

# Cognitive Behavioral Therapy For Psychogenic Nonepileptic Seizures

## INVITED REVIEW ARTICLE

### Cognitive Behavioral Therapy for Psychogenic Neurological Disorders

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**Background:** Psychogenic neurological disorders (PNDs) represent a significant problem in neurology, due to the difficulty in diagnosis and lack of effective and widely available treatment options. Treatment options for this population are limited. Preliminary evidence reveals cognitive behavioral therapy (CBT) may be useful in these disorders.

**Review Summary:** The types of PNDs and their presentations are summarized, and the utilization of CBT in treatment of these disorders is reviewed. Accurate and timely diagnosis of the disorders is paramount and provides direction for implementing appropriate treatment.

**Conclusions:** Neurologists should be familiar with the types of PNDs, clinical findings, and treatment principles of CBT. Early and accurate diagnosis may lead to improved treatment outcomes. Controlled treatment trials for this population are needed to determine efficacy. Further study of CBT in these patients may also help to elucidate the underlying etiology of these disorders by contributing to the understanding of associated psychopathology.

**Key Words:** psychogenic, cognitive therapy, behavioral therapy, conversion disorder, treatment

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Psychogenic neurological disorders (PNDs) present with physical signs and symptoms that are a manifestation of a somatoform disorder and are a significant problem in the field of neurology due to the difficulties and delay in diagnosis and a general lack of well-proven treatment strategies.<sup>1,2</sup> There are many presentations of these disorders, including psychogenic movement disorders (PMDs), paralysis, anesthesia/paresthesia, psychogenic nonepileptic seizures (PNES), and gait disorders, among others. It is estimated that 10% to 30% of patients seen in a neurology outpatient setting have "functional" or psychogenic disorders.<sup>3</sup> Although the pathophysiological basis for psychogenic disorders has not yet been established, there is over a century of medical literature on etiology and mechanisms,<sup>4-6</sup> and presently there is a working understanding of the psychopathology in these disorders.<sup>9</sup> The psychiatric

comorbidities and neuropsychological and personality profiles that are associated with these disorders are well documented.<sup>10,11</sup> More recent functional neuroimaging studies in conversion disorder with larger samples are beginning to show potential connectivity of neural networks in patients with PNDs.<sup>12-14</sup> Research from controlled trials of effective treatment of patients with PND, however, is lacking. The purpose of the article is not to present a review of *all* treatments for PND (examples for PNES found in LaFrance and colleagues<sup>12,13</sup>); rather, we review one specific area of treatment for PNDs that is showing growing promise: cognitive behavioral therapy (CBT), focusing on specific populations with different PNDs.

Patients with PNDs pose diagnostic and therapeutic challenges. There are frequent errors and delays in diagnosis, and patients undergo numerous and sometimes invasive diagnostic procedures.<sup>14</sup> Optimal management remains a problem, often leading to inappropriate, ineffective, and costly treatment for a presumed neurological diagnosis, sometimes for many years.<sup>15-17</sup> Patients with PNDs are seen by neurologists, psychiatrists, primary care providers, as well as emergency room physicians, leading to increased costs to the patient and to society. Patients with PNES may be debilitated for long periods of time before diagnosis, and are often noted to have more disability and poorer quality of life than patients with epileptic seizures.<sup>18</sup> The same disability and chronicity has been shown in the PMD population.<sup>19,20</sup>

Once the diagnosis of a psychogenic disorder has been made, patients with PNDs often continue to experience disability on a long-term basis.<sup>15-17</sup> Comorbid psychopathology is high in PNDs, and other psychological or social problems may add to patient disability.<sup>13,16,21-22</sup>

The tools for diagnosis for PNDs may vary. With many PNDs, including PMDs, psychogenic paralysis, and others, diagnosis is typically made on the basis of careful history-taking, clinical examination, and, sometimes, imaging to rule out structural abnormalities. In the absence of a diagnostic laboratory test for PMD, criteria have been developed for diagnostic classification.<sup>23,24</sup> Unlike the other PNDs, PNES incorporates labs to assist in establishing the diagnosis. Along with neurological and psychiatric assessment, serum prolactin is used to differentiate generalized epileptic seizures from PNES.<sup>25</sup> Video electroencephalogram monitoring (VEEG) provides an additional tool specifically for the diagnosis of PNES versus epilepsy, with good reliability for differentiating epilepsy from PNES,<sup>26</sup> and now is considered the gold standard for diagnosis.

A major barrier to treatment is the lack of a defined treatment provider. The neurologist is often the health care provider who makes the diagnosis of a PND, but transition to treatment can be hampered by the lack of defined treatment strategies to make a smooth transition to a psychologist or psychiatrist with expertise in treating these disorders. Many patients do not continue to receive follow-up care after their

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## COGNITIVE BEHAVIORAL THERAPY FOR PSYCHOGENIC NONEPILEPTIC SEIZURES

PSYCHOGENIC NONEPILEPTIC SEIZURES (PNES) ARE A COMPLEX AND OFTEN MISUNDERSTOOD PHENOMENON THAT CAN SIGNIFICANTLY IMPACT THE LIVES OF THOSE AFFECTED. UNLIKE EPILEPTIC SEIZURES, PNES ARE NOT CAUSED BY ELECTRICAL DISTURBANCES IN THE BRAIN BUT ARE INSTEAD LINKED TO PSYCHOLOGICAL FACTORS. THIS DISTINCTION IS CRUCIAL FOR UNDERSTANDING WHY COGNITIVE BEHAVIORAL THERAPY (CBT) HAS EMERGED AS A KEY TREATMENT MODALITY FOR INDIVIDUALS SUFFERING FROM PNES. CBT CAN HELP PATIENTS IDENTIFY AND MODIFY THE UNDERLYING PSYCHOLOGICAL TRIGGERS THAT CONTRIBUTE TO THE OCCURRENCE OF THESE SEIZURES, THEREBY IMPROVING THEIR OVERALL QUALITY OF LIFE.

# UNDERSTANDING PSYCHOGENIC NONEPILEPTIC SEIZURES

PSYCHOGENIC NONEPILEPTIC SEIZURES ARE EPISODES THAT RESEMBLE EPILEPTIC SEIZURES BUT DO NOT HAVE A NEUROLOGICAL ORIGIN. THEY ARE OFTEN A MANIFESTATION OF PSYCHOLOGICAL DISTRESS, INCLUDING TRAUMA, ANXIETY, AND STRESS.

## CHARACTERISTICS OF PNES

1. SYMPTOMS: PNES CAN PRESENT WITH A VARIETY OF SYMPTOMS THAT MAY MIMIC THOSE OF EPILEPTIC SEIZURES, INCLUDING:
  - LOSS OF CONSCIOUSNESS
  - UNCONTROLLED SHAKING OR JERKING
  - CONFUSION POST-EPISODE
  - UNUSUAL BODY MOVEMENTS
2. DIAGNOSIS: DISTINGUISHING PNES FROM EPILEPTIC SEIZURES CAN BE CHALLENGING. DIAGNOSIS IS TYPICALLY MADE THROUGH:
  - DETAILED MEDICAL HISTORY
  - VIDEO EEG MONITORING
  - PSYCHOLOGICAL EVALUATION
3. PREVALENCE: STUDIES SUGGEST THAT PNES ACCOUNTS FOR 20-30% OF ALL PATIENTS REFERRED TO EPILEPSY CENTERS FOR SEIZURE EVALUATION.

## THE ROLE OF COGNITIVE BEHAVIORAL THERAPY

COGNITIVE BEHAVIORAL THERAPY IS A STRUCTURED, GOAL-ORIENTED FORM OF PSYCHOTHERAPY THAT FOCUSES ON THE RELATIONSHIP BETWEEN THOUGHTS, FEELINGS, AND BEHAVIORS. IT IS PARTICULARLY EFFECTIVE IN TREATING A VARIETY OF PSYCHOLOGICAL DISORDERS, INCLUDING ANXIETY, DEPRESSION, AND STRESS-RELATED DISORDERS, WHICH OFTEN COEXIST WITH PNES.

## MECHANISMS OF CBT IN TREATING PNES

1. IDENTIFYING TRIGGERS: CBT HELPS PATIENTS RECOGNIZE SPECIFIC THOUGHTS AND SITUATIONS THAT TRIGGER THEIR SEIZURES. THIS AWARENESS IS THE FIRST STEP TOWARD MANAGING AND POTENTIALLY REDUCING SEIZURE FREQUENCY.
2. COGNITIVE RESTRUCTURING: PATIENTS LEARN TO CHALLENGE AND REFRAME NEGATIVE THOUGHTS THAT MAY CONTRIBUTE TO THEIR SEIZURES. FOR INSTANCE, FEELINGS OF HELPLESSNESS OR FEAR CAN BE ADDRESSED THROUGH COGNITIVE RESTRUCTURING TECHNIQUES.
3. EMOTIONAL REGULATION: CBT EQUIPS INDIVIDUALS WITH STRATEGIES TO MANAGE THEIR EMOTIONS MORE EFFECTIVELY, PROVIDING TOOLS TO COPE WITH STRESS, ANXIETY, AND TRAUMA—COMMON PRECURSORS TO PNES.
4. BEHAVIORAL INTERVENTIONS: PATIENTS ENGAGE IN BEHAVIORAL TECHNIQUES THAT PROMOTE HEALTHIER COPING MECHANISMS, SUCH AS RELAXATION EXERCISES, MINDFULNESS, AND ASSERTIVENESS TRAINING.

## COMPONENTS OF CBT FOR PNES

CBT FOR PNES TYPICALLY INVOLVES SEVERAL KEY COMPONENTS:

1. ASSESSMENT: THE THERAPIST CONDUCTS AN INITIAL ASSESSMENT TO UNDERSTAND THE PATIENT'S HISTORY AND THE CONTEXT SURROUNDING THEIR SEIZURES.

2. **PSYCHOEDUCATION:** EDUCATING THE PATIENT ABOUT PNES AND THE ROLE OF PSYCHOLOGICAL FACTORS IN THEIR CONDITION IS CRUCIAL. THIS HELPS FOSTER A COLLABORATIVE THERAPEUTIC ENVIRONMENT.

3. **GOAL SETTING:** PATIENTS WORK WITH THEIR THERAPIST TO SET REALISTIC AND ACHIEVABLE GOALS REGARDING THEIR SEIZURE MANAGEMENT AND EMOTIONAL WELL-BEING.

4. **SKILL DEVELOPMENT:** THE THERAPY FOCUSES ON DEVELOPING COPING SKILLS, SUCH AS:

- RELAXATION TECHNIQUES (E.G., DEEP BREATHING, PROGRESSIVE MUSCLE RELAXATION)
- MINDFULNESS PRACTICES TO ENHANCE PRESENT-MOMENT AWARENESS
- JOURNALING TO TRACK THOUGHTS AND FEELINGS ASSOCIATED WITH SEIZURES

5. **RELAPSE PREVENTION:** CBT EMPHASIZES THE IMPORTANCE OF MAINTAINING PROGRESS AND DEVELOPING STRATEGIES TO PREVENT RELAPSE INTO OLD PATTERNS OF THINKING AND BEHAVIOR.

## EFFECTIVENESS OF CBT FOR PNES

RESEARCH INDICATES THAT CBT CAN BE AN EFFECTIVE INTERVENTION FOR INDIVIDUALS WITH PNES, LEADING TO REDUCED SEIZURE FREQUENCY AND IMPROVED PSYCHOLOGICAL WELL-BEING.

## STUDIES AND OUTCOMES

1. **REDUCTION IN SEIZURE FREQUENCY:** VARIOUS STUDIES HAVE SHOWN THAT PATIENTS UNDERGOING CBT REPORT A SIGNIFICANT DECREASE IN THE FREQUENCY OF THEIR PNES.

2. **IMPROVEMENT IN QUALITY OF LIFE:** CBT NOT ONLY HELPS IN MANAGING SEIZURES BUT ALSO CONTRIBUTES TO OVERALL IMPROVEMENTS IN QUALITY OF LIFE, EMOTIONAL REGULATION, AND SOCIAL FUNCTIONING.

3. **LONG-TERM BENEFITS:** THE SKILLS LEARNED DURING CBT OFTEN PROVIDE LONG-TERM BENEFITS, ALLOWING PATIENTS TO MANAGE STRESS AND EMOTIONAL TRIGGERS EFFECTIVELY EVEN AFTER THERAPY HAS CONCLUDED.

## CHALLENGES IN IMPLEMENTING CBT

WHILE CBT CAN BE HIGHLY BENEFICIAL, THERE ARE CHALLENGES TO ITS IMPLEMENTATION FOR PNES:

1. **STIGMA AND MISUNDERSTANDING:** PATIENTS MAY FACE STIGMA ASSOCIATED WITH A DIAGNOSIS THAT IS NOT WELL UNDERSTOOD BY THE PUBLIC OR EVEN WITHIN THE MEDICAL COMMUNITY.

2. **COMORBID CONDITIONS:** MANY PATIENTS WITH PNES ALSO EXPERIENCE OTHER MENTAL HEALTH CONDITIONS, SUCH AS PTSD OR MAJOR DEPRESSION, WHICH MAY COMPLICATE TREATMENT.

3. **ACCESS TO QUALIFIED THERAPISTS:** NOT ALL THERAPISTS ARE TRAINED IN CBT SPECIFICALLY FOR PNES, MAKING IT ESSENTIAL FOR PATIENTS TO FIND SPECIALISTS WHO UNDERSTAND THIS UNIQUE INTERSECTION OF NEUROLOGY AND PSYCHOLOGY.

## INTEGRATING CBT WITH OTHER TREATMENTS

CBT IS OFTEN MOST EFFECTIVE WHEN INTEGRATED INTO A COMPREHENSIVE TREATMENT PLAN THAT INCLUDES OTHER MODALITIES.

## MULTIDISCIPLINARY APPROACH

1. **NEUROLOGICAL EVALUATION:** REGULAR FOLLOW-UPS WITH A NEUROLOGIST CAN HELP MONITOR SEIZURE ACTIVITY AND RULE OUT ANY UNDERLYING NEUROLOGICAL CONDITIONS.
2. **MEDICATION MANAGEMENT:** WHILE MEDICATIONS ARE NOT TYPICALLY EFFECTIVE FOR PNES, THEY MAY BE PRESCRIBED TO MANAGE COMORBID CONDITIONS LIKE ANXIETY OR DEPRESSION.
3. **SUPPORT GROUPS:** PARTICIPATION IN SUPPORT GROUPS CAN COMPLEMENT CBT BY PROVIDING SOCIAL SUPPORT AND REDUCING FEELINGS OF ISOLATION.
4. **FAMILY INVOLVEMENT:** INVOLVING FAMILY MEMBERS IN THERAPY CAN ENHANCE UNDERSTANDING AND SUPPORT, CREATING A MORE CONDUCTIVE ENVIRONMENT FOR RECOVERY.

## CONCLUSION

COGNITIVE BEHAVIORAL THERAPY OFFERS A PROMISING PATHWAY FOR INDIVIDUALS STRUGGLING WITH PSYCHOGENIC NONEPILEPTIC SEIZURES. BY ADDRESSING THE PSYCHOLOGICAL FACTORS THAT CONTRIBUTE TO THESE EPISODES, CBT EMPOWERS PATIENTS TO TAKE CONTROL OF THEIR MENTAL HEALTH AND IMPROVE THEIR QUALITY OF LIFE. WHILE CHALLENGES EXIST IN THE IMPLEMENTATION OF THIS THERAPY, ITS EFFECTIVENESS IN REDUCING SEIZURE FREQUENCY AND ENHANCING EMOTIONAL WELL-BEING CANNOT BE OVERLOOKED. A MULTIDISCIPLINARY APPROACH THAT INCLUDES CBT, MEDICAL EVALUATION, AND SOCIAL SUPPORT CAN CREATE A COMPREHENSIVE TREATMENT PLAN THAT ADDRESSES THE COMPLEX NEEDS OF THOSE AFFECTED BY PNES. AS AWARENESS AND UNDERSTANDING OF PNES CONTINUE TO EVOLVE, IT IS CRUCIAL FOR PATIENTS TO SEEK APPROPRIATE CARE AND SUPPORT TO NAVIGATE THEIR JOURNEY TOWARD RECOVERY.

## FREQUENTLY ASKED QUESTIONS

### WHAT ARE PSYCHOGENIC NONEPILEPTIC SEIZURES (PNES)?

PSYCHOGENIC NONEPILEPTIC SEIZURES (PNES) ARE EPISODES THAT RESEMBLE EPILEPTIC SEIZURES BUT ARE NOT CAUSED BY ELECTRICAL DISRUPTIONS IN THE BRAIN. INSTEAD, THEY ARE OFTEN RELATED TO PSYCHOLOGICAL FACTORS AND CAN BE LINKED TO TRAUMA, STRESS, OR EMOTIONAL DISTRESS.

### HOW DOES COGNITIVE BEHAVIORAL THERAPY (CBT) HELP INDIVIDUALS WITH PNES?

COGNITIVE BEHAVIORAL THERAPY (CBT) HELPS INDIVIDUALS WITH PNES BY ADDRESSING THE UNDERLYING PSYCHOLOGICAL TRIGGERS. IT TEACHES COPING STRATEGIES, HELPS MODIFY NEGATIVE THOUGHT PATTERNS, AND PROMOTES EMOTIONAL REGULATION, WHICH CAN REDUCE THE FREQUENCY AND IMPACT OF SEIZURES.

### WHAT IS THE ROLE OF A THERAPIST IN TREATING PNES WITH CBT?

A THERAPIST PLAYS A CRUCIAL ROLE IN TREATING PNES WITH CBT BY CONDUCTING ASSESSMENTS, PROVIDING A SAFE SPACE FOR PATIENTS TO EXPLORE THEIR EMOTIONS, GUIDING THEM THROUGH COGNITIVE RESTRUCTURING, AND HELPING THEM DEVELOP PRACTICAL COPING SKILLS AND RELAXATION TECHNIQUES.

### WHAT EVIDENCE SUPPORTS THE USE OF CBT FOR TREATING PNES?

RESEARCH HAS SHOWN THAT CBT CAN SIGNIFICANTLY REDUCE THE FREQUENCY OF PNES EPISODES AND IMPROVE QUALITY OF LIFE FOR PATIENTS. STUDIES INDICATE THAT PARTICIPANTS WHO UNDERGO CBT REPORT FEWER SEIZURE EPISODES AND BETTER PSYCHOLOGICAL WELL-BEING COMPARED TO THOSE WHO DO NOT RECEIVE THERAPY.



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