



NURSING INTERVENTIONS PROMOTING FUNCTIONALITY AMONG ADULTS WITH MULTIPLE SCLEROSIS: INTEGRATIVE REVIEW

INTERVENÇÕES DE ENFERMAGEM PROMOTORAS DA FUNCIONALIDADE DO ADULTO COM ESCLEROSE MÚLTIPLA: REVISÃO INTEGRATIVA

INTERVENCIONES DE ENFERMERÍA QUE PROMUEVEN LA FUNCIONALIDAD DEL ADULTO CON ESCLEROSIS MÚLTIPLE: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to identify interventions that have an impact on functionality among adults with multiple sclerosis (MS). **Method:** integrative review, within the time period from 2009 to 2014, conducted between November 2013 and March 2014, on the databases EBSCO, B-On, ISI, and JBI, by using this question: "Which are the nursing interventions promoting functionality among adults with multiple sclerosis during their hospitalization?" **Results:** the results shown are organized according to Marjory Gordon's functional health patterns. Health management is the encompassing pattern, and it is by controlling the various functionality patterns that the individual can achieve the management of her/his health, where the main purpose is self-care in all dimensions. **Conclusion:** it is key to know the specific needs shown by adults with MS, so that care is individualized and functionality is improved or maintained, aiming at comprehensive biopsychosocial and spiritual well-being. **Descriptors:** Adult; Multiple Sclerosis; Functionality.

RESUMO

Objetivo: identificar as intervenções que têm impacto na funcionalidade do adulto com esclerose múltipla (EM). **Método:** revisão integrativa, no limite temporal de 2009 a 2014, realizada entre novembro de 2013 e março de 2014, nas bases de dados EBSCO, B-On, ISI e JBI, a partir desta questão: "Quais são as intervenções de enfermagem promotoras da funcionalidade na pessoa adulta com esclerose múltipla durante a sua hospitalização?". **Resultados:** os resultados apresentados encontram-se organizados de acordo com os padrões funcionais de saúde de Marjory Gordon. A gestão da saúde é o padrão englobante, e é através do controlo dos diversos padrões de funcionalidade que o indivíduo consegue alcançar a gestão de sua saúde, tendo como principal finalidade o autocuidado em todas as dimensões. **Conclusão:** é crucial conhecer as necessidades específicas apresentadas pelo adulto com EM, para que o cuidado seja individualizado e a funcionalidade melhorada ou mantida, visando ao bem-estar integral biopsicossocial e espiritual. **Descritores:** Adulto; Esclerose Múltipla; Funcionalidade.

RESUMEN

Objetivo: identificar las intervenciones que tienen un impacto en la funcionalidad del adulto con esclerosis múltiple (EM). **Método:** revisión integradora, dentro del período de tiempo de 2009 a 2014, realizada entre noviembre de 2013 y marzo de 2014, en las bases de datos EBSCO, B-On, ISI y JBI, mediante esta pregunta: "¿Cuáles son las intervenciones de enfermería que promueven la funcionalidad del adulto con esclerosis múltiple durante su hospitalización?". **Resultados:** los resultados mostrados están organizados de acuerdo con los patrones funcionales de salud de Marjory Gordon. La gestión de la salud es el patrón abarcador, y es mediante el control de los distintos patrones de funcionalidad que el individuo puede lograr la gestión de su salud, donde el objetivo principal es el auto-cuidado en todas las dimensiones. **Conclusión:** es crucial conocer las necesidades específicas mostradas por el adulto con EM, para que la atención sea individualizada y la funcionalidad mejorada o mantenida, teniendo como objetivo el bienestar biopsicosocial y espiritual integral. **Descriptor:** Adulto; Esclerosis Múltiple; Funcionalidad.

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INTRODUCTION

Geographically, according to the Portuguese National Multiple Sclerosis Association (ANEM), multiple sclerosis (MS) has a high incidence (more than 30 cases per 100,000 inhabitants) in a large part of Europe, Russia, Canada, northern USA, southeastern Australia, and New Zealand; an average incidence (between 5 and 30 cases per 100,000 inhabitants) in southern USA, in a large part of Australia, South Africa, southern Mediterranean, Siberia, Ukraine, and some places in Latin America, and a low incidence (less than 5 cases per 100,000 inhabitants) in most of the Asian continent, in Africa, and in the northern portion of South America.¹

MS is one of the most common neurological diseases, it is usually diagnosed between 20 and 40 years, in a productive phase of the adult life project, causing progressive and sometimes unpredictable disability.² The average life expectancy, after diagnosis, is around 40 years. However, these years consist of lower quality of life due to the prevalence of disability, with consequences on the personal, family, social and economic realms.³

Disability is defined as reduced body structure or function, limited activity, and/or restricted participation in society, associated with a past or current damage.⁴ It may include impairment, limited activity, or restricted participation.⁵

When this pathology is diagnosed, a client with MS experiences a health-illness transition, so nursing intervention as a whole must be intentional, i.e. involve the ability to aim thoughts and action at certain purposes or expected outcomes, highlighting professional action⁴, in the case of a client with MS, the desired outcome is promoting her/his functionality.

For most people with MS, progression and evolution of dependence is characterized by episodes of exacerbations and remissions, uncertain and unpredictable, affecting vision, balance, and motility. Around 15 years after diagnosis, the course usually becomes progressive chronic and, after about 20 years, most people with MS may become dependent on auxiliary means for locomotion. Although it is possible, in some way, to predict how quickly someone will develop gait impairment, since this limitation level can be reached, the disease variables are not predictive of disease progression. Early disease progress indicators

are not predictive of how an adult with MS may or may not develop long-term disability.⁶

Fatigue is a major symptom that interferes with the ability of a person with MS to pursue self-care.² This is a debilitating symptom with a negative impact on the quality of life of an adult with MS, making it difficult or impossible to pursue self-care.⁷

Regarding the activities that involve the physical dimension, the individual sees some everyday tasks as activities that require greater effort, thus there is a decrease in physical activity.⁸ This decrease in physical activity and asthenia due to fatigue are associated with difficulties, not only in fulfilling daily life activities and tasks but also in the workplace, and they often can lead a person to leave her/his job.⁹

Just as in other chronic diseases, self-care is a significant resource to manage¹⁰, thus nursing care for an adult with MS is crucial to improve quality of life, taking into account her/his limitations in self-care, deriving from symptoms that emerge with disease evolution. It is key to know the specific needs shown so that care is individualized, aiming at comprehensive biopsychosocial and spiritual well-being.³ Studies that address nursing interventions with an impact on functionality are scarce, so we think it is relevant to conduct this secondary study, which aims to:

- Identify the nursing interventions that impact on the functionality of an adult with MS;
- Analyze the nursing interventions that impact on the functionality of an adult with MS; and
- Organize the search results according to Marjory Gordon's functional health patterns.¹¹

METHOD

Nursing care clients benefit from evidence-based practice. Among the various literature review methods, the integrative literature review was chosen, as it combines primary studies with theory and concepts, something which enables a comprehensive investigation, allows identifying problems, and provides guidance for further research.^{12,13} When compared to the systematic review literature, this method allows using of a broader set of literary features¹², enabling us to draw general conclusions, highlight unsolved issues, and provide guidance for further research.

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We used, in order to increase the methodological rigor, a specific protocol.¹³ Two reviewers participated, who followed up the process and validated the protocol, the analysis of sample studies, and the final study report, thus increasing the reliability of findings.

So, we show the research protocol, organized into six steps.

1. **Research question: it was defined by using the PICO methodology: Which are the nursing interventions promoting functionality among adults with multiple sclerosis during their hospitalization?**

Functionality is defined, according to the International Classification of Functionality,

Disability and Health (ICF), as a generic term that encompasses body functions, activities, and participation, indicating the positive aspects of interaction between an individual (with a health condition) and her/his contextual factors (environmental and personal).⁵

2. Eligibility criteria: after the formulation of the research question, the inclusion and exclusion criteria were defined (Table 1).

Table 1. Eligibility criteria. Lisbon, 2014.

Inclusion criteria	Exclusion criteria
Participants:	Participants:
Adult	Elderly
Both sexes	Child
Multiple sclerosis	
Interventions promoting functionality	
Studies in a hospital environment	Studies with patients not hospitalized

A time period from 2009 to 2014 was established. **The research languages were Portuguese, English, and Spanish, and the search was restricted to articles available in full text.**

We used the following descriptors: “nurs*,” “interventions,” “self-care,” “adult,” “fatigue,” “multiple sclerosis,” “functionality,” “hospitalization,” in associations (AND and OR).

The survey was conducted from November 2013 to March 2014, on the databases available in the search engines EBSCO, B-On, ISI, and JBI. Manual search was conducted in journals and books.

3. Definition of information to be extracted from selected studies and categorization of studies: an instrument was built to identify the title of the article/work; author(s), year of

publication, type of article; objective(s), methods (if applicable); main results/conclusions.

4. Evaluation of the studies included in the integrative review: abstracts were compared to predefined inclusion and exclusion criteria and the repeated articles obtained from the various databases were removed. Thus, the sample consisted of 28 publications, 21 of them were scientific articles obtained from different databases (Table 2), 2 reference books, and 3 theses obtained through manual search in libraries, and 2 websites of organizations of people with MS: ANEM and International Organization Multiple Sclerosis Society (IOMSN).

Table 2. Source of the articles obtained from the databases. Lisbon, 2014.

Databases	Number of articles
PubMed	6
SciELO	4
Science Direct	2
PubMed Central	2
Open Journal System	2
Ebsco	1
B-On	1
ISI Web of Knowledge	1
Wiley Online Library	1
Virtual Health Library	1

5. Interpretation of results and 6 - Presentation of review/knowledge synthesis: the interpretation and synthesis of results were carried out. We defined, with a view to organizing information and writing the final report, 11 a priori categories according to Marjory Gordon's functional health patterns. They are: health management or perception; nutrition; elimination; activity and physical exercise; cognition and perception; sleep and rest; self-perception and self-concept; role and relationship; sexuality; coping; and beliefs and values.¹¹

This way of organizing information and thought allows us to realize that optimization of functionality patterns provides a holistic approach to care and makes it easier to pursue self-care.

RESULTS AND DISCUSSION

The studies included in this integrative review are heterogeneous: they are research works, reference books, and information available on websites (developed by experts). The 21 primary studies are different in terms of methodology, with descriptive papers related to a systematic literature review. Despite the difference in terms of sources and methodology, their reading and interpretation allowed us to provide an answer to our research question.

As mentioned above, we show the results organized and discussed in the light of Marjory Gordon's functional health patterns.¹¹

◆ Health management or perception

Health management encompasses all functional patterns. It is by controlling the various functionality patterns that the individual can manage her/his health¹¹, where the main purpose is self-care in all of its dimensions.

In the literature review we identified that the focus of nursing interventions should be aimed at teaching and education with a view to health promotion. The latter enables clients to decision-making about the health-illness process, so nurse's action must take into account the individual characteristics of clients that influence their health status.¹⁴ It also implies knowledge about their medical condition and the meaning attributed to it, as an influence on the process of adhering to the treatment.

It is crucial to advise and educate clients in order to achieve cognitive, social, emotional, and physical well-being.^{9,14-16} Thus, a health-seeking behavior should be encouraged by the nurse¹⁷, because she/he has knowledge enough to filter information. On the other hand, the nurse can also refer people to associations that support clients with MS¹⁵, increasing the social network for support and sharing.

The planning of information to be provided about the disease, self-management and rehabilitation strategies, must be conducted by a multidisciplinary team, so that everyone adopt the same objectives.^{2,14-18} The information transmission strategies should involve not only content, but also motivation, a person's ability to assign meaning to the situation she/he experiences, a person's emotional state, and her/his cognitive ability, since the aim is raising awareness about the MS.² Validation of what a person already knows about the disease is of paramount importance, since it allows identifying what she/he already know and what she/he needs to know, guiding nurse's intervention.

Other authors report that such awareness also involves the identification of a client's reaction to the diagnosis and the disease, as well as a client's behavior.^{15,19} Information may be collected through an interview with

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the client, to know the experience of the health-illness process.²⁰ This interview should be conducted in an embracing hospital environment, favorable to developing client's potential and facilitating the expression of her/his possibilities.²¹

It is also needed to teach clients about the clinical symptoms of MS, as well as the potential psychological changes associated with it, something which helps the person to adhere to treatment and take control of her/his disease.²

Teaching and education concerning strategies to adopt in self-care should include the management of symptoms, particularly fatigue.^{9,16}

When managing the therapeutic regimen, nurses must educate clients and family members about techniques such as administration of medicines², as well as about side effects (fatigue, emotional lability, and flu-like symptoms).^{22,23}

Non-pharmacological measures should focus on muscle relaxation therapy²⁴ and information about other methods of supplementary treatment, such as acupuncture and homeopathy.¹⁵

◆ Nutrition

An adult with MS do not have specific nutritional needs and, concerning this functionality pattern, the literature tells us that the nurse's focus will be advising on proper nutrition.¹⁹

Monitoring appetite, as well as stimulation of food intake² and fluid intake¹⁷, is key. The food pattern should consist of six daily meals and intake of 1.5 l of water/liquids a day. The diet should be balanced, encompassing all groups of the main foods.²³

It is advisable to have a limited intake of animal fatty acids, people should choose lean meats, such as chicken and fish.^{1,23,24} Preference also lies on foods rich in vegetable fatty acids, vitamin B12 (potatoes, bananas, pepper, liver oil, turkey, and tuna), and vitamin A (melon, mango, carrot, broccoli, spinach, pumpkin, peas, beets, liver, butter, and eggs), vitamin C (liver, kiwi fruit, broccoli, and citrus), vitamin D (mushrooms, eggs, salmon, sardine, and tuna), and vitamin E (nuts and peanuts), which stimulate the immune system and help controlling the symptoms of MS^{1,24}, as well as preferably using polyunsaturated oil, e.g. sunflower oil.²⁴ Fatty vegetable acids are used by the body for

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producing myelin, and this is constituted by fat.²⁴

An adult with MS may still show signs and symptoms of impairment such as cough, dysphagia, or regurgitation, thus it is needed to provide postural changes during meals², such as elevating the head of bed up to 70° or stay in the sitting position. If these changes are identified, it is crucial to refer to the speech therapist, for a specific evaluation.² Later, a nurse's role become rather aimed at interventions for dysphagia³, such as teaching to avoid foods with small particles (e.g., rice and pasta), as well as the intake of pure liquids (use a thickener), put small amounts of food in the mouth, and put food in the mouth only being sure that the previous ones were swallowed.

In situations where dysphagia is total and/or permanent, there may be necessary to place a nasogastric tube or percutaneous gastrostomy tube, thus it is crucial to instruct the client and her/his family about the use at home.²

◆ Elimination

Urinary dysfunction may affect between 80 and 90% of people with MS, while intestinal change is estimated in about 70% of situations.²⁵

In the case of an autoimmune disease and frequently providing therapies that affect or suppress the immune response, people are more likely to develop infections. It is key to evaluate the symptoms of urinary infection and provide information on them.²

There is often change in control of sphincters, so the client must wear clothes easy to remove in the case of urinary or bowel incontinence² and, in situations of greater dependence, use diaper or urinary external device (in men).

The most common intestinal disorders are constipation and bowel incontinence. They can be controlled through proper fluid intake (1.5 to 2 l a day) and high-fiber food, as well as through a prescribed therapy adjustment. Irritating, spicy, and fatty foods should be avoided and the person should establish routines to regulate bowel function. The frequency and characteristics of excreta should be evaluated², in order to identify any change in the elimination pattern.

It may also be necessary to provide intermittent catheterization, instruct the client and/or informal caregiver concerning self-catheterization at home, and advise

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performing Kegel exercises, in order to increase the detrusor and pelvic muscle tone.²

◆ Activity and Physical Exercise

Fatigue is a common symptom that influences this functional pattern, it is important to find strategies so that the client can fulfill her/his daily activities and keep or acquire regular exercise habits.

Nursing interventions consist in making it easier for clients to adopt energy preservation strategies.^{2,21} On the other hand, it is essential to support the client to increase interest in and motivation for exercising¹⁷, since this enhances her/his functional ability.^{14,26} The introduction of rest periods between activities and the adoption of ergonomics principles help the client to prevent or control fatigue.^{2,8,16,21}

The nurse must identify the causes of fatigue.¹⁷ There are several motor and fatigue scales that help evaluating it.⁷

Energy preservation can be achieved if the client controls breathing rhythm, eliminate unnecessary activities, support the elbows to fulfill activities such as shaving and brushing teeth, use shoehorn to put on shoes, bathing sitting, manage time to fulfill daily living activities, ask for help to perform tasks that require a lot of physical effort, and increase motivation to perform new activities.^{2,21} Simplification of work and stress control also extend to labor activities, e.g. by asking working hours exemption.

The use of auxiliary means for locomotion should be considered in clients with difficulties to walk.¹⁵ Despite the strategies suggested by the authors, it should be explained that the client will have to gradually adapt to disability caused by fatigue.²¹

We may resort to other supporting products such as knives, forks, and spoons with firm and slip-resistant cables, plates with protruding lips, and cups with lids to a satisfactory fulfillment of self-care with feeding.²¹ Referring to an occupational therapist may favor the maintenance of independence in daily life activities, e.g. by means of muscle strength maintenance exercises, motility, and motor coordination of the upper and lower limbs.²¹

Regular physical exercise should be promoted and its importance explained.^{17,19} Exercise may consist in having regular walks, which range from 10 to 50 minutes, depending on client's tolerance.¹⁶ If the person gets easily tired, she/he should plan to take breaks regularly and drink fluids.

In clients who have difficulties in mobilizing, alternating decubitus and the application of moisturizer should be provided, in order to prevent the emergence of pressure ulcers.^{2,17} Other interventions include raising limbs¹⁸, instructing on the execution of active mobilization of unaffected limbs at least 4 times a day, and perform passive/active assisted mobilization in affected limbs to prevent the emergence of the spastic pattern.^{2,17,21} In these situations, the purpose of nursing intervention is maintaining and/or increasing clients' functionality, since there is a need to preserve and enhance their capabilities.

Regarding hygiene care, it is necessary to provide all the bathroom equipment adjustments required and place them within client's reach.¹¹

Clients may also have difficulty in coughing effectively, so it is crucial to instruct on coughing technique to avoid accumulation of bronchial secretions and strengthen the breathing muscles.¹⁷ In cases of severe respiratory distress due to fatigue, oxygen must be administered.²

Clients should also be informed as for safety measures to prevent any infection or wound¹⁷, since treatment reduces the body's immune response. One of the potential symptoms is decreasing surface sensitivity, and there may occur, for instance, burns, thus sunscreen should be applied whenever performing outdoor activities.

◆ Cognition and Perception

The cognitive-perceptual pattern is focused on a person's ability to collect environmental information and use it in reasoning and other thought processes.¹¹ The nervous system is the primary biological support system for this pattern.¹¹ MS, as a neurological disease, affects the neurological function.

The information storage and processing speed is among the most affected cognitive functions during the course of disease⁸, thus it becomes worth providing interventions to evaluate affected cognitive functions and deploying neuropsychological rehabilitation activities. These activities include identification and adoption of strategies to reduce cognitive barriers, such as using lists and reminders, digital assistants, time management with the help of an occupational therapist, and music therapy.²

To improve cognitive capabilities it is needed to plan interventions to control fatigue.⁸ It is worth maintaining one's job, so

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that patients keep cognitively active.²⁷ Through working physical and cognitive activity are ensured, preventing disability, protecting against depression states, and thus maintaining the quality of life.

This pattern also includes pain management¹¹, and it is worth alleviating it through pharmacological agents, position change, physical therapy, massage, heat or cold application; we may also use supplementary therapies, such as hypnosis, yoga, meditation, and acupuncture.²

◆ Sleep and Rest

Sleep consists in a crucial pattern, because it is a reparative process. Since adults generally require about 7 to 8 hours of sleep a day¹¹, monitoring the sleep pattern and the number of hours of sleep constitutes a priority.

The evaluation focus in this pattern involves one's rest and her/his ability to fulfill daily life activities¹¹ and, as a consequence, manage fatigue. The nurse should encourage alternate periods of rest/activity¹⁸, as well as encourage the patient to adopt an adequate sleeping pattern.⁸

◆ Self-Awareness and Self-Concept

This pattern involves personal awareness. It is associated with various dimensions, including self-identity, self-esteem, and self-competence.¹¹ Emotional lability and depression often arise in people with MS, and depression occurs in 30 to 50% of them.²³ A primordial intervention is the identification of risk factors for depression.¹⁴

The focus of this pattern also includes evaluating mood, the presence of signs and symptoms of depression, such as irritability, discouragement, frustration, insomnia, poor appetite, impaired memory and concentration, feelings of guilt, and low self-esteem, which are described as risk factors for suicide.^{2,14,20}

There may be a need to provide psychological counseling in case of suicidal ideation or indications of mood changes.²⁰

As one of the signs of depression is apathy¹⁷, it is worth evaluating the motivation for self-care and self-concept, self-image, and self-esteem, as well as asking about the difficulties and changes experienced in fulfilling daily life activities due to illness, assessing clients' decision-making capacity, evaluating the independence degree^{14,15}, in order to find coping strategies.²⁸

A nurse should provide emotional support and answer questions in order to reduce fear, provide group discussion time for

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externalization of feelings and verbalization of difficulties, as well as show willingness to listen and/or be together.^{15,28}

◆ Role and Relationship

It comprises the pattern of relationship and commitment to the role each person plays in her/his relationships, encompassing satisfactory relationships with family, at work, and with friends and also the evaluation of its structure.¹¹ MS has a negative impact on the various social roles, undermining social and family relations, leading to a sense of loss by the patient and family members.²⁵

It is worth including in data collection information on the social and family relationship.^{2,15,28} Data refer to the family dynamics, functioning, and structure^{14,18} and also the family members' emotional state, providing emotional support.²¹ Family and client must verbalize thoughts and feelings and be encouraged to find strategies to maintain and improve family and social relationships.

Quality of life is influenced by social and professional stigma and the perception of social uprooting, important in the social relationships of individuals with MS²⁷, so it is necessary to evaluate its impact on self-esteem and self-concept. It is worth identifying the risk factors of social isolation, encouraging the client to keep her/his social relationships³, and promoting integration and social relationship.²⁸

The nurse must include, besides the client, family members, so that they find alternatives together to deal with symptoms related to the disease, as well as ensure home self-care^{9,20,21}, in order to facilitate the homecoming process.

◆ Sexuality

Sexuality is observed in the life of every individual, following her/his growth and development. The young adult has acquired physical maturity, but keeps on developing and defining emotional maturity in the relationships, so the existence of changes that compromise sexual activity may affect her/his sexual satisfaction. Sexual issues affect the quality of life of about 40 to 80% of women and 50 to 90% of men and they may be related to the therapy established or have a psychological origin.^{8,29} Sexual dysfunction usually occurs as erectile dysfunction, among women it is expressed through impaired sexual arousal or orgasm.²³

Nurse's role goes through a multidisciplinary approach⁸, which includes identifying the manifestations of sexual disorder²⁹, stimulating

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verbalization of thoughts and feelings about sexual issues, improving knowledge about sexual and reproductive health and help identifying strategies that favor achieving sexual satisfaction.²

People with MS should learn stimulation and sexual response techniques as they develop their intimate relationships, which are satisfactory to oneself and her/his partner.²⁹

Teaching should provide information about the use of vaginal lubricants, prescribed medication, and use of a penile ring with vacuum device for effective erection, self-administration of injectable prostaglandin to the penis or penile prosthesis.²⁵

◆ Coping

Throughout life, people learn on a social basis strategies to tackle issues such as diseases.¹¹ An adult with MS, undergoing a health-illness transition, needs to find coping strategies to deal with the symptoms and chronicity of disease.

Nurse's role in promoting coping for a person with MS involves identifying individual coping factors and strategies.^{18,27} This involves, first, the identification of predisposing factors, as well as factors triggering fatigue, then help her/him to adopt strategies to deal with and control this symptom.⁹ This includes helping the client to establish a link between the symptoms and increased disability, as well as the impact on productivity, and also promote monitoring of symptoms and optimize the treatment schemes.³⁰

The nurse promotes adaptation and seeks to change dysfunctional behaviors arising from disease.^{2,17,28} There will also occur changes in daily life environment due to the conditions imposed by disease.² Clients should be instructed with regard to the promotion of relaxation techniques to use during periods of stress or fatigue, by means of breathing exercises, as well as awareness of breathing time, diaphragmatic breathing, and relaxation of muscles in the upper and lower limbs.¹⁶

The intervention along with family members involves enabling them to interact, manage, stabilize, reduce, and overcome cognitive, emotional, and social disabilities, providing significant improvements to achieve quality of life in patients with MS.²⁸ On the other hand, when clients are dependent on others for self-care, this may be provided by the informal caregiver, who should be prepared to identify client's needs.

The nurse should inform, educate, and encourage the participation of an informal caregiver, as well as facilitate her/his presence during hospitalization, identify her/his training needs, and stimulate taking periods of rest, in order to avoid feeling overwhelmed.²

Social support is key so that the person feels protected and supported and thus prevent social isolation. To do this, there is a need to identify the client's social support network¹⁶ and encourage social support.² The nurse should promote social relationships, benefiting a person both by means of material and psychological support.

The family and social support is crucial so that the client feels the best quality of life possible. The lack of this support is associated with poor adherence to the treatment scheme or a limited educational level.²⁶

◆ Beliefs and Values

This pattern deserves our attention and intervention, taking into account the importance the client assigns to her/his beliefs and values, in problem-solving and decision-making.¹¹ It is through client's experiences, values, and cultural perspectives related to health³⁰ that individualization of care is built, through client participation. The partnership has as its early stages knowledge of participants and the identification of her/his potential to develop the abilities that each person can offer to the relationship.

The identification of client's beliefs and values is the baseline of intervention, taking into account this functional pattern.²⁹ Thus, knowing client's personality and her/his philosophy of life, the nurse will provide information on the adaptations needed, such as, for instance, changes of belief and attitude, values, priorities, and criteria.¹⁵ These adjustments are intended to facilitate acceptance of disease and maintain quality of life at optimal levels for oneself - there is a need to reformulate goals and life expectations. Nurse's intervention involves explicit strategies, but the decision is always up to the client, who can even chose strategies that the nurse did not explained.

CONCLUSION

MS is characterized as a chronic, degenerative, and autoimmune disease of the neurological system. Its unpredictable evolution implies monitoring by a multidisciplinary team focused on client and family needs.

This pathology accompanies the client throughout her/his life, and diagnosis is established at the height of a young adult's life project, something which causes a change in expectations and routines. As a chronic disease, interventions are aimed at the management of disease and the treatment scheme, and these are the key areas to provide care for an adult with MS. Self-care is characterized as a significant and crucial resource to maintain functionality, since this disease causes various changes to the client, mainly in the central nervous system, in the musculoskeletal system, and in sensitivity.

The presence of this disease can lead to various degrees of disability that cause decreased client and family members' quality of life, and the latter ones are faced with different requirements imposed, derived from resilience, expectations, and culture.

This integrative literature review allowed us to answer the research question. There is evidence available to implement in clinical practice the interventions described and organized through Marjory Gordon's functional health patterns. For the intervention, it is suggested to design programs for evaluating complex nursing interventions. At the levels of undergraduate and graduate nursing education, it is worth including the research results in curricular contents.

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