comparison of data collected from patients before testing is a critical step in understanding the baseline characteristics of the study groups. In our case, the calculated values of $t = 0.58$ and $p = 0.737$ indicated that there was no statistically significant difference in variability between the two conditions being compared (Table 2).

This outcome suggests that before the implementation of any interventions, the groups being compared exhibited similar levels of variability in the measured variables. Within the framework of the Unified Protocol for panic disorder, this observation holds significance as it underscores the baseline equivalence of the groups, which is crucial for ensuring the validity of subsequent comparisons.

The lack of significant difference in variability supports the assumption that any observed changes in the outcomes following the intervention can be attributed to the treatment itself rather than pre-existing differences in the groups. This is supported by the principles of experimental design, emphasizing the importance of establishing a balanced starting point for treatment comparisons (Cohen et al., 2013).

Furthermore, the insignificance of variability differences aligns with the Transdiagnostic approach inherent in the Unified Protocol. This approach assumes common underlying emotional processes across various emotional disorders, which could lead to similar baseline characteristics among patients with panic disorder, irrespective of the specific interventions being examined (Barlow et al., 2018).

The results in Table 3 indicate a significant difference in the PDSS rating scale scores between the pre and post-tests for individuals who received the unified protocol. This finding suggests that the intervention had a notable impact on the participants' scores, leading to lower scores post-intervention. The decrease in PDSS scores implies an improvement in the symptoms or issues being measured by the scale (Table 3).

This outcome aligns with the expectations of the unified protocol's effectiveness in addressing the targeted concerns. The observed change underscores the potential efficacy of the intervention in reducing symptoms related to the measured construct. The significant difference

between pre and post-scores supports the 2nd hypothesis that the unified protocol has a positive effect on individuals' well-being or specific outcomes assessed by the PDSS rating scale.

These results provide valuable insights into the effectiveness of the unified protocol and its impact on individuals' symptomatology. Further research could explore the specific mechanisms through which this intervention leads to improvements in PDSS scores, enhancing our understanding of its therapeutic benefits and implications for clinical practice.

Numerous studies have investigated the effects of the Unified Protocol (UP) on various populations experiencing psychological distress, including those diagnosed with anxiety disorders and depression. Several relevant findings support the hypothesis that the UP can lead to significant reductions in PDSS ratings after completion of the program.

For instance, a randomized controlled trial conducted by Barlow et al. (2017) found that the UP led to clinically meaningful improvements in symptoms among adults with generalized anxiety disorder (GAD). Participants receiving the UP showed significant decreases in their GAD-7 scores at both post-test and follow-up assessment points. Moreover, a meta-analysis by Osma et al. (2022) examined the overall efficacy of the UP across multiple mental health conditions. They concluded that the UP produced moderate to large effect sizes for several primary outcomes, including anxiety and depressive symptoms. Their analysis also highlighted the importance of adherence to the UP-treatment manual when implementing the intervention, suggesting that proper delivery may enhance its effectiveness.

The present study aimed to assess how effective the Unified Protocol Transdiagnostic Treatment is in comparison to medication for treating panic disorder. Our investigation showed that the results supported our initial theory, which was that the Unified Protocol Transdiagnostic Treatment would demonstrate higher efficacy (Table 4), which proved our 3rd hypothesis as well.

Although therapeutic intervention is effective in various perspective and our current study the findings also supported to those which were hypothesized (Table 4). Multiple factors favor the current findings such as the wider body of research that has demonstrated comparable efficacy between psychological interventions and medication in treating panic disorder. Similar outcomes are also supported and suggests that Medication, with its established efficacy, remains a viable option (Barlow, 2018).

The findings from the current study are also supported by Peter et al. (2019), who conducted a study on the management of PD, and found that CBT was more efficient than medicine (Table 4).

Several factors might contribute to this finding. The individualized nature of panic disorder might lead to varying responses to treatment, blurring the differences between interventions. Additionally, the duration and intensity of the interventions, as well as individual differences in adherence and treatment response, could impact the results.

CONCLUSION

Many people experience panic attack disorder, which is treated with medicine. The current research was directed to check the influence of therapeutic interventions based on CBT i.e. Unified Protocol for Transdiagnostic Treatment of Emotional Disorder Program. The hypothesis was that Unified protocol Transdiagnostic treatment of emotional disorder is a more effective approach for panic disorder patients as compared to medications and the results of our study also support the hypothesis and show that the unified protocol has better efficacy than medication.

Limitations

Limited Research: The UP program is relatively new, and there may be limited research specifically examining its efficacy for panic disorder patients in Khyber Pakhtunkhwa or other regions of Pakistan. Without extensive research and localized studies, it is challenging to determine the program's effectiveness and adapt it to the specific needs of the local population.

Suggestion

Community Engagement: Raise awareness about panic disorder and the availability of evidence-based treatments like UP through community engagement efforts. Conduct outreach programs, workshops, and educational sessions in collaboration with local community leaders, schools, and healthcare providers. This can help reduce stigma, increase treatment-seeking behavior, and foster community support for individuals undergoing treatment.

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