Individual Sleep Analysis Report

Subject ID: 19 | Healthy Control Study

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

Subject Information

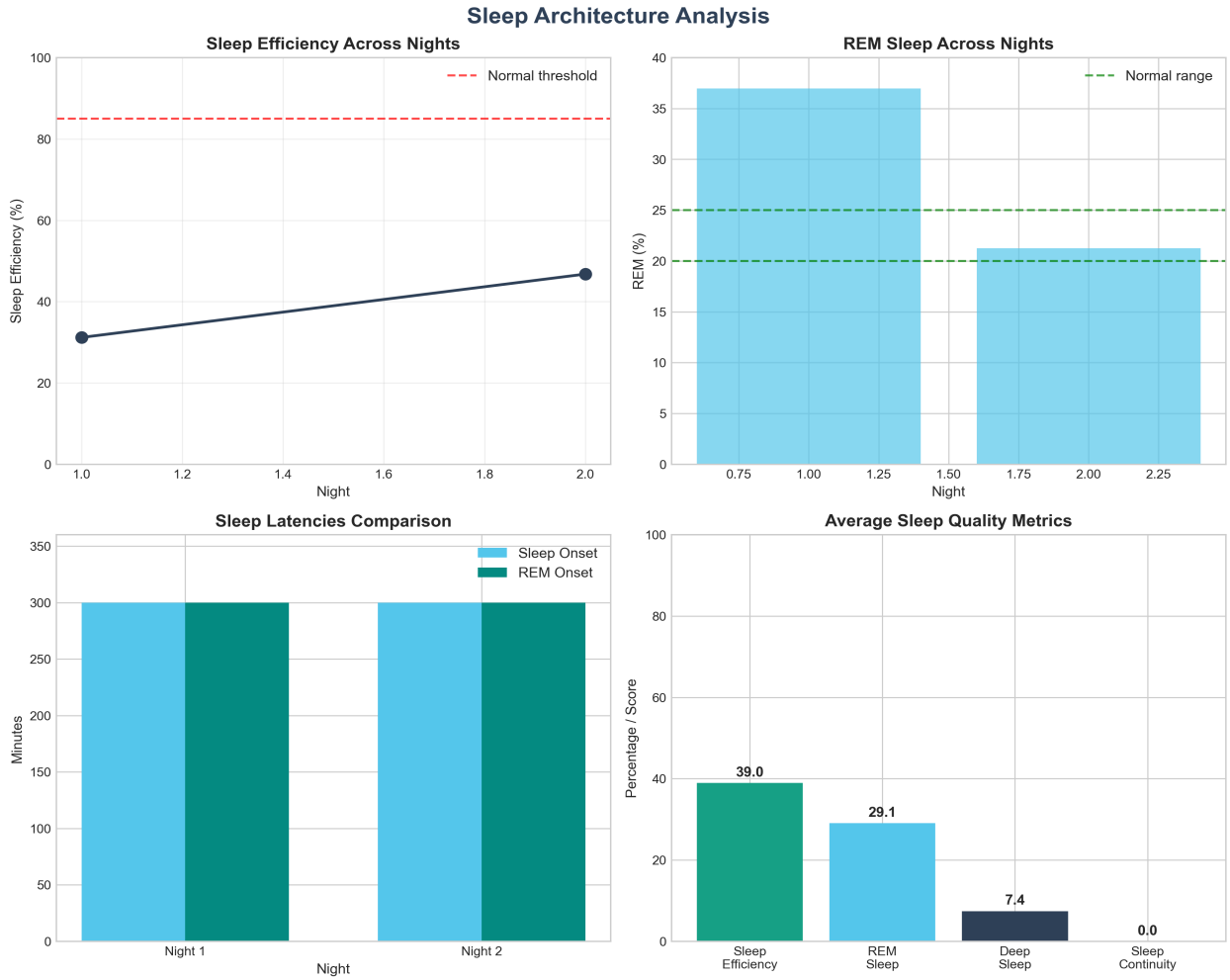
Subject ID	19
Age	28 years
Sex	M
Study Type	Healthy Controls
Number of Nights	2
Recording Dates	Multiple nights

Executive Summary

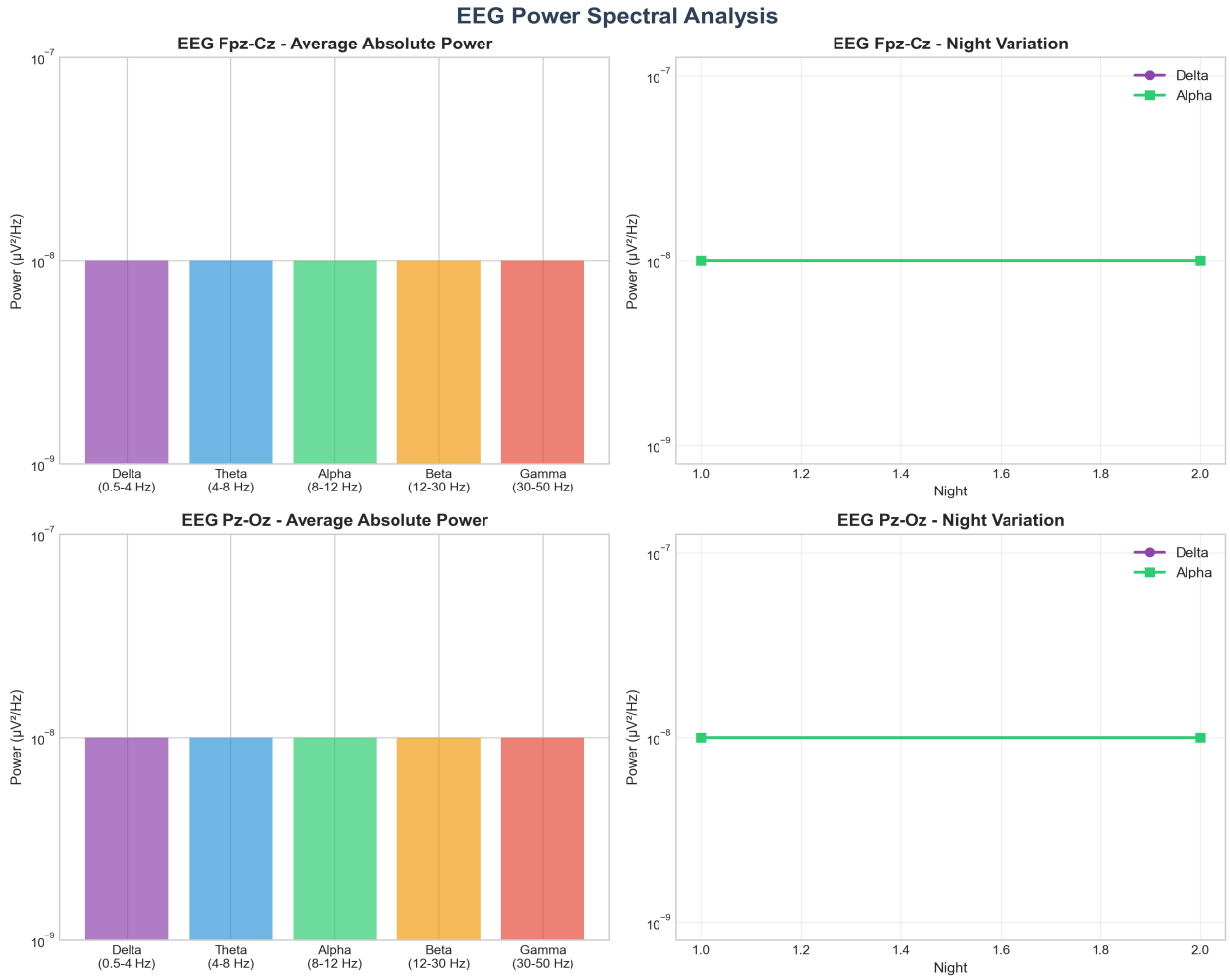
This report presents a comprehensive analysis of 2 night polysomnographic recordings for Subject 19, a 28-year-old M participant from the Sleep Cassette (healthy controls) study under nan condition.

Metric	Value	Clinical Interpretation
Sleep Efficiency	39.0%	Below Normal (<85%)
Sleep Latency	621.0 min	Prolonged (>30min)
REM Latency	726.8 min	Atypical
REM Sleep	29.1%	Atypical
Wake After Sleep Onset	162.5 min	Elevated (>30min)

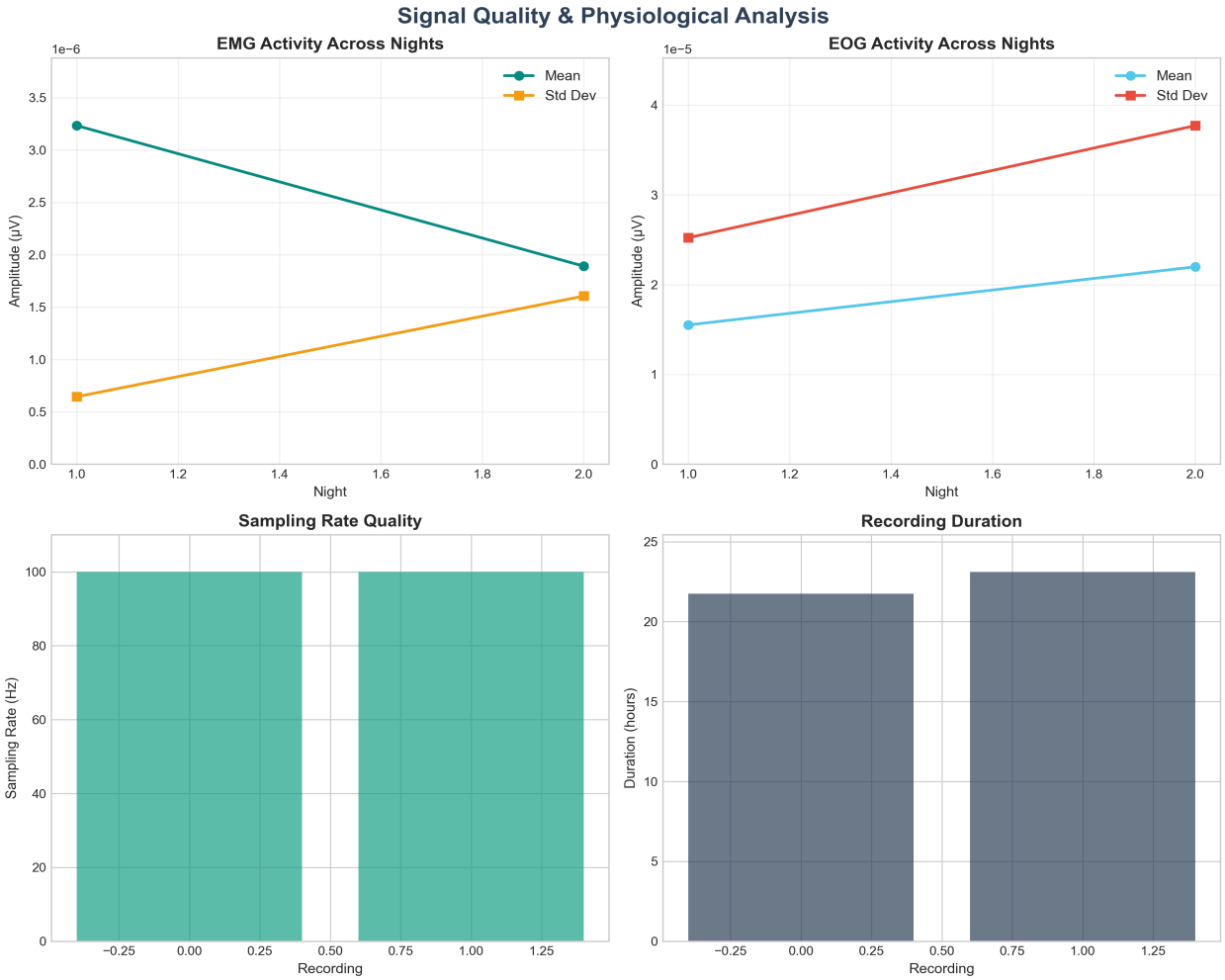
Sleep Architecture Analysis



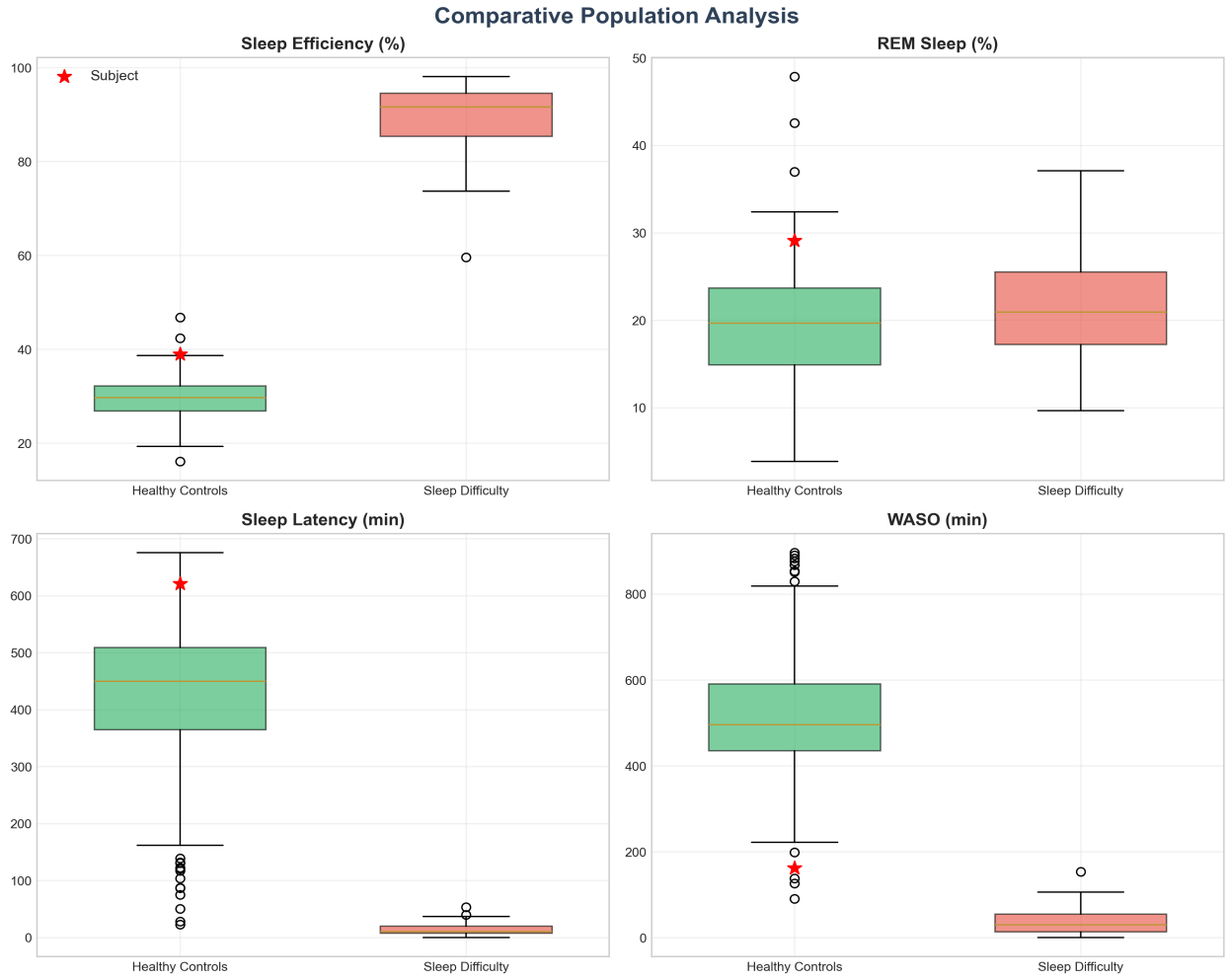
Neurophysiological Analysis - EEG Power Spectrum


EEG Power Spectral Analysis
EEG Fpz-Cz - Average Absolute Power
EEG Fpz-Cz - Night Variation
EEG Pz-Oz - Average Absolute Power
EEG Pz-Oz - Night Variation
Power (µV²/Hz)
Delta (0.5-4 Hz)
Theta (4-8 Hz)
Alpha (8-12 Hz)
Beta (12-30 Hz)
Gamma (30-50 Hz)
Night
Delta
Alpha

Signal Quality & Physiological Assessment



Population Comparative Analysis


Comparative Population Analysis
Sleep Efficiency (%)
Subject
100
80
60
40
20
Healthy Controls
Sleep Difficulty
REM Sleep (%)
50
40
30
20
10
Healthy Controls
Sleep Difficulty
Sleep Latency (min)
700
600
500
400
300
200
100
0
Healthy Controls
Sleep Difficulty
WASO (min)
800
600
400
200
0
Healthy Controls
Sleep Difficulty

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: 39.0% (Below normal)
• REM Sleep: 29.1% (Atypical)
• Deep Sleep: 7.4% (Reduced)
• Sleep Continuity: Fragmented (WASO: 162.5 min)

Key Findings

• **Reduced Sleep Efficiency**: At 39.0%, sleep efficiency is below the normal threshold of 85%, indicating potential sleep quality issues.
• **Elevated REM Sleep**: REM sleep comprises 29.1% of total sleep, which is above the typical range of 20-25%.
• **Reduced Deep Sleep**: Deep sleep stages (N3+N4) comprise 7.4% of sleep, which may indicate reduced sleep restoration.
• **High Night-to-Night Variability**: Sleep efficiency varies significantly across nights (SD: 11.0%), suggesting inconsistent sleep patterns.

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
• Sleep diary and lifestyle factor assessment recommended due to high night-to-night variability

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