

CASE REPORT

Nursing assessment of people with Multiple Sclerosis

Valoración de Enfermería a personas con Esclerosis Múltiple

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ABSTRACT

Introduction: multiple Sclerosis is a chronic neurological disease that affects the myelin of the central nervous system, causing motor, sensory, and cognitive impairment. Its unpredictable evolution requires a comprehensive nursing assessment to identify needs and promote self-care.

Objective: to describe the nursing assessment process in a person diagnosed with Multiple Sclerosis, applying Marjory Gordon's functional health patterns to identify actual and potential problems.

Method: a clinical case study conducted in an outpatient care setting. Data were collected through a semi-structured interview, direct observation, and clinical record review. Information was analyzed using Gordon's functional patterns, and nursing diagnoses were formulated according to NANDA taxonomy, NOC outcomes, and NIC interventions.

Results: alterations were identified in activity-exercise, health perception-management, and coping-stress tolerance patterns. Interventions focused on health education, therapeutic adherence promotion, and psychological coping enhancement, showing improvement in autonomy and perceived well-being.

Conclusions: nursing assessment based on theoretical models enables a holistic understanding of the needs of people with Multiple Sclerosis, fostering individualized, continuous, and patient-empowering care.

Keywords: Multiple Sclerosis; Nursing Assessment; Nursing Process; Nursing Models; Nursing Care; Outpatient Care; Self-Care.

RESUMEN

Introducción: la Esclerosis Múltiple es una enfermedad neurológica crónica que afecta la mielina del sistema nervioso central, ocasionando deterioro motor, sensitivo y cognitivo. Su evolución impredecible exige una valoración integral de Enfermería que identifique necesidades y promueva el autocuidado.

Objetivo: describir el proceso de valoración de Enfermería en una persona diagnosticada con Esclerosis Múltiple, aplicando el modelo de patrones funcionales de Marjory Gordon para identificar problemas reales y potenciales.

Método: estudio de caso clínico realizado en un entorno de atención ambulatoria. Se empleó entrevista semiestructurada, observación directa y revisión de registros clínicos. La información se analizó mediante los patrones funcionales de Gordon, formulando diagnósticos de Enfermería según la taxonomía NANDA, resultados NOC e intervenciones NIC.

Resultados: se identificaron alteraciones en los patrones de actividad-ejercicio, percepción-manejo de la salud y afrontamiento-tolerancia al estrés. Las intervenciones se centraron en la educación sanitaria, promoción de la adherencia terapéutica y fortalecimiento del afrontamiento psicológico, evidenciando mejoría en la autonomía y percepción de bienestar.

Conclusiones: la valoración de Enfermería basada en modelos teóricos permite comprender de forma holística las necesidades de las personas con Esclerosis Múltiple, favoreciendo cuidados individualizados, continuos y orientados al empoderamiento del paciente.

Palabras clave: Esclerosis Múltiple; Valoración de Enfermería; Proceso De Enfermería; Modelos de Enfermería; Cuidados de Enfermería; Atención Ambulatoria; Autocuidado.

INTRODUCTION

Multiple sclerosis is a chronic inflammatory and neurodegenerative disease that affects the central nervous system, characterized by demyelination, axonal damage, and progressive loss of neurological function.⁽¹⁾ This process causes motor, sensory, visual, and cognitive impairments that significantly impact the autonomy and quality of life of those who suffer from it.⁽²⁾ Globally, the World Health Organization (WHO) estimates that more than 2,8 million people live with multiple sclerosis, making it one of the leading causes of non-traumatic disability in young adults, especially women of productive age.⁽³⁾ Its chronic, unpredictable, and progressive course makes this disease not only a medical challenge but also an area of opportunity for nursing, as it requires comprehensive, continuous, and person-centered care.

From the perspective of the nursing discipline, caring for people with multiple sclerosis requires transcending the traditional biomedical view that focuses on diagnosis, pharmacological treatment, and clinical evolution. Nursing practice is based on a holistic approach that integrates the physical, emotional, social, and spiritual aspects of the individual, promoting self-care, adaptation, and quality of life.⁽⁴⁾ In this sense, the Nursing Care Process (NCP) is the scientific tool that allows care practice to be structured in a systematic and well-founded manner, ensuring that interventions are safe, personalized, and evidence-based.⁽⁵⁾

Nursing care in multiple sclerosis is critical due to the variability of symptoms and the need for constant support in the face of fluctuations in the disease. Symptoms may include severe fatigue, muscle weakness, spasticity, balance disorders, incontinence, cognitive impairment, and emotional changes, all of which affect functionality and social participation.⁽⁶⁾ In this context, nurses play a leading role in the comprehensive assessment of patients, the planning of interventions focused on maintaining independence, and health education for both patients and their families.

Over the last few decades, various theoretical nursing models have provided a foundation for guiding care in chronic and neurodegenerative diseases. Among them, the functional health patterns model proposed by Marjory Gordon in 1994 has proven to be a practical guide for comprehensive assessment, encompassing 11 dimensions that facilitate the identification of actual or potential alterations in human responses. This approach facilitates a comprehensive view of the individual and promotes planning care oriented toward observable outcomes (NOC) and selecting evidence-based interventions (NIC).⁽⁷⁾

In the case of multiple sclerosis, the application of Gordon's model enables the identification of altered patterns, such as activity-exercise, health perception-management, sleep-rest, nutrition-metabolism, and coping-stress tolerance, among others. Based on this assessment, nurses can formulate updated NANDA-I diagnoses, define expected outcomes using the NOC classification, and select NIC interventions to improve functionality, psychological well-being, and treatment adherence.⁽⁸⁾ The integration of these taxonomies constitutes an advanced practice that reinforces the scientific nature of nursing care and promotes continuity of care across different levels of care.

Recent scientific literature highlights the innovative role of nursing in the comprehensive management of multiple sclerosis, particularly in self-care and therapeutic education. According to Jones et al., in 2024, nursing will not only perform clinical procedures but will also lead educational, emotional support, and care coordination interventions, which will contribute to improving therapeutic adherence, reducing hospitalizations, and increasing perceived quality of life. Likewise, it has been shown that implementing individualized care plans based on theoretical models and supported by NANDA, NOC, and NIC classifications has a positive impact on patients' physical and psychosocial well-being indicators with chronic diseases.⁽⁹⁾

However, gaps remain in research on the systematization of nursing care in multiple sclerosis, especially regarding the assessment process and longitudinal patient follow-up. In many contexts, care focuses on immediate responses to flare-ups or complications, leaving education and prevention in the background. This gap highlights the need to strengthen the scientific process of nursing and its practical applicability by integrating theories, taxonomies, and assessment methodologies that enable the construction of reproducible, adaptable care plans.⁽¹⁰⁾

The case presented below is a significant experience in the field of neurological nursing, where the focus is not on medical diagnosis but on the novel care provided. It involves a comprehensive nursing assessment process for a person with multiple sclerosis treated in an outpatient setting, where priority was given to

identifying self-care needs, emotional support, and psychosocial adaptation. This approach allowed for the design and implementation of a care plan focused on strengthening autonomy, preventing complications, and promoting the patient's overall well-being.

Objective: to describe the nursing assessment process in a person with multiple sclerosis, applying Marjory Gordon's functional patterns model to identify actual and potential problems, plan and implement an individualized care plan, and evaluate its results based on the NANDA-I, NOC, and NIC classifications.

METHOD

Type of study

A descriptive and observational study was conducted, based on the application of the Nursing Care Process (NCP) to a person diagnosed with Multiple Sclerosis (MS) in the acute phase, hospitalized in the Internal Medicine ward of the ISSSTE Columba Rivera Osorio Hospital, Pachuca de Soto, Hidalgo, from June to August 8, 2025. The focus was on comprehensive nursing care from a holistic perspective, with an emphasis on identifying human needs and adaptive responses to chronic illness.

Assessment framework

Marjory Gordon's Functional Health Patterns model was used for the initial assessment, which allowed for the organization of subjective and objective data obtained through interviews, direct observation, and review of clinical records.

This framework provides a systematic approach to exploring eleven fundamental areas of human functioning: health perception/management, nutrition/metabolism, elimination, activity/exercise, sleep/rest, cognition/perception, self-perception, role/relationships, sexuality/reproduction, coping/stress tolerance, and values/beliefs.⁽¹¹⁾

Methodology used

The study was structured according to the five phases of the Nursing Care Process (NCP):

1. **Assessment:** collection of objective and subjective data, applying Gordon's model.
2. **Diagnosis:** formulation of nursing diagnoses based on the NANDA-I 2024-2026 Taxonomy.⁽¹²⁾
3. **Planning:** selection of expected outcomes according to the NOC (Nursing Outcomes Classification) and definition of appropriate interventions using the NIC (Nursing Interventions Classification).
4. **Execution:** implementation of prioritized interventions in coordination with the multidisciplinary team and the family.
5. **Evaluation:** analysis of the achievement of outcomes using NOC indicators and reassessment of the care plan.

Recording system used

A narrative and functional pattern recording system was used, structured according to the guidelines of the Internal Medicine Service of the ISSSTE Columba Rivera Osorio Hospital, Pachuca de Soto, Hidalgo, and international standards for clinical documentation. Data confidentiality and patient-informed consent were guaranteed, in accordance with international ethical standards for health research.⁽¹³⁾

CASE PRESENTATION

A 36-year-old female patient was admitted to the neurology department for exacerbation of relapsing-remitting multiple sclerosis (MS), with a history of diagnosis dating back five years. She reports progressive weakness in her lower limbs, intense fatigue, visual disturbances, and anxiety about losing her independence. She lives with her mother and 10-year-old son. A partial dependence for basic activities of daily living is observed. She does not show significant cognitive impairment, but expresses fear of disability and concern for her family's future.

The nursing assessment was performed according to Marjory Gordon's Functional Health Patterns, enabling the identification of altered human responses in the physical, emotional, and social spheres. The relevant findings are summarized below:

Table 1. Nursing Assessment According to Marjory Gordon's Functional Health Patterns	
Functional Pattern	Relevant Assessment Data
Health Perception/Management	Partial knowledge of her illness. She complies with medication but has low adherence to exercise.
Activity/Exercise	Fatigue with minimal effort, muscle weakness, and gait disturbance.
Sleep/Rest	Difficulty falling asleep, non-restorative sleep.

Table 1. Nursing Assessment According to Marjory Gordon's Functional Health Patterns

Functional Pattern	Relevant Assessment Data
Cognition/Perception	Blurred vision, paresthesia in extremities, anxiety due to functional loss.
Self-perception	Feelings of uselessness, frustration, and dependence.
Role/Relationships	Primary caregiver mother; reduced social networks.
Coping/Stress tolerance	Anxiety, ineffective coping strategies.
Values/Beliefs	Strengthen your spirituality as a source of support.

Table 2. Nursing Diagnoses (NANDA-I 2024-2026)

Code and Diagnosis (NANDA-I)	Expected Outcomes (NOC)	Interventions (NIC)
00093 - Fatigue related to muscle weakness secondary to neurological process, manifested by complaints of tiredness and lack of energy.	0007 - Energy Level: Indicators: physical endurance, activity tolerance, ability to perform ADLs. Goal: improve energy level from 2 (low) to 4 (moderate).	0180 - Energy management: schedule rest periods, teach energy conservation techniques, encourage gradual participation in activities.
00146 - Anxiety related to uncertainty about the course of the disease, manifested by restlessness, tension, and verbalization of fear.	1211 - Anxiety level: Indicators: relaxed facial expression, calm demeanor, control of thoughts. Goal: decrease anxiety level from 4 (high) to 2 (mild).	5820 - Decrease anxiety: actively listen, provide realistic information, encourage breathing and relaxation techniques, reinforce family support networks.
00155 - Risk of deterioration in physical mobility related to progressive neuromuscular impairment.	0208 - Mobility: Indicators: balance, coordination, muscle strength. Goal: maintain stable functional level.	0221 - Exercise therapy: ambulation: collaborate with physical therapy, assist with passive-active exercises, promote safe ambulation with technical aids.
00165 - Ineffective coping related to perception of loss and lack of control over the disease, manifested by verbalization of helplessness and discouragement.	1302 - Active coping: Indicators: use of support resources, emotional control, acceptance of reality. Goal: improve coping from 2 (low) to 4 (moderate).	5230 - Improve coping: encourage emotional expression, reinforce self-esteem, teach problem-solving strategies, provide psychological support.

Implementation of the care plan

During the hospitalization period, therapeutic education, emotional support, and self-care strengthening interventions were implemented. The nurse acted as an adaptation facilitator, prioritizing respect for the patient's autonomy and her active participation in daily care planning. Actions were coordinated with physical therapy, psychology, and social work, promoting an interdisciplinary approach.

Progressive improvements were recorded in activity tolerance, decreased anxiety, and increased participation in self-care. NOC indicators reached expected levels after seven days of intervention, with daily reassessment of objectives.

DISCUSSION

The results coincide with those reported by Pérez et al.⁽¹⁴⁾ in 2023, who highlight that fatigue and ineffective coping are the primary nursing diagnoses in patients hospitalized with multiple sclerosis (MS). The person-centered approach, grounded in Gordon's model, enabled us to identify not only physical needs but also emotional and social dimensions relevant to the adaptive process.⁽¹⁵⁾

The use of standardized interventions (NICs) contributes to the systematization of care and the objective measurement of outcomes (NOCs), thereby strengthening evidence-based practice.⁽¹²⁾ The implementation of self-care and energy management strategies promotes patient autonomy, an aspect identified as a priority by the World Health Organization within the framework of a comprehensive rehabilitation approach.

Among the limitations of the case study are the short observation period and reliance on the hospital environment, which make it difficult to assess the sustainability of the results in the long term. However, the findings highlight the importance of nursing's consulting role in therapeutic support and educational guidance, promoting humanized, safe, and participatory care.

CONCLUSIONS

The nursing assessment based on Marjory Gordon's model allowed us to identify priority alterations in the functional patterns of activity, coping, and self-perception in a person with multiple sclerosis who was hospitalized. The application of the Nursing Care Process with the NANDA, NOC, and NIC taxonomies enabled the

development of a comprehensive care plan focused on promoting autonomy, symptom control, and emotional adaptation.

The case demonstrates that nursing practice, supported by theoretical models and updated guidelines, contributes to improving health outcomes and quality of life for people with chronic neurodegenerative diseases. It also highlights the need to strengthen nursing research and patient education as pillars of comprehensive and humanized care.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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