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Multidimensional Assessment of Tremors in patients with Multiple Sclerosis

Thesis

Submitted in Partial requirement of the Master Degree in Medical Surgical Nursing

By

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(B.Sc.2012)

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2020

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Multidimensional Assessment of Tremors in Patients with Multiple Sclerosis

Abstract

Tremors can result in negative consequences on physical, emotional, and cognitive status in patients with multiple sclerosis, which may affect patient satisfaction and clinical recovery. **Aim:** This study aimed to assess multidimension of tremors in patients with multiple sclerosis. **Design:** A descriptive exploratory design was utilized. **Setting:** Multiple Sclerosis Outpatient Clinic at Ain Shams University Hospitals/Egypt. **Study subject:** A purposive sample of one hundred and fifty patients admitted to the previous mentioned setting. **Tools of data collection:** Two tools were used for data collection: An interviewing questionnaire, Multidimensional assessment of tremors in patients with multiple sclerosis. **Results:** 54.66% of the studied patients had tremor in right upper extremities while, 40% had intentional tremor. There was a positive correlation between Tremor Severity Scale, age, gender and self-care. There was a positive correlation between self-care and productivity activities. There was a weak positive correlation between productivity activities and leisure activities. There was a strong positive correlation between leisure activities and other activities. **Conclusion:** More than half of the studied sample had tremor in right upper extremities and majority of the studied sample affected by stress and stressful event and also all of the studied sample suffered from feel down, embarrassment and frustration due to tremors. **Recommendations:** Health education should be given to multiple sclerosis patients with tremors about ways to improve their quality of life with more efforts to improve awareness of the patients regarding the techniques that can relieve pain or stress.

Keywords – multiple sclerosis, tremors and multidimensions.

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List of Abbreviations

a.	**MS**	Multiple Sclerosis
b.	**CNS**	Central Nervous System
c.	**RRMS**	Relapsing-Remitting Multiple Sclerosis
d.	**CIS**	Clinically Isolated Syndrome
e.	**PPMS**	Primary Progressive Multiple Sclerosis
f.	**SPMS**	Secondary Progressive Multiple Sclerosis
g.	**PRMS**	Progressive Relapsing Multiple Sclerosis
h.	**MRI**	Magnetic Resonance Imaging
i.	**IgG**	Immunoglobin G
j.	**BBB**	Blood Brain Barrier
k.	**CSF**	The Cerebral Spinal Fluid
l.	**DMTs**	Disease Modifying Therapies
m.	**FDA**	The Food and Drug Administration
n.	**IVIG**	Intravenous Immunoglobulin
o.	**TSS**	Tremors Severity Scale
p.	**FSS**	Functional Severity Scale
q.	**UTI**	Urinary Tract Infection
r.	**HADS**	Hospital Anxiety and Depression Scale
s.	**ICF**	International Classification of Functioning
t.	**TV**	Television

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Introduction

Multiple sclerosis (MS) is a chronic inflammatory demyelinating disease of the central nervous system that usually affects young adults. The disease affects about 2.5 million people worldwide. Women are three times more likely to develop MS than men *(Baum & Rothschild, 2016; Lublin & Reingold, 2017)*

Multiple sclerosis is one of the most common disabling neurological disease that affects the brain and spinal cord. Based on the clinical disease pattern, four types of MS are recognized: relapsing–remitting MS (RRMS), secondary progressive MS (SPMS), primary progressive MS (PPMS), and progressive relapsing MS (PRMS) *(Madell, 2019).*

The etiology of this potentially debilitating disease is still unknown but both environmental and genetic factors interact in disease development and progression. Many environmental factors such as vitamin D deficiency, viral infections such as Epstein Barr Virus and smoking have been mentioned as triggering factors in genetically susceptible people *(Goldenberg, 2016).*

Early symptoms include numbness, paraparesis, double vision, optic neuritis, ataxia, and bladder control problems. Subsequent symptoms also include prominent upper motor neuron signs as increasing spasticity, increasing para- or quadriparesis. Vertigo, incoordination and other cerebellar problems, depression, emotional lability, abnormalities in gait, dysarthria, fatigue and pain are also common symptoms (***Compston, Wetherall, Leadingham & Warrell, 2017).***

Treatment is symptomatic, but recent disease-modifying drugs that attenuate the body's immune response delay disease progression in many patients. However, a number of medications can be used to treat the disease symptomatically. Corticosteroids are medications of choice for treating exacerbations. Interferon are successfully used to reduce the frequency and severity of relapses ***(Derwenskus, 2016).***

Tremor is an involuntary rhythmic muscle movement caused by repetitive contraction and relaxation of paired muscle groups. Tremor was recognized as a common feature of MS. In MS patients the two most prevalent tremor forms are postural tremor and intention tremor ***(Goldman & Kelly, 2016).***

Multi dimensions of tremors in multiple sclerosis include (physical, social and psychological) domains. Physical

domain refers to performance of activities of daily living, such as feeding, toileting, bathing, dressing and the ability of patient with multiple sclerosis to deal with disease symptoms and treatment related problems. physical weakness and impairment disturb most aspects of life like psychological, social, sexual, spiritual and other daily activities of life *(Reich, Lucchinetti & Calabresi, 2018).*

Social domain refers to communicative contexts which influence and are influenced by the structure of such contexts, whether social, institutional, power-aligned and aimed at improving the quality of life for patients and their families who are confronted with life-threatening illness by providing support and care for pain, physical symptoms, psychological and social stress *(Omerhoca, Akkaş & Icen, 2018).*

Psychological domain is the case in which distress may be indicative of physical and mental health. Due to physical deterioration most patient become frustrated of their life and do not want to live. End up with sadness, loneliness, anxiety due to hospitalization and they worried about the prognosis of disease *(Tremlett, Paty, & Devonshire, 2017).*

Multiple sclerosis nurse should maintain an environment in which patient confidentiality is assured. Act as an advocate

to help patient meet needs. Assist patients to achieve optimal level of comfort, using an interdisciplinary approach. Support family involvement in accordance with patient's wishes regarding caregiving and decision making. Identify need of patient/family for support systems/resources and make appropriate referrals **(Kister et al., 2017).**