

# Individual Sleep Analysis Report

Subject ID: 53 | Healthy Control Study

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

## Subject Information

Subject ID	53
Age	67 years
Sex	M
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 53, a 67-year-old M participant from the Sleep Cassette (healthy controls) study under nan condition.

Metric	Value	Clinical Interpretation
Sleep Efficiency	30.1%	Below Normal (<85%)
Sleep Latency	487.2 min	Prolonged (>30min)
REM Latency	561.0 min	Atypical
REM Sleep	20.2%	Normal (20-25%)
Wake After Sleep Onset	415.5 min	Elevated (>30min)

# Sleep Architecture Analysis

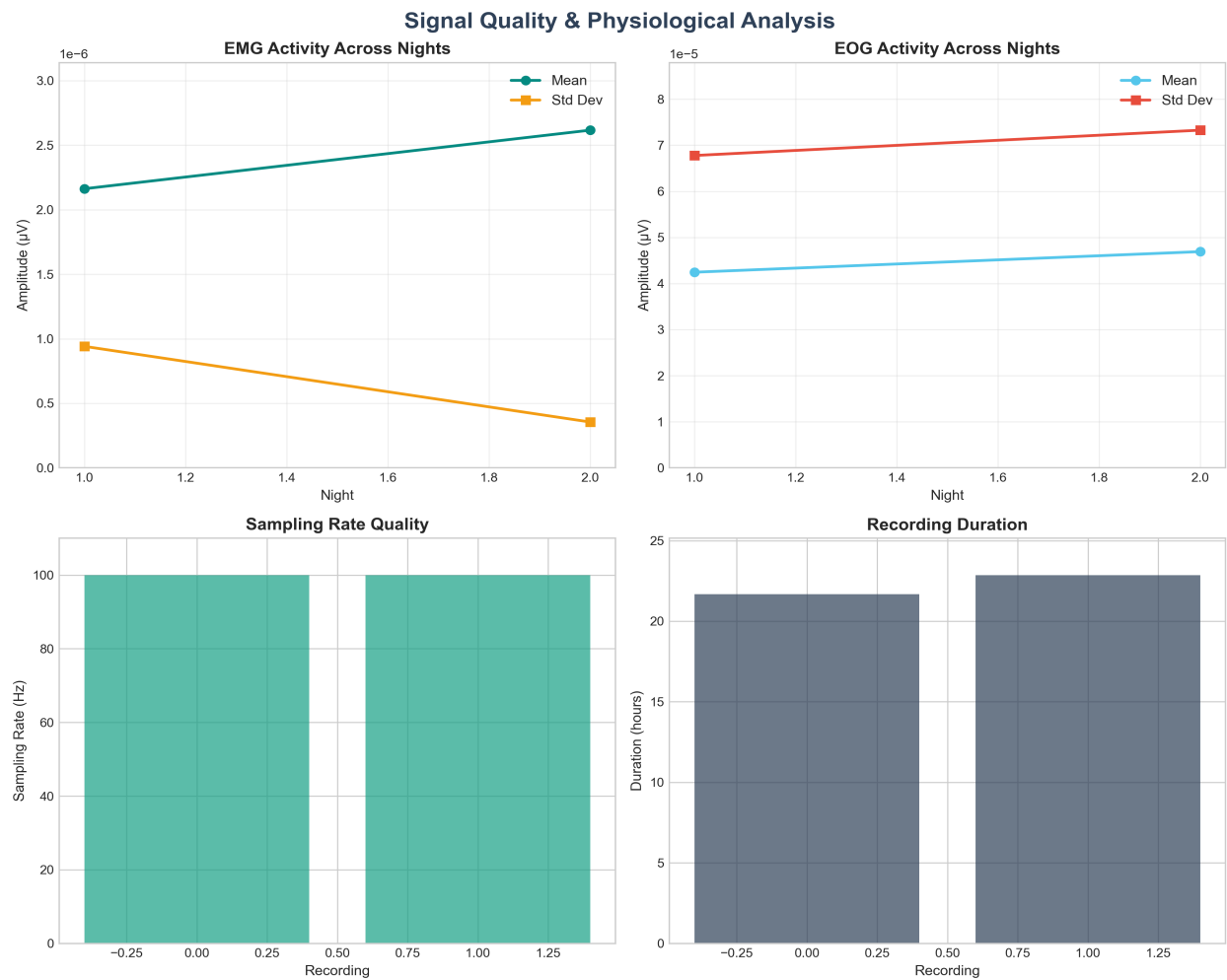


# Neurophysiological Analysis - EEG Power Spectrum

# EEG Power Spectral Analysis

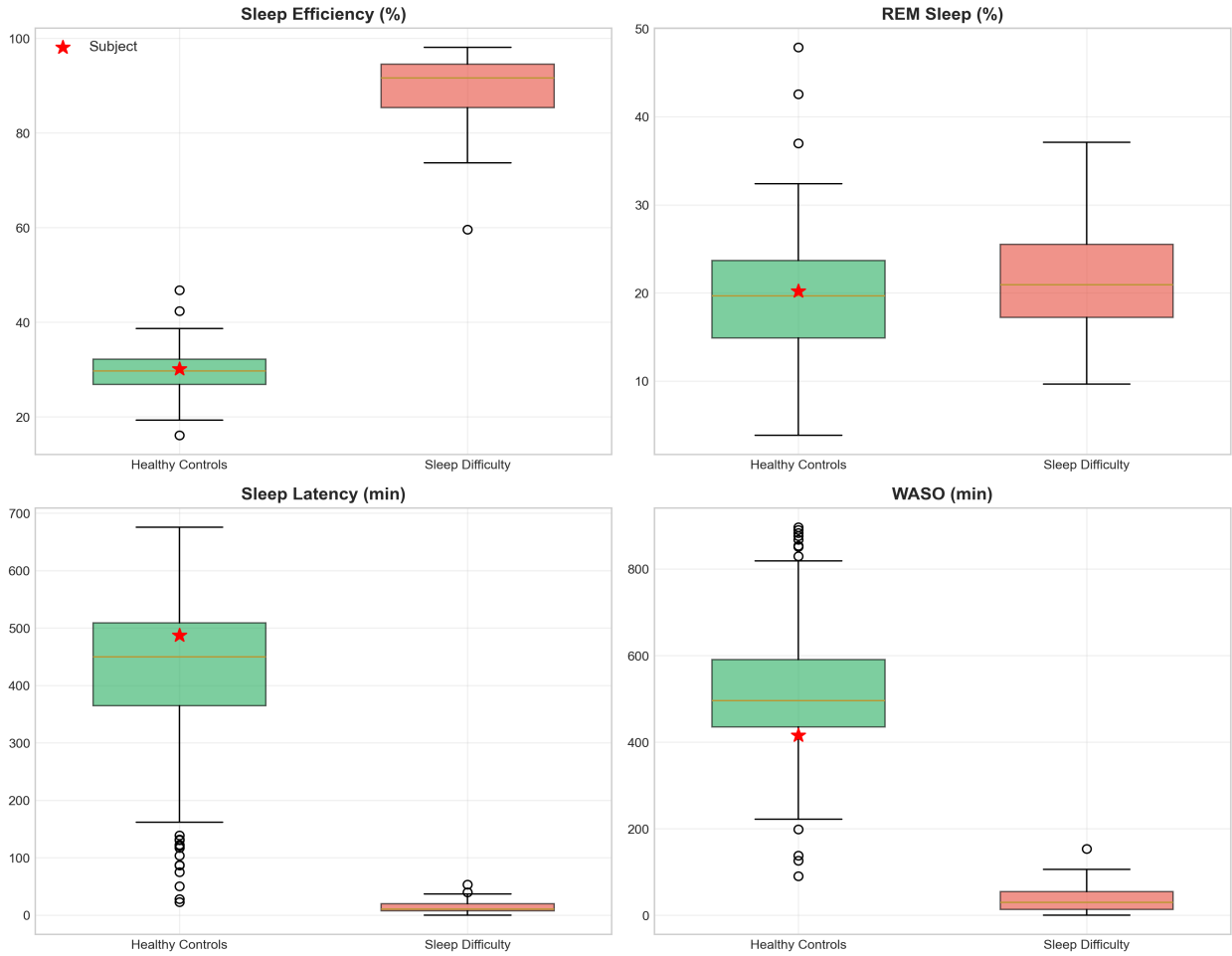


# Signal Quality & Physiological Assessment



## 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: 30.1% (Below normal)
- REM Sleep: 20.2% (Normal)
- Deep Sleep: 6.2% (Reduced)
- Sleep Continuity: Fragmented (WASO: 415.5 min)

### Key Findings

- **Reduced Sleep Efficiency:** At 30.1%, sleep efficiency is below the normal threshold of 85%, indicating potential sleep quality issues.
- **Normal REM Sleep:** REM sleep comprises 20.2% of total sleep, which is within the normal range.
- **Reduced Deep Sleep:** Deep sleep stages (N3+N4) comprise 6.2% of sleep, which may indicate reduced sleep restoration.

### Recommendations

- Consider sleep hygiene counseling and evaluation of factors affecting sleep quality
- 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 08:59 PM