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Enhancing mental well-being in elderly stroke: A case study for comprehensive occupational therapy and relaxation therapy intervention for post stroke depression and anxiety

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Abstract

The aim of this case study was to explore the efficacy of holistic occupational therapy intervention combining relaxation therapy to evaluate PSD and anxiety in elder individual.

A 49 year old male with PSD and anxiety was taken in the study, the pre and post assessment was carried out using COPM and Hamilton Depression Scale, Hamilton Anxiety Scale and an unstructured interview to know about client's interest and his expectations from future, his concerns and perspective related to stroke. The client was given 12 weeks intervention for 40 minutes, combining occupational therapy intervention and relaxation therapy. The results demonstrated that a comprehensive occupational therapy intervention combining with relaxation therapy is useful to improve the psychological aspects, motor functions participation in occupation and quality of life.

After 12 weeks of intervention the patient was reassessed using COPM, HAM-D and HAM- A which shows remarkable decrease in score of HAM-D and HAM-A and increased satisfaction and performance domains of COPM.

It is concluded that combining occupational therapy & relaxation therapy presents a promising avenue for enhancing the mental well-being of elder stroke survivor.

Keywords: Occupational therapy, stroke, PSD, QOL

Introduction

The WHO defined stroke as "A rapidly developing clinical signs of focal or global disturbances of cerebral functions with signs and symptoms lasting 24 hours or longer leading to death, with no apparent cause other than of vascular origin."

Stroke is a major health problem in India. There is a limited access present to reliable mortality & morbidity estimates for stroke owed to certain factors like incomplete death certification, incorrect death certification & uncertainty of etiology in cases of sudden death & multiple comorbidities.

Sensory impairments, motor, cognitive, perceptual & language functions are common symptoms of stroke. Motor deficits are marked by paralysis (Hemiplegia) or weaknesses (Hemiparesis). Some stroke patients possibly show behavioral issues like aggression, anxiety, depression, emotional liability. Anxiety & depression is noticeable between 18% to 25% of individuals post - stroke. Patients with impaired motor functions generally experience fair amount of stress derived from loss of motor control, pain, inability to perform functional tasks previously performed with ease & loss of control in taking important life decisions.

They may report ADLs being severely affected, may experience emotional disturbances & agitation secondary to disability & in some cases panic & anxiety attacks. Occupational therapists assess the impact of changes in motor functions, sensations, coordination, visual perception, memory & cognition on a person's ability to manage daily life tasks. The occupational therapy intervention focuses to improve participation in meaningful roles, tasks & activities, remediates deficits, minimize secondary complications & provide education & support to patient & caregiver.

Relaxation techniques are therapeutic exercises designed to assist individuals by decreasing

stress, anxiety, pain & fatigue & by increasing energy as well as arousal, motivation, productivity & also improve decision - making ability. The goals of relaxation therapy is:

1. To advance stress reduction & prompt relaxation;
2. To relax muscles;
3. Reduce ischemic pain;
4. Enhance awareness of emotional state & memory;
5. Increase energy levels;
6. Increase sense of control

Occupational therapy (OT) and relaxation therapy are two complementary interventions that can significantly contribute to enhancing mental well-being in elderly stroke survivors, particularly in addressing post-stroke depression and anxiety.

Occupational therapy focuses on enabling individuals to participate in meaningful activities and occupations that are essential for daily functioning and quality of life. In the context of stroke rehabilitation, occupational therapists work with individuals to regain skills and independence in activities of daily living (ADLs), such as bathing, dressing, and meal preparation. Additionally, occupational therapists help stroke survivors adapt to any physical or cognitive impairments resulting from the stroke, facilitating a smoother transition back to daily routines and community engagement.

Relaxation therapy, on the other hand, involves various techniques and practices aimed at reducing stress, promoting relaxation, and improving emotional well-being. Techniques commonly used in relaxation therapy include deep breathing exercises, progressive muscle relaxation, guided imagery, and mindfulness meditation. These techniques help individuals manage stress, alleviate symptoms of anxiety and depression, and cultivate a sense of calmness and inner peace.

When combined, occupational therapy and relaxation therapy offer a holistic approach to addressing the mental health needs of elderly stroke survivors. Occupational therapy focuses on restoring function and independence, while relaxation therapy provides tools for managing stress and promoting emotional well-being. Together, these interventions can empower stroke survivors to cope effectively with the psychological challenges associated with stroke, ultimately leading to improved mental health outcomes and overall quality of life.

Need of the Study

The need for studying the comprehensive occupational therapy and relaxation therapy intervention for post-stroke depression and anxiety in elderly stroke survivors arises from the significant mental health challenges they often face post-stroke. Stroke survivors, particularly in the elderly population, are susceptible to experiencing depression and anxiety due to factors such as physical disability, cognitive impairment, and social isolation. Post-stroke depression and anxiety not only impede recovery and rehabilitation but also diminish overall quality of life for these individuals. Despite the prevalence of mental health issues among stroke survivors, there is a lack of comprehensive intervention strategies tailored specifically to address post-stroke depression and anxiety in elderly populations. Therefore, this study aims to fill this gap by investigating the effectiveness of a combined approach involving occupational therapy and relaxation therapy in enhancing

mental well-being among elderly stroke survivors. By providing evidence-based interventions targeting post-stroke depression and anxiety, this study seeks to improve the overall mental health outcomes and quality of life for elderly stroke survivors.

Materials & Methodology

We studied the case of a 49 years old male with stroke & post- stroke depression & anxiety. The pre & post assessment was done using COPM (Canadian Occupational Performance Model) along with Hamilton Depression Rating Scale & Hamilton Anxiety Rating Scale, abbreviated as HAM-D & HAM- A respectively.

The COPM is a self-report client- centred outcome measure designed for the use by occupational therapist to demonstrate change in a client's self - perception in performance areas of self - care, productivity & leisure. Using a semi- structure interview, the COPM is a five step process which measures individual, client- identified problem areas in daily function. Scores for performance & satisfaction are obtained.

The Hamilton Depression Rating Scale or HAM- D, discovered by Max Hamilton in 1950s is a most commonly used assessment tool for depressive symptoms. The scale is widely available & has two common versions with either 17 or 21 items & is scored between 0 to 4 points.

The Hamilton Anxiety Rating Scale or HAM- A was also discovered by Max Hamilton is a psychological assessment tool that assess severity of anxiety. The scale consists of 14 items, each item consists of no. of symptoms rated on a scale of 0 to 4, with 4 being most severe.

Procedure

The ethical permission was obtained & a written consent was taken from the family member as well as the patient himself. After receiving the consent the patient was explained the entire procedure of the case study.

He was given total 40 minutes protocol which included 20 minutes of occupational therapy intervention followed by 20 minutes of relaxation therapy which included Jacobson Relaxation Technique & Shavasana.

Findings

The patient is a 49 years old male who lives in a small town in Madhya Pradesh in a joint family along with his wife, children & grandchildren. He had stroke four years ago & now is living with its residual effects.

To gather information the patient was interviewed along with his family members to establish his previously held life roles, routines, habits, occupations & other performers areas. Thus, the patient fulfilled many potential roles like being a village head, head of farmers committee, a restaurant owner, a husband, father & grandfather.

The goal of the interview was to explore the patient's perspective about his disease, its after effects & hopes for future. Based on clinical reasoning ideas were formulated about client's occupational performance difficulties to plan out an effective, client- centred & meaningful intervention.

During the interview the patient elaborated how his life used to be before stroke & now how he feels while facing overwhelming emotional burdens. The patient described that how he faces difficulty while performing activities of daily living due to his impaired right hand as a residual motor deficit after stroke, and slurred speech due to facial muscle

weakness. Due to improper speech the patient is unable to express himself & often feels anxious & embarrassed.

He also described that he often has mood changes, guilt, anger, frustration, fatigability & confusion. Until now we can identify the patient's occupational roles (As a self- carer) as well as social roles (Village head, farmer committee head, restaurant owner, husband, father & grandfather) & also current limitations in performing tasks he liked.

According to the patient, prior to stroke he used to enjoy good health & quality time with his family friends & relatives in social gatherings. He reported feelings of hopelessness, pessimist & often anxious. Earlier he enjoyed participating in social gatherings as a village head, going on outings with friends, playing & watching cricket & spending time with family but now he feels decrease in energy levels, sometimes tired & likes to be alone with his thoughts. Now he describes himself as a solitary, frustrated individual due to his medical conditions. He is aware of his diminished responsibilities towards his family & community & decreased desire to do things he used to do earlier.

Initially the assessment was carried out using COPM which focuses on occupational performance & satisfaction in self-care, productivity & leisure. COPM aided to identify the patient's occupational performance problems. The COPM as an outcome measure provides opportunities to detect changes overtime & assure that treatment focuses on clients perspectives.

The problems identified were difficulty in performing activities of daily living (self- care) that had performance score 4 & satisfaction score 3, performing occupation with performance score 3 & satisfaction score 2 & enjoying leisure activities with performance score 3 & satisfaction score 3.

The psychological assessment was carried out using HAM-D & HAM-A to rule out severity of anxiety & depression. The score of HAM- D interpreted mild depression with a score of 11 whereas that of HAM-A interpretation was moderate levels of anxiety with a score of 19. The intervention given was of 12 weeks beginning from May, 2023 to July, 2023 consisting of 20 minutes of occupational therapy intervention followed by 20 minutes of Jacobson Relaxation Therapy & Shavasana at the end of the session.

We worked with the client in order to maximize the ability to undertake his own personal self-care tasks, occupations, domestic tasks & help him to learn strategies to manage his anxiety & emotional responses.

After 12 weeks of intervention the patient was re- assessed using COPM, HAM-A & HAM-D that demonstrated significant decrease in depression & anxiety scores & increase in performance & satisfaction levels in self-care, productivity & leisure activities included in COPM.

Discussion

PSD & anxiety is common affecting approximately one third of stroke survivors. These are one of the most common complications after stroke that greatly impact patients QOL, engagement into meaningful activities & productivity.

Jacobson Relaxation Technique is a holistic, anti-anxiety technique invented by Dr. Edmund Jacobson in 1920s to ease his patient's perserverating; that's the brain swirl of worrying thoughts. Jacobson Progressive Muscle Relaxation, abbreviated as JPMR works by systematically tensing & relaxing muscle groups, reducing muscle tension

& promoting deep physical & mental relaxation, which help alleviate anxiety & depression.

This relaxation technique enhances self- awareness & help individuals recognize & release unnecessary muscle tension. By engaging in the deliberate sequence of muscle contraction & release, JPMR taps into the mind- body connection, promoting a state of calmness & a sense of control over their physiological responses. Regular practice of JPMR can lead to improved stress management, reduced anxiety levels & overall sense of well- being.

Shavasana also known as "Corpse Pose" or "Mritasana" is an asana in hatha yoga & modern yoga as exercise, often used for relaxation at the end of a session. Shavasana is intended to rejuvenate the body, mind & spirit. This posture brings a deep, meditative state of rest which may help in repair of tissue & cells. Many studies conducted concluded that there were remarkable changes in stress levels of patients post practising Shavasana due to increase in endorphins by stretching & breathing that decreases physical exhaustion. It modifies the CNS & enhance activity of brain & reduce cortisol levels. Shavasana decreases heart rate, blood pressure & general anxiety levels.

Conclusion

From a wider perspective, the patient was a good candidate for the study with PSD & anxiety with delay in receiving rehabilitation services.

After 12 weeks in occupational therapy rehabilitation program, the patient made phenomenal progress. He is currently able to manage his anxiety & depressive symptoms & is able to participate in his daily activities, productivity & leisure & is efficiently able to fulfill his roles in different occupational performance areas.

The purpose this study was to focus on client's participation in meaningful activities, everyday roles, tasks, reducing of deficit impact, avoiding secondary complications & providing education to client's himself & his family members. Therefore, from this study we concluded that occupational therapy along with relaxation therapy plays an eminent role in reducing PSD & anxiety.

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