**Learning Journal Unit 2**

University of the People

PSYC 1504-01: Introduction to Psychology-AY2025-T2

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29 November 2024

# Learning Journal Unit 2

**Understanding the Nervous System and Sleep**

**Structure and Function of the Nervous System**

The nervous system in humans is a complex network responsible for regulating and coordinating body activities. The system is divided into two components; Central Nervous System (CNS) and Peripheral Nervous System (PNS). The CNS, consisting of the brain and spinal cord, serves as the control center, processing information and directing responses. The PNS connects the CNS to the rest of the body and is further divided into the somatic system (voluntary control, like muscle movements) and the autonomic system (involuntary actions, such as heart rate and digestion). The nervous system functions through a combination of electrical and chemical signals, with neurons (nerve cells) playing a key role in transmitting information across synapses.

**Importance of Sleep in Psychology**

The study of sleep is crucial in psychology because it directly impacts cognitive processes, emotional regulation, and overall well-being. Sleep is a vital biological function that allows the nervous system to repair, consolidate memories, and process information. During sleep, the brain undergoes critical restorative activities, such as clearing toxins, strengthening neural connections, and regulating hormone production. Sleep affects psychological functions like mood, decision-making, and problem-solving, making it a core topic in understanding mental health and behavior.

**Benefits of Sleep on our Nervous System, Body and Health**

For the nervous system, sleep enables synaptic pruning, where unnecessary neural connections are removed to enhance efficiency. It also supports neuroplasticity—the brain's ability to adapt and reorganize—which is essential for learning and memory. Furthermore, deep sleep promotes the release of growth hormones and the repair of tissues, aiding physical recovery. Immune system functioning also improves with adequate sleep, helping the body fend off infections and diseases.

On a broader level, sleep helps regulate emotional health by modulating activity in the amygdala (the brain's emotional center). Insufficient sleep can lead to heightened emotional reactivity, impaired judgment, and increased stress levels, highlighting the interconnectedness of sleep with both physical and psychological health.

**Personal Experience with Sleep Disturbances**

As a university student in Pakistan, I often face sleep disturbances, particularly during exam periods. Stress and irregular study schedules sometimes lead to difficulty falling asleep, reduced sleep duration, or waking up feeling unrested. These disturbances have significant effects on my physical, mental, and emotional well-being.

Physically, I experience fatigue and a noticeable drop in energy levels, making it harder to focus on academic tasks. Mentally, sleep deprivation impairs my ability to concentrate, retain information, and solve problems effectively. For example, during one particularly intense exam season, I noticed that my memory became unreliable, and simple tasks felt overwhelming.

Emotionally, inadequate sleep heightens stress and irritability. Minor inconveniences feel exaggerated, and my ability to regulate emotions weakens. This sometimes leads to strained interactions with peers and family, affecting my social relationships. Additionally, poor sleep increases anxiety, especially when I feel unprepared for an academic challenge.

Reflecting on these experiences, I have realized the importance of maintaining a consistent sleep routine, even during busy periods. Strategies like practicing relaxation techniques, limiting caffeine intake, and setting a fixed bedtime have helped me manage sleep disturbances more effectively.

In conclusion, the nervous system's optimal functioning is closely linked to sleep, making its study essential in understanding human behavior and health. For students like me, prioritizing sleep not only supports academic performance but also contributes to overall well-being.

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