

Multiple Sclerosis

SILO 1: The role of the registered nurse in terms of philosophical, theoretical, practical and regulatory frameworks at an individual and professional level

Introduction

The term 'Neurodiversity' refers to the variation in cognitive abilities among the human population. It points out the fact that everyone has a unique nervous system with unique abilities and needs (Singer, 2016). As our nervous system is responsible for communication between all parts of the body, a neurological condition has the potential to impair the body functions significantly. In case of Multiple Sclerosis (MS), the central nervous system is affected. The myelin sheath surrounding certain nerve fibers suffers degeneration, which causes a delay in or interruption of nerve impulses (Halper & Holland, 2011).

Due to the degenerative character of MS, it can lead to disabilities over time. The disease has no definitive cure, but pharmacological and nonpharmacological interventions can mitigate its progression (Zawada & Campanella, 2022). Caring for patients living with MS involves addressing and identifying psychological, social, and physical issues that might arise from the condition or be aggravated by it.

Registered nurses play a pivotal role in assisting and coordinating the care of patients living with MS (Multiple Sclerosis Nurses Australasia Inc [MSNA], 2016). The correct use of evidence-based research supports and optimises outcomes. Philosophical, theoretical, practical, and regulatory frameworks systematically organise and indicate theories based on relevant concepts in nursing practice.

This poster aims at discussing different frameworks within nursing practice and how registered nurses can utilise them, at an individual and professional level, to provide adequate care for a patient living with MS.

Meet Sage



Sage is 28 years old and was diagnosed with MS in February 2022. Initially, about eight months ago, Sage started experiencing tiredness, muscle weakness and tremors (specially when lifting light weight objects), occasional blurred vision and short-term memory problems. The symptoms occurred infrequently, which caused Sage to not seek help for some time. However, Sage experienced an exacerbation that resulted in paralysis of her right arm and partial paralysis of her left arm.

After relevant assessments to discard other possibilities and a magnetic resonance imaging (MRI) scan, Sage receives her diagnostic from the medical team and also intravenous treatment (steroids). She was referred to an inpatient rehabilitation hospital for treatment of the paralysis. Upon discharge, Sage was able to hold a glass with her hands but still unable to lift it.

Sage is still dealing with the fact that she was diagnosed with MS and all the implications of this diagnose to her life. She lives with her mother and sister, who are also affected by the recent events but willing to support her. Sage is very confused with all the medical terms she suddenly have to become familiar with, and is unsure about what the next steps are regarding her treatment. She is worried about not being able to lift her arms again, and comes to you for advice.

In terms of frameworks (theoretical, practical, philosophical, and regulatory) within nursing practice at a professional and individual level:

What should you consider in assisting Sage with her decisions regarding her care plan?

The following content and literature review will aim at answering this question based on existing research on the topic.

Literature Review

Literature Review

Theoretical Framework

Due to the complexity of the disease, MS nursing involves many aspects to consider and reconsider over time depending on patient's needs, changing conditions, responses and treatment options. The registered nurse will be in a better position to assist Sage by making use of some underlying principles regarding MS nursing practice, as discussed by Halper & Harris (2012, p.12) and shown on Table 1:

Table 1

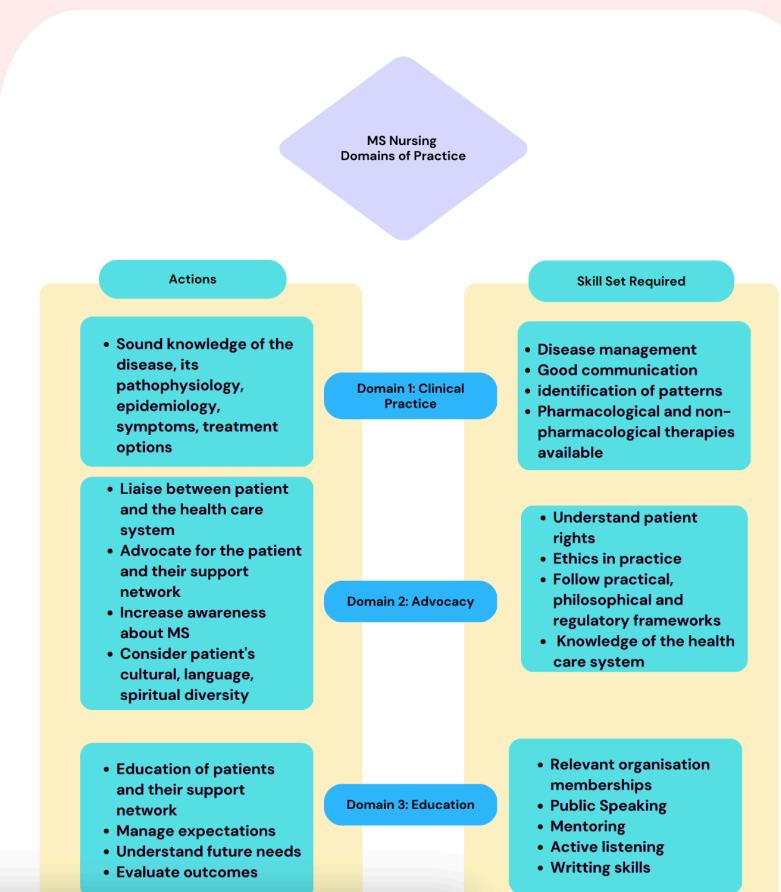
Universal Tasks Associated with MS Nursing

MS Nursing Universal Tasks
Establishment of a long term partnership with the patient and their support network. The partnership is based on trust and collaboration
Perform systematic and ongoing nursing assessment of the patient
Create, in conjunction with a interdisciplinary health team, a treating plan that is comprehensive and tailored to patient's conditions and expectations
Make sure treatment is initiated, maintained and take proactive steps to increase patient's adherence
Evaluation of outcomes

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Figure 1

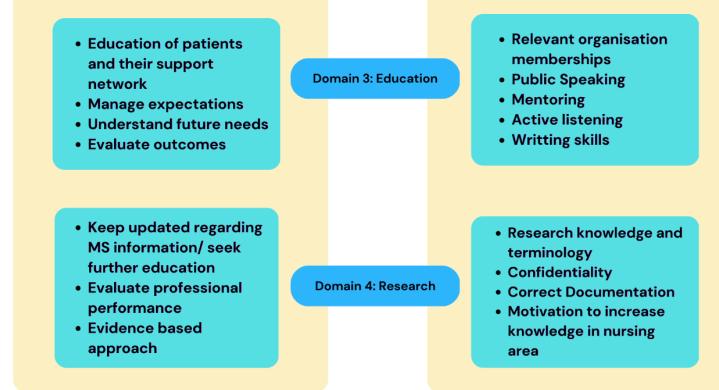
Domains of Practice - MS Nursing



Evaluation of outcomes

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In addition, MS nursing can be organised as domains of practice, which consist of areas of nursing practice where nurses are responsible when assisting a patient with MS and their support network. The domains of practice are also discussed in Burke et al. (2011), Halper (2012), and at the Professional and Practice Standards for Multiple Sclerosis Nurses organised by Multiple Sclerosis Nurses Australasia Inc (MSNA)(2016). They are summarised in Figure 1.



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Practical Framework

Nursing process is the "systematic guide" for nursing to provide person-centred care to all patients. It includes 5 steps: Assessment, diagnosis, planning, implementation, and evaluation (Toney-Butler & Thayer, 2020). Table 3 and 4 organise information regarding the nursing process for Sage.

Table 3

Nursing Process

NURSING PROCESS	HOW TO PERFORM
ASSESSMENT	<p><u>Objective data:</u></p> <ul style="list-style-type: none"> - Age - Vital signs e.g. temperature, respiratory rate, blood pressure, and heart rate (Wang et al., 2018). - Height and weight (Toney-Butler & Thayer, 2020). - Neurological assessment to examine the patient's ability of 'vision, strength, sensation, gait and coordination', also balance (Wang et al., 2018). The standard neurological assessment also aimed to examine the cognitive functions of patients with MS, since they are commonly impaired in 'information processing speed, complex attention, memory and executive function' (Oreja-Guevara et al., 2019). - Vision testing to examine the 'visual acuity, color vision, eye movements, and visual fields' (Wang et al., 2018). - Brain scan, i.e. MRI, can help to diagnose MS and any brain lesion, also it helps to monitor the progression of disease over time (Wang et al., 2018). <p><u>Subjective data:</u></p> <ul style="list-style-type: none"> - Verbal information from both the patients and family members or/and caregivers. For example but not limited to their quality of life, mental state, speech fluency, sleeping pattern, appetite, output pattern, pain areas, smoking, bowel issues and physical activity regularity (Sadeghi Bahmani et al., 2019).. Also, it is critical to know whether they have made the changes recently or not (Sadeghi Bahmani et al., 2019).

Table 4

Nursing Process (continuation from Table 3)

NURSING PROCESS	HOW TO PERFORM
PLANNING	<p>To formulate goals and ideal outcomes by using the SMART goal strategy (Wang et al., 2018):</p> <ul style="list-style-type: none"> • Since Sage is struggling to do DLA recently, our goal here is to prevent her from recurring fall and improve her independence. <p>Goal: To ensure the patient is supervised and given a wheeled walker whenever the patient wants to or is required to walk from one location to another. Meanwhile, a cleared path should be ready beforehand.</p> <ul style="list-style-type: none"> • Another goal is to minimise Sage's brain deterioration. <p>Goal: To monitor Sage's consciousness and cognitive functions using neurological assessment, at least twice per ward.</p>
IMPLEMENTATION	<p>Implementation involves completing the nursing interventions, (Tony-Butler & Thayer, 2022). In this case, since the goal is to prevent falls, the intervention can include the RN discussing Sage's goals, how the diagnosis affects her day to day activities, provides Sage with education regarding her diagnosis and ways to navigate the system and can connect Sage to a MS nurse, (Multiple Sclerosis Australia, 2022).</p> <p>It includes completing the neurological assessment as well as assessing Sage's mobility and gait to see if there is a decline. This could then be escalated and the RN can refer Sage to an OT who can conduct a home assessment after discharge.</p>

DIAGNOSIS	<ul style="list-style-type: none"> - To gather all the assessed data and require clinical judgment, aiming to provide a patient-centered care plan (Wang et al., 2018). - To target the actual problems: increased dependency on normal living, worsening vision, poor balance, tremors, had fainted due to the lack of consciousness. Also, to target the potential problems: causing mental burdening onto the patient, family members and / or caregivers, such as stress, horrifying, nervous and anxiety, etc. (Wang et al., 2018). 	EVALUATION	<p>Evaluating involves questioning whether the interventions worked and the way to do that is through assessments.</p> <p>In this case, we can compare previous assessments, such as Sage's GCS and a falls risk assessment.</p> <p>Communication is also key, hence asking Sage what interventions have worked, and her concerns are also important. Reassess Sage's fears and perceptions of MS. Patients with MS may fear becoming wheelchair bound, blind, paralysed, incontinence and death, (Fallahi-Khoshkhab et al., 2014). This can lead to adverse effects such as withdrawal and depression, (Fallahi-Khoshkhab et al., 2014), hence evaluating the patient's awareness and understanding of the disease and its complexities is important as the RN can educate the patient about the potential risks and symptoms.</p>

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Philosophical Framework

Often, registered nurses make decisions that reflect their values and beliefs. However, as part of the nursing process and the domains of practice described above, nurses should evaluate whether their moral principles are in line with their duty of care and standard of care set by the Nursing and Midwifery Board of Australia (NMBA). Among many other possibilities of organisation of moral principles within nursing practice, the four principles of bioethics - non-maleficence, beneficence, respect for autonomy, and justice - are considered a relevant guide to registered nurses (Atkins et al., 2017). Figure 2 summarises the four principles of bioethics being applied to Sage by a registered nurse.

Figure 2

Four Principles of Bioethics applied to Sage

Non-maleficence Choose not to cause harm on others and yourself (Atkins et al., 2017). Avoid providing care if it will harm Sage in her health journey to control MS progression. Consider the risk-benefit of every medication that is part of Sage's treatment. Assess treatment options and risk tolerance of Sage in order to tailor treatment (Olejarczyk & Young, 2022).	Beneficence Actively promote a benefit to others and yourself (Atkins et al., 2017). Factors in the care plan should benefit Sage and should not further complicate MS symptoms. Therefore an RN should have sound knowledge of MS, avoiding any potential risks to Sage's health.
Autonomy Encourage and promote the other's capacity for active participation in decisions about their lives (Atkins et al.m 2017) Sage should have a role in the decision-making of her care plan. She should feel a sense of empowerment and maintain her independence. The care plan should reflect Sage as a person including her values and	Justice Act in fairness (Atkins et al., 2017) As an RN, maintaining a professional level of nurse-to-patient relationship is very important. All patients should be treated fairly without favouritism, discrimination and without prejudice.

Regulatory Framework

Prior to implementing a nursing intervention for Sage, the registered nurse(RN) must be qualified and deemed fit to enter the profession. This is where the regulatory frameworks are important. An RN must renew their Australian Health Practitioner Regulation Agency (AHPRA) registration yearly, regularly participate in professional development and criminal checks, have up-to-date practical experience, and have English skills. If these factors are fulfilled, then nurses are qualified and deemed fit for the title of a registered nurse (Atkins et al., 2020). In order to provide a safe nursing practice, the code of conduct must be upheld. Ultimately, by adhering to these codes, the RN can safely provide nursing care for Sage throughout her treatment. Figure 3 shows the four domains within the Code(s) of Conduct set by the NMBA (Purdue & Kerr, 2020), the domains are based on seven principles of conduct expected from nurses and in accordance with the National Law.

Figure 3

Code(s) of Conduct for Nurses and Midwives

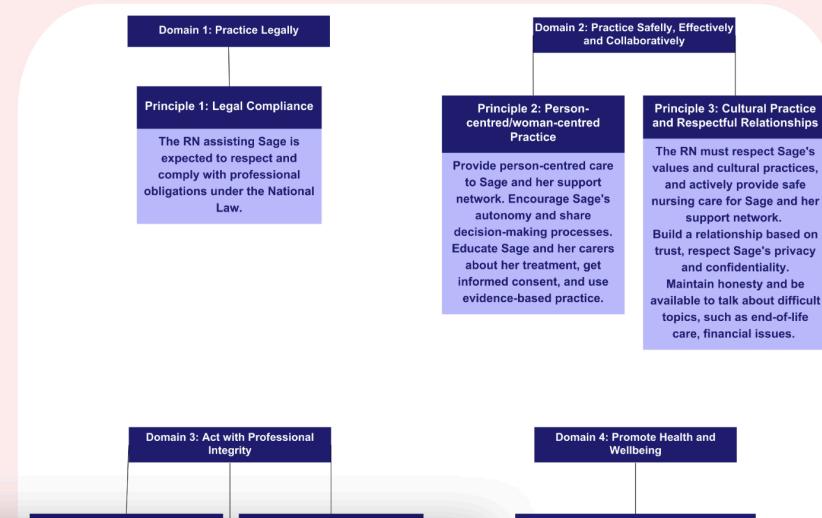
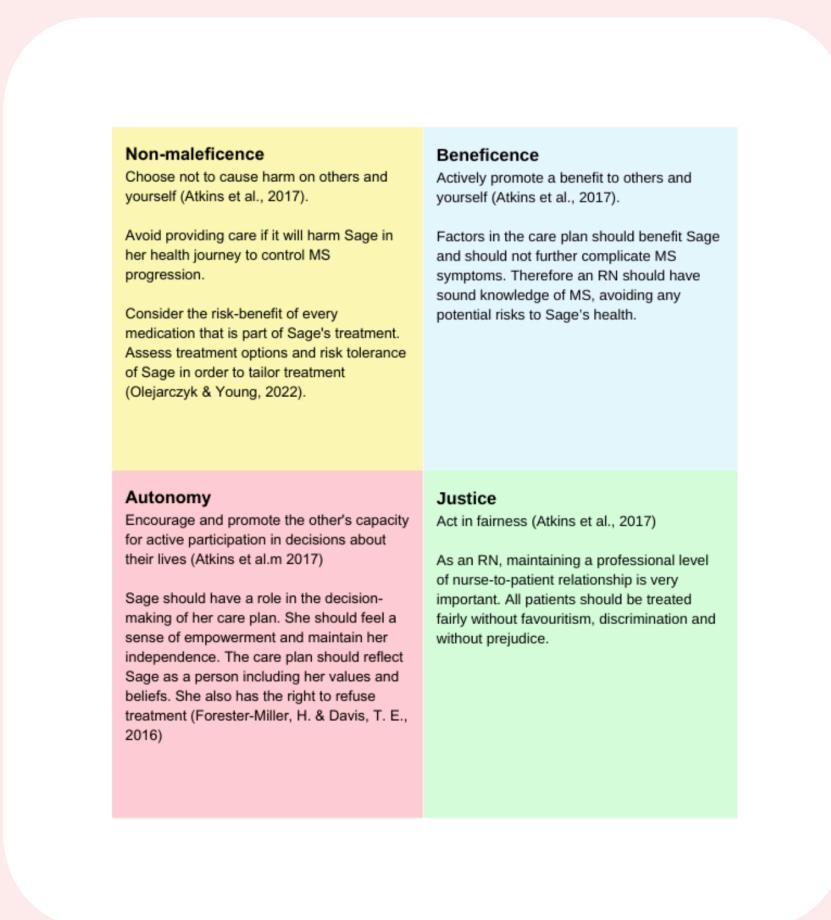


Figure 2

Four Principles of Bioethics applied to Sage

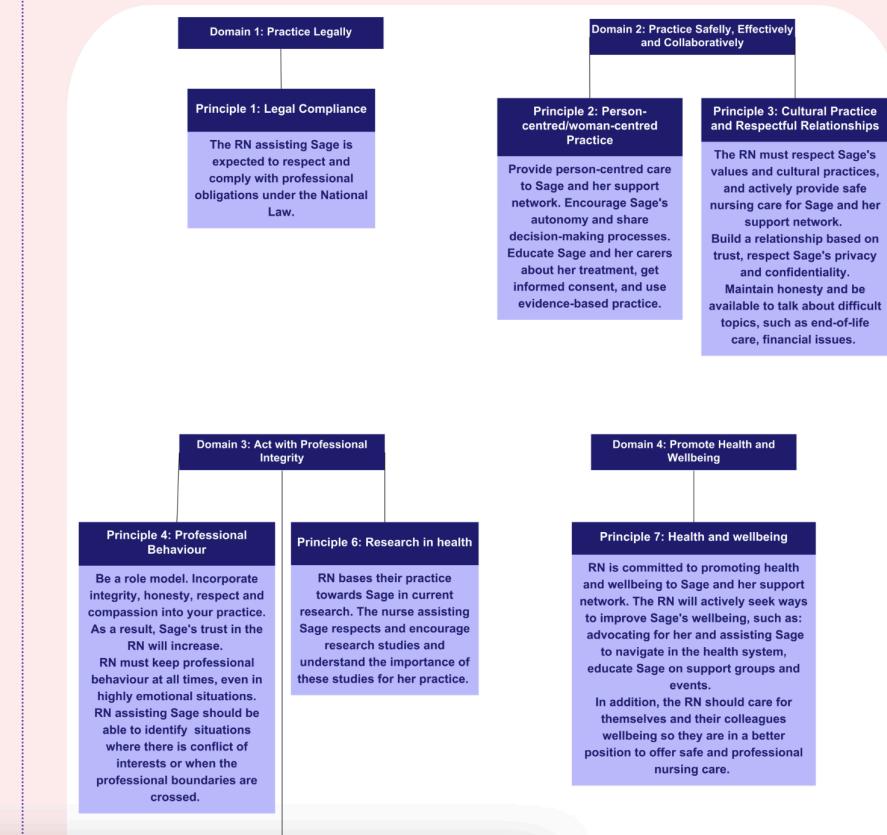


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Figure 3

Code(s) of Conduct for Nurses and Midwives



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professional boundaries are crossed.

Principle 5: Teaching, supervising, and assessing

RN is responsible for teaching and supervising students and other nurses/midwives in order to improve the quality of the nursing/midwifery service.
RN should seek Sage's consent to share information and teaching space with other nurses/students. The aim is to respect Sage's dignity and privacy.

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Recommendations

Adherence to Treatment

Training and policies

Recommendations

Adherence to Treatment

Registered Nurses are directly involved in counselling patients and their families about possible treatment options and course of action. This means that nurses are at the forefront of ensuring treatment adherence to patients living with MS by managing or monitoring side effects and discussing treatment outcomes. A study showed that 40% of patients living with MS were non adherent to treatment involving parenteral administration of disease modifying drugs (DMDs) (Treadaway et al., 2009, as cited in Burke et al., 2011), and other studies confirm this finding with 17% to 46% of MS patients not adhering to prescribed treatments (Tremlett & Over, 2003, Portaccio et al., 2008, O'Rourke & Hutchinson, 2005, Rio et al., 2005, as cited in Burke et al., 2011). The scope of treatment options for MS has increased, such as the introduction of oral therapies, which are perceived as being more friendly than parenteral, and therapies with annual dosing schedules (Burke et al., 2011). As a result, patient adherence might increase even though the changes in treatment also have the potential to pose new challenges to patients and nurses.

Adherence to treatment is an important part of the management of MS. Some strategies to encourage adherence to treatment and improve long term outcomes are listed below:

- Develop a therapeutic relationship with the patient and their support network
- Effectively involve other members of the health care team in the caring plan of patients
- Education: encourage patient's self-determination and assist them to manage their expectations. A study shows that 57% of patients who decided not to proceed with treatment had misguided expectations (Mohr et al., 1996).
- During treatment administration: address patient's concerns, explain possible side-effects and work on relaxation techniques (Burke et al., 2011).

Training and policies

Recommendations

Adherence to Treatment



Training and policies



The need for highly specialised nurses has increased due to the expansion of treatment options coupled with higher pressure on healthcare systems (Burke et al., 2011). Unfortunately, 31.5% did not have access to MS Nurse care (1 nurse/ 286 patients), and 17.8% were unaware of the existence of an MS Nurse (Multiple Sclerosis Australia, 2022). This results in deficient care, which contributes to poor health outcomes (faster disease progression, severity of symptoms, depression).

To optimise the situation, raise the awareness of MS nurses' value and services provided by them to patients. Increase their access by expanding to Telehealth services and make this available through Medicare, and increase their numbers by secure funding (Multiple Sclerosis Australia, 2022).

Conclusion

This poster presentation investigates and discuss the case of Ms. Sage - active young women who has been diagnosed with Multiple Sclerosis (MS) - based on different frameworks within nursing practice. Treatment of MS is multifactorial including patient and family education, counselling, physical therapy, rehabilitation, and pharmacotherapy (Maloni & Hillman, 2015). The registered nurse must inspire confidence in patients by allowing them to take responsibility for their MS self-management. This can be achieved by involving other members of the health care team in the caring plan of the patient and encourage patient's self- determination. Nurses have an unique capacity to develop, manage, and sustain care for people living with MS throughout the disease's progression and understand the objective of providing access to efficient, high-quality care. The different frameworks available for nurses can assist in organising and keeping the nursing practice consistent. As a result, nurses are able to evaluate the outcome of their interventions, and adopt necessary changes throughout the course of the long and sometimes unpredictable MS treatment. The broader implication of this case suggests the benefit of multi-model approach to provide adequate care for a patient with MS.

References

- Alshamrani, R., Althbiti, A., Alshamrani, Y., Alkomah, F., & Ma, X. (2020). Model-Driven Decision Making in Multiple Sclerosis Research: Existing Works and Latest Trends. *Patterns*, 1(8), 100121. <https://doi.org/10.1016/j.patter.2020.100121>
- Atkins, K., de Lacey, S., Ripperger, R. (2020). *Ethics and Law for Australian Nurses*. Cambridge University Press.
- Burke, T., Dishon, S., McEwan, L., & Smrtka, J. (2011). The Evolving Role of the Multiple Sclerosis Nurse. *International Journal of MS Care*, 13(3), 105–112.
- Halper, J., & Harris, C. (2012). *Nursing practice in multiple sclerosis : A core curriculum*. Springer Publishing Company, Incorporated.
- Halper, J., & Holland, N. (2011). *Comprehensive nursing care in multiple sclerosis : Third edition*. Springer Publishing Company, Incorporated.
- Fallahi-Khoshknab, M., Ghafari, S., Nourozi, K., & Mohammadi, E. (2014). Confronting the Diagnosis of Multiple Sclerosis. A Qualitative Study of Patient Experiences. *Journal of Nursing Research*, 22(4), 275-282. <https://doi.org/10.1097/jnr.0000000000000058>
- Forester-Miller, H. & Davis, T. E. (2016). *practitioner's guide to ethical decision making*. American Counseling Association.
<https://www.counseling.org/docs/default-source/ethics/practitioner-39-s-guide-to-ethical-decision-making.pdf>
- Maloni, H., & Hillman, L. (2015). Multidisciplinary management of a patient with multiple sclerosis: Part 2. Nurses' perspective. *Federal Practitioner: For the Health Care Professionals of the VA, DoD, and PHS*, 32(Suppl 3), 17S-19S.
- Mohr, D. C., Goodkin, D. E., Gatto, N., Neilley, L. K., Likosky, W., Griffin, C., & Stiebling, B. (1996). Therapeutic expectations of patients with multiple sclerosis upon initiating interferon beta-1b: Relationship to adherence to treatment. *Multiple Sclerosis*, 2(5), 222–226. <https://doi.org/10.1177/135245859600200502>
- Multiple Sclerosis Australia (2022). *MS Nurse Care in Australia. Patterns of access and impact on health outcomes*. Menzies Institute for Medical Research University of Tasmania.
https://www.msaaustralia.org.au/wp-content/uploads/2022/04/msa_ms-nurses-report_web.pdf
- Multiple Sclerosis Nurses Australasia. (2016). *Professional and Practice Standards for Multiple Sclerosis Nurses*. Multiple Sclerosis Nurses Australasia Inc.
https://msnainc.org.au/wp-content/uploads/2019/08/Professional-and-Practise-Standards-for-MS-Nurses-PPSMSNA_2016.pdf

Olejarczyk, J. P. & Young, M. (2022). Patient Rights And Ethics. *National Library of Medicine: National Center for Biotechnology Information*.

<https://www.ncbi.nlm.nih.gov/books/NBK538279/>

Oreja-Guevara, C., Ayuso Blanco, T., Brieva Ruiz, L., Hernández Pérez, M. Á., Meca-Lallana, V., & Ramió-Torrentà, L. (2019). Cognitive Dysfunctions and Assessments in Multiple Sclerosis. *Frontiers in Neurology*, 10. <https://doi.org/10.3389/fneur.2019.00581>

Sadeghi Bahmani, D., Kesselring, J., Papadimitriou, M., Bansi, J., Pühse, U., Gerber, M., Shaygannejad, V., Holsboer-Trachsler, E., & Brand, S. (2019). In Patients With Multiple Sclerosis, Both Objective and Subjective Sleep, Depression, Fatigue, and Paresthesia Improved After 3 Weeks of Regular Exercise. *Frontiers in Psychiatry*, 10. <https://doi.org/10.3389/fpsyg.2019.00265>

Singer, J. (2016). *NeuroDiversity: The Birth of an Idea*. Judy Singer

Toney-Butler, T. J., & Thayer, J. M. (2020, July 10). *Nursing Process*. PubMed; StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK499937#:~:text=The%20nursing%20process%20functions%20as>

Wang, C., Ruiz, A., & Mao-Draayer, Y. (2018). Assessment and Treatment Strategies for a Multiple Sclerosis Relapse. *Journal of Immunology and Clinical Research*, 5(1), 1032. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6223639/#:~:text=The%20physical%20exam%20is%20the>

Zawada, W. M., PhD, & Campanella, J. J., PhD. (2022). Multiple sclerosis. *Magill's Medical Guide (Online Edition)*. <https://discovery.ebsco.com/c/xppotz/viewer/html/33ftqyvkzv>

Footnote. The source code for this website was written and developed by Ana Marr. The website is hosted by GitHub, Inc(2007), (<https://github.com/about>). The video animation was drawn and developed by Roshini Sam. The video was developed using Krita(2005), (<https://krita.org/en/>).