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Possible New Therapeutic Contributions on Nightmares

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Posibles nuevas aportaciones terapéuticas sobre pesadillas
Introducción: diversos estudios indican una estrecha relación entre las pesadillas y el trastorno de estrés postraumático (TEPT). Los pacientes que han experimentado eventos traumáticos a menudo informan pesadillas repetitivas y despertares abruptos durante el sueño, así como síntomas de ansiedad persistente, hipervigilancia, *flashbacks*, alucinaciones y fobias. Dado que las pesadillas involucran fragmentos de memoria traumática y respuestas de amenaza para la supervivencia o la seguridad, también pueden considerarse «sueños angustiosos». Las pesadillas traen angustia y, a menudo, recuerdos traumáticos olvidados. En este trabajo se busca discutir los procedimientos de *Eye Movement Desensitization and Reprocessing* (EMDR) e hipnosis, que pueden arrojar luz sobre los sueños y pesadillas y cómo se puede contribuir al bienestar de los pacientes que padecen este trastorno. *Método*: revisión de la literatura sobre el uso de las técnicas *Eye Movement Desensitization and Reprocessing* (EMDR) y de hipnosis en el tratamiento de los síntomas de los trastornos del TEPT. La búsqueda de publicaciones científicas realizada en PubMed/NLM y Biblioteca Virtual de Salud y Psicología (BVS/Bireme/OPAS y BVS Psi Brasil). *Resultados*: EMDR e hipnoterapia pueden facilitar el acceso a recuerdos de experiencias traumáticas contenidas en el material onírico de las pesadillas recurrentes, ya que ayudan a liberar emociones reprimidas junto con el recuerdo del evento que las generó, promoviendo cambios psíquicos. Ambas terapias se utilizan para acceder a la información neuronal almacenada en el sistema mente-cuerpo, promoviendo la calidad del sueño y de la vida. *Conclusión*: aunque los trastornos del sueño se informan con frecuencia en la práctica clínica, a menudo se pasan por alto y se consideran síntomas secundarios del TEPT, rara vez evaluados. A pesar de que los sueños y las pesadillas se consideran fenómenos clínicos independientes, existen pocas investigaciones que aborden su tratamiento, y existe una investigación limitada sobre nuevas contribuciones terapéuticas.

Palabras clave: Trastornos de estrés postraumático – Desensibilización y Reprocesamiento del Movimiento Ocular – Sueños – Hipnosis.

Possible New Therapeutic Contributions on Nightmares
Introduction: Several studies indicate a close relationship between nightmares and Post-Traumatic Stress Disorder (PTSD). Patients who have experienced traumatic events often report repetitive nightmares and abrupt awakenings during sleep, as well as symptoms of persistent anxiety, hyper-vigilance, flashbacks, hallucinations, and phobias. Since nightmares involve fragments of traumatic memory and threat responses to survival or safety, they can also be considered "distressing dreams." Nightmares bring distress and often forgotten traumatic memories. This work intends to discuss the procedures of EMDR and Hypnosis, which can shed light on dreams and nightmares and how they can contribute to the well-being of patients suffering from this disorder. *Method*: Literature review on the use of EMDR (Eye Movement Desensitization and Reprocessing) and Hypnosis techniques in the treatment of symptoms of PTSD disorders. The search for scientific publications carried out on PubMed/NLM and Health and Psychology Virtual Library (VHL/Bireme/OPAS and VHL Psi Brazil). *Results*: EMDR and Hypnotherapy can facilitate to access memories of traumatic experiences contained in the dreamlike material of recurrent nightmares, as they help to release of repressed emotions along with the memory of the event that generated them, promoting psychic changes. Both therapies are used to access neural information stored in the mind-body system, promoting quality of sleep and life. *Conclusion*: Although sleep disorders are frequently reported in clinical practice, they are often overlooked and considered secondary symptoms of PTSD, rarely evaluated. Despite dreams and nightmares being considered as independent clinical phenomena, there are few investigations addressing their treatment, and there is limited research on new therapeutic contributions.

Keywords: Stress Disorders Post-Traumatic – Eye Movement Desensitization Reprocessing – Dreams – Hypnosis.

Introduction

The development of PTSD symptoms may be associated with a fragmented sleep pattern, which potentially hinders the synthesis and integration of traumatic memory from nightmares. Dreams bring mnemonic contents that have long been "forgotten" by the dreamer and seem inaccessible during wakefulness. If forgetting does not imply the destruction of mnemonic content, there must be a mechanism that guards this content, preventing its contact with consciousness, and another mechanism that allows its manifestation in a disguised manner [5].

Sleep disorders, including recurring nightmares, are common complaints among many victims of psychological trauma. Chronic nightmares are classified as "parasomnias" of REM sleep (Rapid Eye Movement) (DSM-V) and are also known as distressing dreams [2]. However, despite being frequently and intensely reported in clinical practice, these disorders are often ignored and considered secondary symptoms of PTSD, rarely treated.

Approximately 5% of population report experiencing occasional nightmares, and around 10% of individuals with PTSD have recurring nightmares [17]. In general, these nightmares are identical reproductions of fragmented sensory memories, including images, sounds, odors, physical sensations, or emotions (disgust, fear, terror, anger, sadness) not integrated with other autobiographical memories.

EMDR (Eye Movement Desensitization and Reprocessing) and Hypnotherapy are used to access neural information stored in the mind-body system, facilitating the release of repressed emotions along with the memory of the event that generated them. Although these psychotherapeutic approaches have distinct neuropsychological functioning, they have shown efficacy in treating PTSD symptoms.

PTSD - Post-Traumatic Stress Disorder

PTSD is a neuropsychological disorder that disrupts normal memory processes in the brain following trauma. It is characterized by the persistence of dysfunctional stress reactions for a month or more after exposure to an extremely traumatic event. Neuroimaging studies indicate that trauma affects specific brain structures involved in active memory and the ability to interpret the meaning of evasive stimuli [16].

Post-Traumatic Stress Disorder (PTSD) is defined as a psychological distress that an individual experiences due to exposure to a traumatic event they have encountered. Typically, the person has experienced, witnessed, or been confronted with one or more negative situations involving actual suffering or a threatening situation in which the person can respond with intense fear. Throughout life, a person experiences several traumatizing events that can manifest as symptoms of post-traumatic stress disorder.

Until recently, it was uncommon to discuss Post-Traumatic Stress Disorder. It was only in the 1980s that mental health professionals recognized post-traumatic stress disorder as a disorder that causes severe suffering for the individual and significantly affects their quality of life, social life, and occupational functioning [1].

The concept of PTSD originated in the French school as the first to address the psychological connection between trauma and symptoms of hysteria, particularly in the fundamental works of Charcot, Janet, and Freud. However, it was Abram Kardiner who, in 1941, published a book on "War Neuroses" and came to be considered by many specialized authors as the work that would define, throughout the 20th century, what Post-Traumatic Stress Disorder would be [6]. He was the first to emphasize, among other clinical findings, that patients suffering from "traumatic neuroses" developed persistent hypervigilance and sensitivity to environmental threats [9].

In less severe stages of the disorder, individuals may experience nightmares with plots distinct from the original trauma but with similar themes and emotional components. These nightmares occur almost exclusively during REM sleep. Although this sleep stage is interspersed with other sleep phases, these periods become longer throughout the night, and nightmares tend to occur after the first three hours of sleep.

REM sleep's function is to process new information, as the electrical activities in the hippocampus found during behavioral "alertness" are similar to the rhythms characterizing this sleep phase. Supporting this hypothesis, several findings indicate that memories initially stored in the hippocampus are transferred over time to the cerebral cortex. In their recent studies, Ribeiro and Nicolelis highlight that gene regulation during REM sleep may be crucial for the progressive transfer of memories from the hippocampus to the neocortex, indicating the role of dreams in learning processes [14].

The Function of Dreaming

Before the emergence of psychoanalysis, dreams were understood as something mystical and revealing the will of the Gods, which would only be deciphered through popular wisdom or as a product of cerebral physiological activity that science alone could explain, without any psychological

meaning [4]. However, Freud, contrary to the ideas of his time, went further and observed that dreams brought forth long-forgotten mnemonic contents of the dreamer, seemingly inaccessible during wakefulness. If forgetting did not mean the destruction of mnemonic content, there must be a mechanism that preserved this content, preventing its contact with consciousness or allowing its manifestation in a disguised manner [5].

Nightmares or anxiety dreams, which bring forth long-forgotten mnemonic contents of the dreamer, seemingly inaccessible during wakefulness, repeat to provide a new opportunity to integrate the trauma psychically,5 processing and transforming tensions (excitation) into instincts [12]. For Freud, dreams fulfill their mission even if the dreamer is not conscious of their meaning, as the emotion represented in them is expressed, albeit in a distorted manner [5].

The overarching function of dreams is to restore our psychological balance by producing dream content that subtly reconstructs the overall psychic equilibrium. Dreams serve a complementary role in the psychological constitution. They compensate for personality deficiencies while protecting against the dangers of current directions, according to Jung, who is also considered an important dream scholar [9]. According to Jung, it was believed for a long time that the main function of dreams was to predict the future. In antiquity and even in the Middle Ages, dreams were part of physicians' prognoses and also served a prophetic function [9].

Dreams and Nightmares

Ernest Jones, in his book "On Nightmare" [8], was the first scholar to extensively study nightmares, emphasizing that healthy individuals would never have nightmares. He observed that nightmares indicated the presence of a conflict between unconscious sexual desires and intense fear. At the time, dreams were popularly referred to as "the guardians of sleep", and Jones was intrigued by the realization that nothing would be more disturbing to the quality of sleep than the presence of nightmares [8].

Despite his association with Freud, Jones' study on nightmares diverges from the master's conceptions. However, it is interesting to note that the word "nightmare" appears very rarely in Freud's work, as he preferred to refer to them as "anxiety dreams" in his writings [8].

Jones' research on nightmares began in three distinct stages*: 1)* a study on the pathology of nightmares, initially published in 1910, which addressed the etiology of pathogenesis and the clinical aspects of nightmares; *2)* a description of the relationship between nightmares and certain medieval superstitions, published in 1912; *3)* and in the third part, he presented his complete work as a contribution to psychoanalysis, published in 1931 [6, 7, 8].

When deciding to investigate nightmares, Jones highlighted them as independent and important phenomena in the field of pathology. He surprised his colleagues by questioning the disregard of the "physicians of the time" who did not consider the importance of nightmares [6]. He also emphasized that the "agony" and physiological alterations that occur in nightmares could jeopardize the health and life of the dreamer. Although he noted that an "attack of anguish" is similar in all aspects to nightmares and can occur in a waking state, he pointed out that nightmares have a distinct “paralyzing" aspect places them in another category of disorder [8].

Jones confirms that clinical experience demonstrates that nightmares, like anxiety dreams, do not exclude a "libidinal aspect". However, their most recurrent theme is that of a nocturnal visitor, an "obscene demon" who lies upon the dreamer for copulation. He also observes that nightmares bear a resemblance to "certain erotic hallucinations" in patients who complain of childhood sexual abuse by family members. This observation served as a guide for various subsequent studies on nightmares after Jones' work.

Freud, in 1989, emphasized that dreams fulfill their purpose even if the dreamer is not consciously aware of their meaning, as the represented emotion has been expressed, even the distorted [5]. Freud's approach to deciphering dream content involved the technique of free association, performed by the subject based on the dream elements, which should then be interpreted by the psychoanalyst. The interpretation includes both the patient's life events and universal symbolism. Freud asserted that once analyzed, the dream becomes entirely logical. Dreams reflect psychophysical and emotional states, as well as general problems, and can also involve traumatic dreams that relieve traumas.

Thus, the dreams of anguish or nightmares, which bring forth long-forgotten mnemonic contents by the dreamer and seem inaccessible during wakefulness, repeat themselves to provide a new opportunity for the psychic integration of trauma, processing and transforming tensions (excitation) into drives [12].

As nightmares involve fragments of traumatic memory and threat responses to survival or safety,

they are considered "dreams of anguish", causing physiological responses of the sympathetic nervous system. The nervous system, through dreams, attempts to detach itself from excessive traumatic material, which exceeds its processing capacity for the same reason, but fails in its attempt, thereby maintaining the symptoms produced by the unprocessed, frozen, and incapacitated memory from entering the individual's life narrative [13].

Therapies: EMDR and Ericksonian Hypnotherapy
Both EMDR and Hypnotherapy can facilitate access to memories of traumatic experiences contained in recurring nightmare dream material, as they promote the release of repressed emotions along with the memory of the event that generated them, promoting psychic changes. Both therapies are used to access neural information stored in the mind-body system, promoting sleep and quality of life. However, EMDR and Hypnosis therapies have different neuropsychological mechanisms as they induce different modulations of the state of consciousness, with distinct patterns of brain waves, frequencies, and patterns [11].

A - (Desensitization and Reprocessing through Eye Movements) by Francine Shapiro.
Known as the therapy of the Adaptive Information Processing (AIP) system, through bilateral sensory movements, it follows a rich protocol that encompasses the various elements of the traumatic experience stored in dysfunctional memory networks. EMDR assumes that the original memory, when accessed, undergoes changes in its connections and is subsequently stored with the new modifications, in a neurobiological process known as "memory reconsolidation" [15].

Shapiro observed a direct correlation between the intensity of negative emotion in the dream and the activity of REM sleep and concluded that when the disturbance is very high, the REM state is also disturbed, and the material remains unassimilated [15].

When a nightmare is taken as the focus of treatment with EMDR, it has a direct connection to the memory network in which the traumatic material is stored and allows that material to be available for therapeutic resolution.

With EMDR, we reprocess dreams using the protocols that apply to any other clinical material. The most repetitive indicators regarding the dream are the emotion, physical sensation, and degree of disturbance it causes. It is not always possible to obtain negative and positive beliefs. In treatment with the EMDR technique, they are usually addressed by asking the individual to mentally review the dream as if it were a movie, repeating this process several times while engaging in bilateral stimulation, activating the information reprocessing.

During this process, different modifications of the dream material can occur, very similar to those that occur during the reprocessing of other material. Changes may occur in the general mood of the dream or in its outcome, usually resolving in a positive manner, with insights into the dream's personal meaning. The therapist should maintain the same approach during the reprocessing as in any other protocol or procedure being performed and should never interpret or provide any explanations about the dreams. The therapist should investigate three types of dreams: *a)* repetitive dreams; *b)* traumatic dreams and nightmares; *c)* dreams that draw excessive attention.

In this procedure, the individual begins to deconstruct the network of meanings that influence their post-traumatic behavior. They dismantle it, removing the emotional charge from the event and opening up new possibilities. The aim is to deactivate the "energy bomb" that was previously immobilized, addressing the physiological reactions. This approach directly targets the inadequately stored material, the generators of anxiety and distress, aligning with the Buddhist principle of "as above, so below".

B- Milton Erickson's Hypnotherapy
Ericksonian Hypnotherapy is based on modifying the patient's dysfunctional patterns, enabling changes and providing insights into the meaning or function of symptoms. These techniques are primarily focused on the past, starting from the current problematic situation of the patient to develop problem-solving strategies. By creating favorable contexts, changes can occur [3].

Erickson argued that humans possess the ability to respond to suggestions and accept them. The approach sets strategic goals while respecting the individual's capacity for change. As changes take place, new objectives are established [18]. The clinical trance induces a state of semi-conscious relaxation in the patient while maintaining sensory contact with the environment. The goal of the light trance is to empower the patient to become the driver of their own healing process, utilizing their unique characteristics and suggesting that they explore further resources within themselves.

The induction of trance aims to reduce the focus of attention to a few internal realities, facilitate alterations in habitual patterns of direction and control, and enhance the patient's receptivity to their own intimate associations and mental abilities that can

be integrated into therapeutic responses. The emphasis is on brief treatment, and although the number of sessions is not predetermined, it is flexible and outcome-oriented. The primary tool of this technique is indirect psychological communication, which stimulates the individual's willpower and resolution based on their personal values [18].

During hypnotherapy sessions, the therapist works with induced dreams, which convey the unconscious "desires" when accessed during a deeper trance state. The therapist instructs the patient to "dream" or recall disturbing dreams while in a deeper trance. Subsequently, questions and interpretations are exchanged between the therapist and patient to desensitize and reprocess the dream within an altered state of consciousness.

Conclusion

Both EMDR and hypnosis can facilitate access to traumatic memories contained within recurring nightmares, as they promote the release of repressed emotions alongside the memory of the event, thus facilitating psychological changes. However, they have distinct neuropsychological mechanisms, as they induce different states of consciousness with varying brain wave patterns and frequencies, and their procedures differ. The contribution of these therapeutic approaches lies in their brevity in treating trauma-related sequelae, including the cost-effectiveness due to the limited number of sessions required for reprocessing traumatic dream memories. Both EMDR and hypnosis are considered brief therapies, achieving the expected results within a short period of time, according to the specific goals of each therapeutic approach.

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