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Biopsychosocial Needs among Patients with Hemiplegia

Thesis

*Submitted for Partial Fulfillment of the Requirements for
Master Degree in
Medical Surgical Nursing*

By

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 **Reda Tawfik Mohamed**



Abstract

Hemiplegia is defined as the paralysis of one side of the body. It is caused by disease or injury to the opposite hemisphere of the brain. People with hemiplegia often display difficulties in mobility, cardiopulmonary function, and sensory functioning. These difficulties affect their activities in daily living and thus have a negative impact on the quality of their life. **Aim of the study:** assess the biopsychosocial needs of patient with hemiplegia. **Research design:** exploratory descriptive design was utilized to meet the aim of this study. **Setting:** this study conducted at special medicine unit (neurology) and outpatient clinic at Fayoum university hospital. **Subjects:** A Purposive sample includes 100 patients. **Tools of data collection:** patient's assessment tool; **Part 1:** Socio-demographic data. **Part 2:** Past medical history of patients under study. **Part 3:** Biopsychosocial needs assessment. **A)** Physical needs assessment include **I.** systemic assessment; **II.** assessment of the daily living activities using barthel index scale. **B)** Psychological needs assessment. **C)** Social needs assessment. **Results:** the study showed that the common systemic need among studied patients were nervous system disorder with 61%, rest and sleep alteration with 56% followed by integumentary alteration with 38%, among the patients under study. Regarding performance of activity of daily living it was found that 30% of patient's under study had severe dependency. Regarding psychological needs it was found that 84% of patient's under study had severe anxiety. **Conclusion:** this study concluded that about third of patient's under study had moderate level of social needs. **Recommendation:** the study recommended that supportive care services in any hospital care setting should be directed towards meeting biopsychosocial needs of patients with hemiplegia.

Keywords: Biopsychosocial, Hemiplegia, Activity of daily living.

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List of Abbreviations

Abb.	Full Term
ADL	Activities of daily Living
BI	Barthel index scale
BPS	Biopsychosocial
CBC	Complete blood account
CO2	Carbon dioxide
CSF	Cerebrospinal fluid
CT	Computed tomography
CVA	Cerebral vascular accident
DASS	Depression and anxiety stress scale scoring
DVT	Deep venous thrombosis
EEG	electroencephalography
ESR	Erythrocyte sedimentation rate
mCIMT	Modified constraint-induced movement therapy
MRI	Magnetic resonance imaging
NDT	Neurodevelopment treatment
NMES	Neuromuscular stimulation
SCI	Spinal cord injury
SDB	Sleep-Disordered breathing
U.A	United state



Introduction





Introduction

Hemiplegia is defined as the paralysis of one side of the body. It is caused by disease or injury to the opposite hemisphere of the brain. People with hemiplegia often display difficulties in mobility, cardiopulmonary function, and sensory functioning. These difficulties affect their activities in daily living and thus have a negative impact on the quality of their life (*Sharma & Wong, 2021*).

The main cause of hemiplegia is cerebrovascular attack (CVA) or stroke. Stroke is the third main cause of the death & disability in Egypt. According to World Health Organization; from the total world's population, nearly 18.6 million had severe disability and 79.7 million had moderate long term disability. From all the disabilities, hemiplegia is one of the crippling disorders in society (*Yadav, et al., 2018*).

Other causes of hemiplegia include spinal cord injury, specifically traumatic brain injury, or disease affecting the brain. Features other than weakness include decreased movement control, clonus (a series of involuntary rapid muscle contractions), spasticity, exaggerated deep tendon reflexes and decreased endurance (*Handelzalts, et al., 2019*).



Problems and difficulties related to hemiplegia are sensorimotor deficit (numbness, tingling, anosognosia, apraxia, loss of proprioception and stereognosis, loss of strength and power), unilateral neglect, inability to perform activities of daily living, mental barriers (dementia, depression, and anxiety), speech difficulties (aphasia, dysarthria), abnormal tone (spasticity/flaccidity), and inability of social participation, cognitive difficulties (attention, learning, planning), difficulties in mobility, cardiopulmonary dysfunction, loss of independency, visual neglect, loss of vision or diplopia, incoordination that results in ataxia and gait difficulties (*Yadav, et al., 2018*).

Other problem related to hemiplegia is balance difficulties, abnormal reflexes, postural difficulties, swallowing problems (dysphagia), emotional deficit (irritability, frustration), bladder and bowel difficulties. People with hemiplegia are limited physically in their daily activities. This limitation affects their social well-being & thus can lead to depression (**Simmons, 2021**).



It is important to handle the three biopsychosocial needs together as a whole. Empirical literature suggests that the patients' perceptions of health, threat of the disease and barriers in the patient's social or culture environment influence the likelihood of the patient's engaging in health-promoting or treatment behaviors, such as medication taking, engaging in physical activity and proper diet or nutrition (*Williams, et al., 2019*).

Physiological needs, the most basic in the hierarchy of needs, are essential to life and therefore have the highest priority. Physiological needs include oxygen, water, food, temperature, elimination, sexuality, physical activity and others. It is necessary to meet such needs, at least minimally, to maintain life. Physiological needs represent a major part of nursing care plan for disabled and ill people who require assistance in meeting those needs (*Fallatah & Syed, 2018*).

Psychological and social problems for patient with hemiplegia including depression and other emotional problems; lack of information or skills needed to manage the illness; disruption in work and family life cause additional suffering, weaken adherence to prescribe



treatment and threatened patients to return to health (*Perna & Harik, 2020*).

Significance of the study

According to the World Health Organization over a billion people lived with some form of disability. Between 110 million and 190 million adults have significant difficulties in functioning; hemiplegia is one of the more common disabling conditions. In year 2006, Egyptian census determined that around 1.4 million Egyptians have disabilities (*World Health Organization, 2020; Ali, et al., 2020*).

Biopsychosocial assessment is comprehensive evaluation of an individual patient's physical, psychological and social. So assessment of biopsychosocial need is an important step to identify anticipating problems that facing patients with hemiplegia, creating a health care plan and facilitate recovery that is crucial to assess biopsychosocial needs for those patients.