

Special Article

Dance Therapy in the Rehabilitation of the Parkinson's Disease

Ismail Toygar

Research Assistant, Ege University Faculty of Nursing, Department of Internal Medicine, Ismir, Turkey

Yasemin Yildirim, PhD

Professor, Ege University Faculty of Nursing, Department of Internal Medicine, Ismir, Turkey

Serap Ozer, PhD

Assoc. Professor, Ege University Faculty of Nursing, Department of Internal Medicine, Ismir, Turkey

Correspondence: Toygar Ismail, Ege University Faculty of Nursing, 35100 Bornova, Ismir, Turkey
E-Mail: ismail.toygar1@gmail.com

Abstract

Recently, the prevalence of Parkinson's disease (PH) and the problems that arise due to the disease are increasing steadily. These problems and symptoms must be eliminated or minimized in order for patients to be able to continue their daily life activities. Rehabilitation practices such as exercise and dance therapy play an important role in adapting to the daily living activities of Parkinson's patients. Dance therapy is known to be effective in controlling PH-specific symptoms as well as being a good aerobic exercise that affects strength, flexibility, focus and cardiovascular functions positively. Moreover, dance therapy is also an effective method of rehabilitation for the prevention of falls, the socialization of the Parkinson's patient. Dance therapy can provide synapse activation and cerebral repair. Among the dance types, the Argentine tango has been reported to be effective in the step backward and maintain its balance.

This article provides information on dance therapy and benefits in PH and explains its use in the field of rehabilitation nursing.

Key Words: Dance Therapy, Nursing, Rehabilitation, Parkinson Disease

Introduction

Parkinson's disease (PH) is the most common type of parkinsonism. Parkinsonism is a group of disease typically characterized by tremor, rigidity, bradykinesia, akinesia and postural disorders. Parkinson's disease is a progressive disease that occurs with dopamine reduction as a result of degeneration of dopaminergic nigrostriatal pathways (Gelb, Eugene, & Sid 1999).

Parkinson's disease is a major problem with increasing prevalence worldwide. The prevalence of PH is 1.6% among elderly in European Union, 1.1-1.5% in Turkey (de Rijk et al. 1997, Torun et al. 1995, Bolayir et al. 2002).

Parkinson's occurs when 80% of dopaminergic neurons damaged. The disease affects functional skills such as writing, motor functions, communication, swallowing, mobility, balance,

and consecutive movements (Heisters 2011). Dopamine has an important role in maintaining cognitive functions such as the ability to concentrate, maintain motivation, problem-solving, making a decision and visual perception. Since dopamine is reduced in Parkinson's disease, problems such as anxiety and depression are also frequent (Aarsland et al. 1999). Furthermore, gait and balance disorders are frequently observed, leading to an increase in falls (Protas et al. 2005).

Rehabilitation practices are needed to eliminate all these symptoms due to the disease and to increase the functional capacity of the individual. As known; exercise is one of the basic components of rehabilitation practices. Exercise also helps to repair cerebral tissue as well as prevent cerebral damage progression. It helps the individuals to fulfill their daily life activities,

increase functional capacity and prevent falls (Wade et al. 2003).

Dance/movement therapy is one of the effective exercise methods that can be used in the rehabilitation of PH. Dance allows exercise to be performed at a specific rhythm and frequency. Especially when it is done with a partner, it provides support by preventing falls. Dance therapy also helps to socialize by increasing voluntary participation in the exercise (van Nimwegen et al. 2013).

In this article, dance therapy, which has important effects on symptom management in the rehabilitation of PH, and roles of the nurse in the implementation of this therapy are explained.

Dance Therapy

Dance pre-determined movements are usually accomplished with routine movements in musical harmony. It is also a multidimensional activity that includes listening, vision, sensory stimulation, music experience, social appeal, memory, motor learning, emotional perception, expression, and initiative. Music is a guide for movements. Music can be replicated with the same movements at the same time with the same emphasis, music plays an external stimulus and reminder (Kattenstroth et al. 2010).

Dance therapy is a kind of therapy in which interaction is essential between the body and the mind. The dance therapy, which first appeared in the United States in the 1940s, is now used in various areas such as depression, anxiety disorder, autism, Alzheimer's disease, eating disorders and PH (Ritter & Low 1996, Anamak, Karaöz, & Sevil 2013).

It is known that dance therapy is particularly effective in improving balance especially in the elderly. It is known that dance therapy is effective in improving balance especially in the elderly. Dance also increases flexibility, strength, and focus (Hackney, & Earhart 2009). Dance, which also improves cardiovascular function, becomes a very good type of aerobic exercise when done in regular and adequate intensity (Ritter & Low 1996, Belardinelli et al. 2008).

Dance Therapy in Parkinson's Disease

It is known that exercise is only beneficial when done regularly. Research suggests that exercise should be done at least 2-3 times a week and regularly over 4-12 week periods. But providing participation and continuity to exercise programs

in Parkinson's patients is an important problem. In a study conducted by Van Nimwegen and colleagues on 299 Parkinson's patients (2013); it was aimed to increase compliance with the exercise but was not successful. In this study, the individuals in the control group were 29% less active in their daily life than the control group (van Nimwegen et al. 2013). From the results of this study, it is stated that the exercise program should be interesting, regular and encouraging. At this point it is thought that exercise types such as dance can lead individuals to become more active in their daily lives.

It has been reported in the literature that if Parkinson's patients who participate in regular dance therapies, they will more consistent in the exercise program, they will have higher motivation, and their falls are decreasing (Hackney, & Earhart 2009). Dancing is becoming an important alternative to Parkinson's disease at the point of establishing individual exercise programs. It is stated that individuals with dance habits are less fallen because they provide better balance. It is also an unquestionable fact that it is an activity that enhances fun and sociability besides the main benefits of dance (Palo-Bengtsson & Ekman 1997).

Each type of dance has its own unique movements and intensities. Research shows that some dance types are more effective in Parkinson's patients. Among these dance types, the two dance types most known for their effectiveness and most supported by research are the Argentine Tango and the Irish Set Dance. Irish Set Dance is a type of dance that is performed with consecutive frequent and small steps in partnership support, while tango is a type of dance involving frequent movement changes, the movement starts, pauses, direction changes and movement speedup (Westheimer 2008, Volpe et al. 2013).

Since dancing also involves learning specific movement strategies, it provides intense synapse activation and slows down cerebral destruction and provides cerebral improvement. For example; In the Argentinian tango, individuals can provide important improvements in backward movement and develop their own action strategies. In the Argentinian tango, one foot goes behind of other. Falls are avoided thanks to partners who support the back of the body. The balance center is slowly shifted

backward. The other leg is taken to the back and the balance center is taken to the middle of the two legs (Fedirici, Bellagamba, & Ricchi 2005, Belardinelli et al. 2008).

There is the restricted study of the role of dance therapy in rehabilitation of Parkinson's disease. The oldest and most well-known study among these studies is Westbrook et al.'s (1989) study comparing six-week dance therapy with the traditional exercise program. As a result of this study, it was reported that there was an increase in mobility during the day when the dance therapy group compared with the control group (Westbrook & McKibben 1989). In a study, Berrol et al.'s performed dance therapy for two days a week for five months, it was found that among the individuals with neurological problems, the dance therapy was effective on balance, falling and cognitive performance (Berrol Ooi, & Katz 1997). As a result of these studies, "Dance for PH" organization was established in the USA in cooperation with Mark Morris Dance Group and Brooklyn Parkinson Group. Today this organization has opened more than 100 dance schools in 16 countries for Parkinson's patients and their families and continues to work (Dance For PD 2018).

Nursing Role in Dance Therapy

Multidisciplinary teamwork in the rehabilitation of Parkinson's disease increases the success rate (Wade et al. 2003). Nurses must take an active role in the team and provide necessary information about exercise and dance therapy that will help the patient gain independence in daily life. Nurses should also take training in dance therapy and be involved in practice and research in this regard and contribute to the literature. If necessary, introduce patients to the relevant places, explain the dance therapy to patient among the rehabilitation alternatives. Rehabilitation and dance therapy topics should be given more place in nursing undergraduate education programs. Knowledge about dance therapy of nurses should be increased by sharing reforms in dance therapy in in-service training programs of nursing.

Result

As a result, Dance therapy is an effective method for relieving movement and balance disorders in Parkinson's patients and regaining lost functions. Dance therapy is an effective method for solving problems such as anxiety, depression and social

isolation as well as physical effects. After Parkinson's disease is diagnosed, a rehabilitation program for the patient should be established with the physician, nurse, and physiotherapist. In this program, dance therapy should be considered as an alternative and its use should be common.

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