**The Nervous system**

Department of Psychology, University of the People

PSYC 1504 Introduction to Psychology

Joseph Lucero

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# Introduction

The nervous system is the body's information processing and transmission system. It is responsible for receiving information from both external and internal stimuli, processing the information and transmitting it to where the information is needed. This essay explores the general structure of the nervous system, the benefits of sleep to the nervous system and personal experiences with sleep disturbances.

# Central nervous system

The nervous system is composed of all the networks of nerves across the body. It is divided into the central nervous system (CNS) and the peripheral nervous system (PNS). The CNS includes the brain and the spinal cord while the PNS includes all the nerves that connect the CNS to other parts of the body.

## The Brain

The brain is responsible for storing and processing of information from all the sensory organs and internal organs sent to it by the spinal cord. It is made of billions of complexly connected neurons. It has two distinct parts called hemispheres, the left and the right hemispheres connected by the corpus callosum which allows both sides of the brain to share information. Each of the hemisphere is divided into the frontal, partial, temporary, and the occipital lobes.

## Spinal Cord

The spinal cord transmits information between the brain and the rest of the body. It runs from the head into the pelvis. As it runs through the vertebral column which protects it, it branches out into the body to connect with the peripheral nerves.

# Importance of Sleep

The study of sleep is important in psychology because it profoundly influences mental and emotional well-being. Sleep affects cognitive processes like memory, learning, and emotional regulation (Klumpers et al., 2015), which are central to psychological functioning. Disorders like insomnia or sleep apnea can contribute to psychological issues such as anxiety and depression (Spielman, Jenkins, & Lovett, 2020), making it vital for psychologists to understand sleep's role in overall health. Sleep benefits the nervous system by allowing the removal of waste products from the brain, consolidating memory, and strengthening new neural connections. Also sleep benefits the body by supporting immune function, hormonal balance and tissue repair (Spielman, Jenkins, & Lovett, 2020).

# Experience with Sleep Disturbance

I have experienced sleep disturbance such as difficulty in falling asleep in periods of stress, high temperature, and an uncomfortable environment. The day after this sleep deprivation is always marked by fatigue, reduced energy level difficulty in concentrating, impaired decision-making, anxiety, and memory lapses.

In conclusion, the nervous system is responsible for storing, processing, and transmitting information to and from other parts of the body. Sleep is crucial for the functioning of the nervous system and overall health therefore, individuals should ensure they get adequate sleep to maintain optimal health.

**References**

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