

Individual Sleep Analysis Report

Subject ID: 0 | Healthy Control Study

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

Subject Information

Subject ID	0
Age	33 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 0, a 33-year-old F participant from the Sleep Cassette (healthy controls) study under nan condition.

Metric	Value	Clinical Interpretation
Sleep Efficiency	27.7%	Below Normal (<85%)
Sleep Latency	472.5 min	Prolonged (>30min)
REM Latency	550.0 min	Atypical
REM Sleep	21.0%	Normal (20-25%)
Wake After Sleep Onset	498.0 min	Elevated (>30min)

Sleep Architecture Analysis

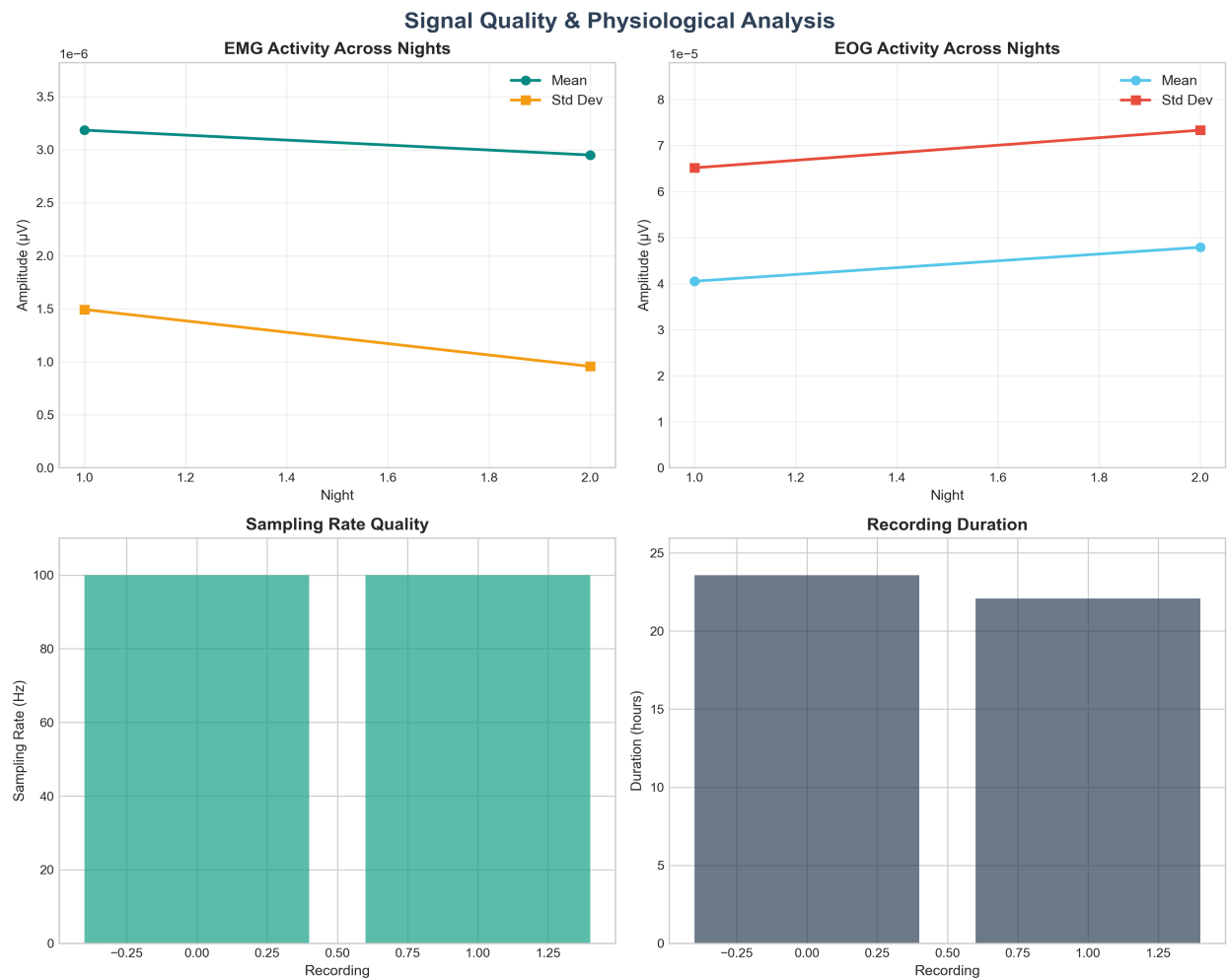


Neurophysiological Analysis - EEG Power Spectrum

EEG Power Spectral Analysis



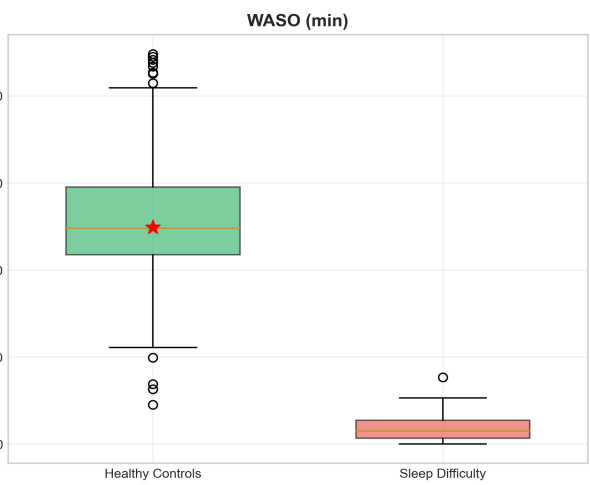
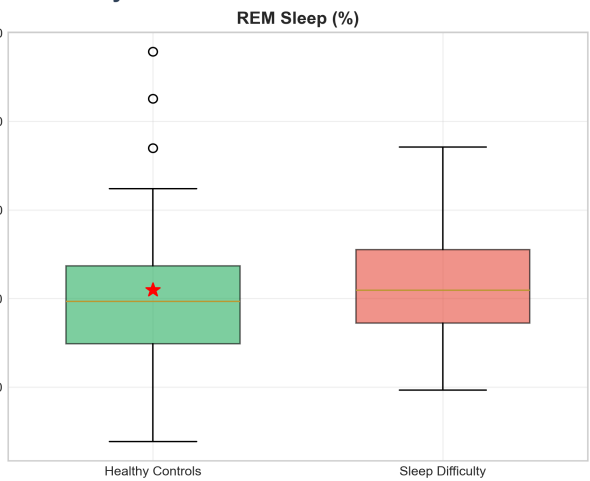
Signal Quality & Physiological Assessment



Population Comparative Analysis

The figure consists of four box plots arranged in a 2x2 grid, comparing sleep metrics between Healthy Controls (green boxes) and Sleep Difficulty (red boxes) groups. Each plot includes a legend indicating that a red star represents the mean for the Healthy Controls group.

- Sleep Efficiency (%):** The Healthy Controls group has a median sleep efficiency of approximately 30%, with a mean (red star) slightly higher. The Sleep Difficulty group has a significantly higher median sleep efficiency of approximately 90%.
- REM Sleep (%):** The Healthy Controls group has a median REM sleep of approximately 20%, with a mean (red star) slightly higher. The Sleep Difficulty group has a median REM sleep of approximately 22%.
- Sleep Latency (min):** The Healthy Controls group has a median sleep latency of approximately 450 minutes, with a mean (red star) slightly higher. The Sleep Difficulty group has a significantly lower median sleep latency of approximately 10 minutes.
- WASO (min):** The Healthy Controls group has a median WASO of approximately 500 minutes, with a mean (red star) slightly higher. The Sleep Difficulty group has a significantly lower median WASO of approximately 40 minutes.



Clinical Interpretation & Recommendations

Overall Sleep Health Assessment

Sleep Quality Level: **FAIR**

Fair sleep quality with some metrics outside normal ranges. The subject's sleep architecture shows:

- Sleep Efficiency: 27.7% (Below normal)
- REM Sleep: 21.0% (Normal)
- Deep Sleep: 32.6% (Adequate)
- Sleep Continuity: Fragmented (WASO: 498.0 min)

Key Findings

- **Reduced Sleep Efficiency:** At 27.7%, sleep efficiency is below the normal threshold of 85%, indicating potential sleep quality issues.
- **Normal REM Sleep:** REM sleep comprises 21.0% of total sleep, which is within the normal range.
- **Adequate Deep Sleep:** Deep sleep stages comprise 32.6% of sleep, indicating good restorative sleep.

Recommendations

- Consider sleep hygiene counseling and evaluation of factors affecting sleep quality
- Investigation of factors causing sleep fragmentation may be beneficial