

Type: Case Study

Subject: Pathophysiology

Subject area: Nursing

Education Level: Masters Program

Length: 1 pages

Referencing style: APA

Preferred English: US English

Spacing Option: Double

Title: Concepts of Neurological and Musculoskeletal Disorders – Part 2

Instructions: in your case study analysis related to the scenario provided, explain the following: both the neurological and musculoskeletal pathophysiologic processes that would account for the patient presenting these symptoms. any racial/ethnic variables that may impact physiological functioning. how these processes interact to affect the patient.

Important notes: this is a case study analysis and the three questions provided above must be answered. assignment must be original writing because it has to be submitted to safe assign

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**Concepts of Neurological and Musculoskeletal Disorders – Part 2**

Name

Institutional Affiliation

Instructor

Course

Date

## Concepts of Neurological and Musculoskeletal Disorders – Part 2

There are a wide variety of musculoskeletal and neurological disorders that can result in impairment in an individual's ability to perform basic functions such as speaking, walking, and other important daily activities. Impairment may result from altered muscular, skeletal, neurological, or even cognitive function of an individual. The impairment can lead to motor, sensory, and cognitive deficits, which may negatively affect strength, coordination, various motions, reaction time, visual perception, speed of processing information, judgment, ability to solve problems, attention, self-awareness, memory loss, and the ability of an individual to perform basic actions (McCance & Huether, 2019). In the pathogenesis of dysarthria, both neurological and musculoskeletal pathophysiological processes are involved, leading to an impairment of one or more speech subsystems. One of the most common causes of impairment is circulatory problems in the brain. Conventionally, the normal blood supply is required for the brain to function correctly (McCance & Huether, 2019). However, when there is a problem in the circulatory system, the brain may not get the right amount of blood flow due to a blockage or leakage.

The effects on the brain cause malfunctions, thereby creating a sudden change in speech. Even though the brain is the control center of the body, it does not operate alone. Nerves and muscles work with the brain to help the body function correctly. The brain utilizes the nerves to signal the muscles, and when there is any interference, the muscles will not move accordingly, which is why the patient has a speech problem. In mild dysarthria, the muscles in the face,

tongue, throat, and lips, as well as the muscles for breathing that move to aid in speech development, are affected, causing a weak or uncontrollable speech (Rampello et al., 2016).

Ethnic variables such as culture, racial discrimination, socioeconomic factors, and family functioning may impact the patient's physiological functioning. For instance, responses to discrimination by the individual may determine the patterns of physiological reactions or may even uncover the neural pathways mediating the physiological effects (Yesilot et al., 2017). Besides, discrimination based on age may also increase the risk of the patient developing problematic behaviors that may interfere with his physiological functioning. Moreover, lower socioeconomic status may also increase problematic behaviors for the patient, thus adversely affect his physiological functioning. Additionally, low-income family functioning factors may result in depression and stress that can significantly influence the patient's physiological functioning (Yesilot et al., 2017). Lastly, culture can substantially influence the patient physiological functioning.

## References

- Yesilot, N., Putaala, J., Bahar, S. Z., & Tatlısumak, T. (2017). Ethnic and geographical differences in ischaemic stroke among young adults. *Current vascular pharmacology*, 15(5), 416-429.
- Rampello, L., Rampello, L., Patti, F., & Zappia, M. (2016). When the word doesn't come out: A synthetic overview of dysarthria. *Journal of the neurological sciences*, 369, 354-360.
- McCance, K. L., Huether, S. E., Brashers, V. L., & Rote, N. S. (Eds.). (2019). *Pathophysiology: The biologic basis for disease in adults and children*. Elsevier.