

Individual Sleep Analysis Report

Subject ID: 21 | Healthy Control Study

Analysis Date: August 16, 2025 | Nights Analyzed: 2 | Report Generated by: Sleep-EDF Analysis System

Subject Information

Subject ID	21
Age	51 years
Sex	F
Study Type	Healthy Controls
Number of Nights	2
Recording Dates	Multiple nights

Executive Summary

This report presents a comprehensive analysis of 2 night polysomnographic recordings for Subject 21, a 51-year-old F participant from the Sleep Cassette (healthy controls) study under nan condition.

Metric	Value	Clinical Interpretation
Sleep Efficiency	25.2%	Below Normal (<85%)
Sleep Latency	317.2 min	Prolonged (>30min)
REM Latency	582.5 min	Atypical
REM Sleep	16.1%	Atypical
Wake After Sleep Onset	694.5 min	Elevated (>30min)

Sleep Architecture Analysis

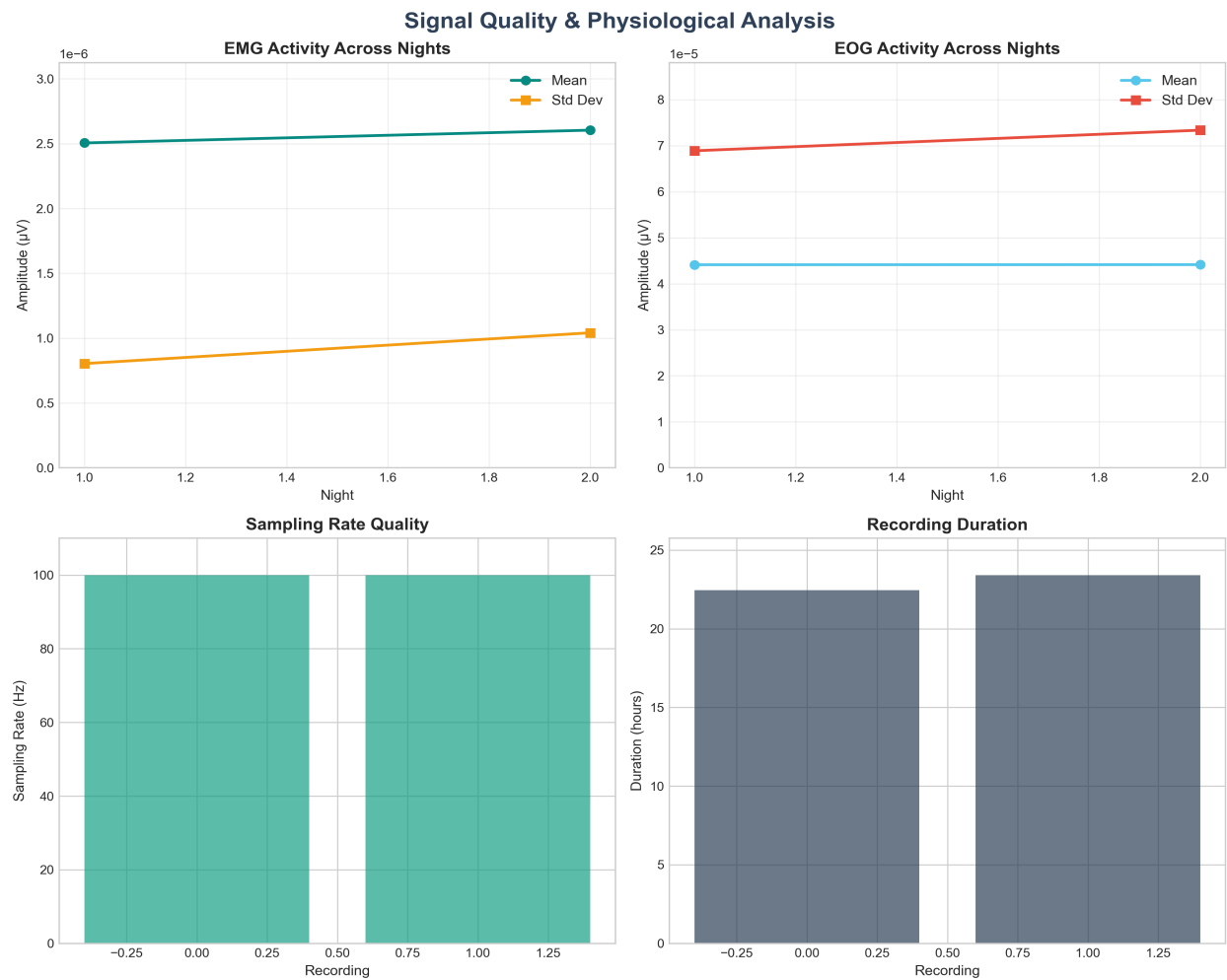


Neurophysiological Analysis - EEG Power Spectrum

EEG Power Spectral Analysis

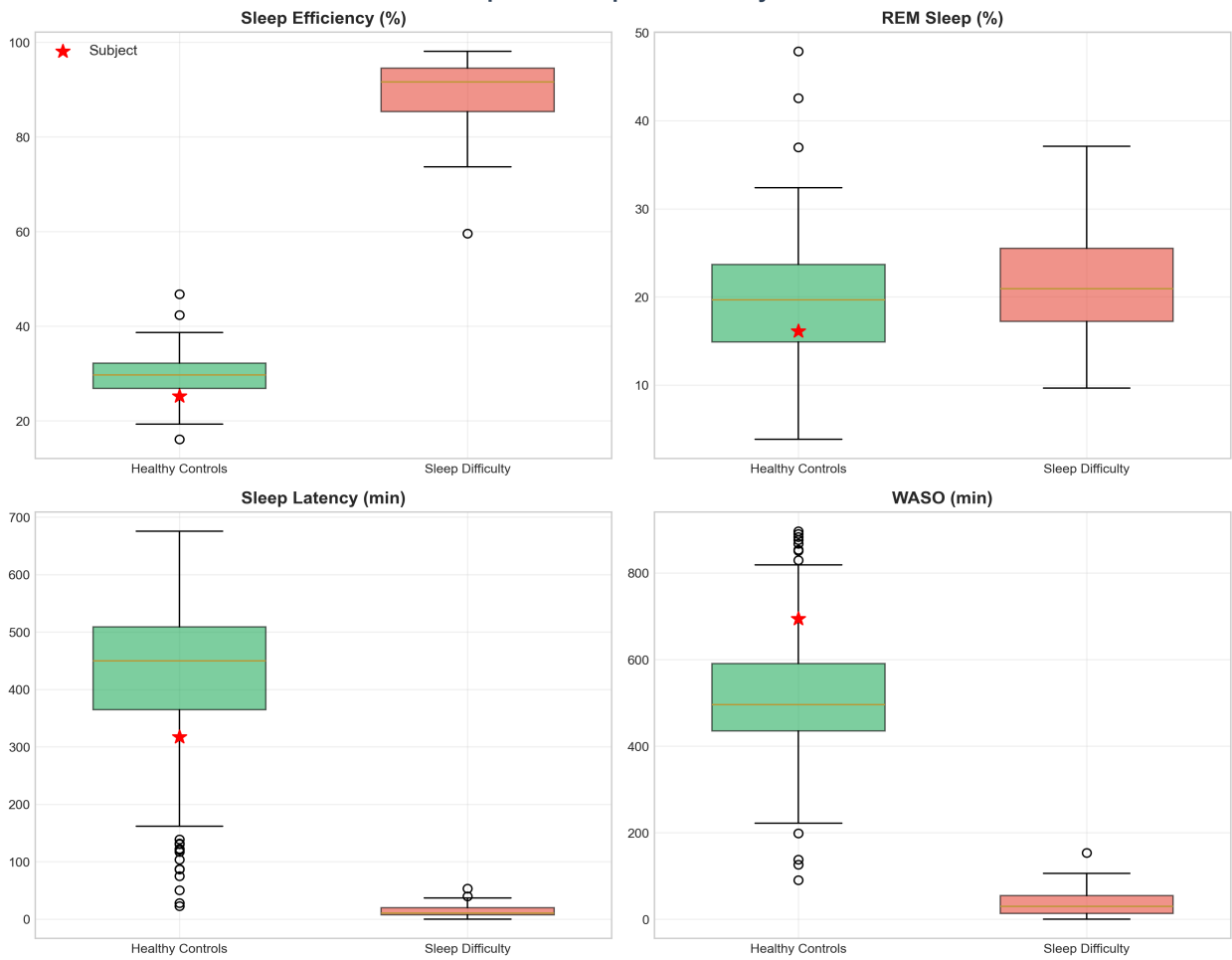


Signal Quality & Physiological Assessment



Population Comparative Analysis

Comparative Population Analysis



Clinical Interpretation & Recommendations

Overall Sleep Health Assessment

Sleep Quality Level: POOR

Poor sleep quality with multiple metrics outside normal ranges. The subject's sleep architecture shows:

- Sleep Efficiency: 25.2% (Below normal)
- REM Sleep: 16.1% (Atypical)
- Deep Sleep: 6.4% (Reduced)
- Sleep Continuity: Fragmented (WASO: 694.5 min)

Key Findings

- **Reduced Sleep Efficiency:** At 25.2%, sleep efficiency is below the normal threshold of 85%, indicating potential sleep quality issues.
- **Reduced REM Sleep:** REM sleep comprises 16.1% of total sleep, which is below the normal range of 20-25%.
- **Reduced Deep Sleep:** Deep sleep stages (N3+N4) comprise 6.4% of sleep, which may indicate reduced sleep restoration.

Recommendations

- Consider sleep hygiene counseling and evaluation of factors affecting sleep quality
- Evaluate for potential REM sleep disorders or medications affecting REM sleep
- Assess sleep environment and factors that may be disrupting deep sleep stages
- Investigation of factors causing sleep fragmentation may be beneficial

Report Analysis and Generation:

Report Analysed and created by the following students of IIIT Allahabad,
Part of Big Data Analytics Course:

- Aditya Singh Mertia (IIT2022125) - [iit2022125@iiita.ac.in]
- Rishabh Kumar (IIT2022131) - [iit2022131@iiita.ac.in]
- Karan Singh (IIT2022132) - [iit2022132@iiita.ac.in]
- Tejas Sharma (IIT2022161) - [iit2022161@iiita.ac.in]

Report Version: 1.0 | Generated: August 16, 2025 at 08:58 PM