# Individual Sleep Analysis Report

## Subject ID: 52 | Healthy Control Study

Analysis Date: August 16, 2025 | Nights Analyzed: 1 | Report Generated by: Sleep-EDF Analysis System

## Subject Information

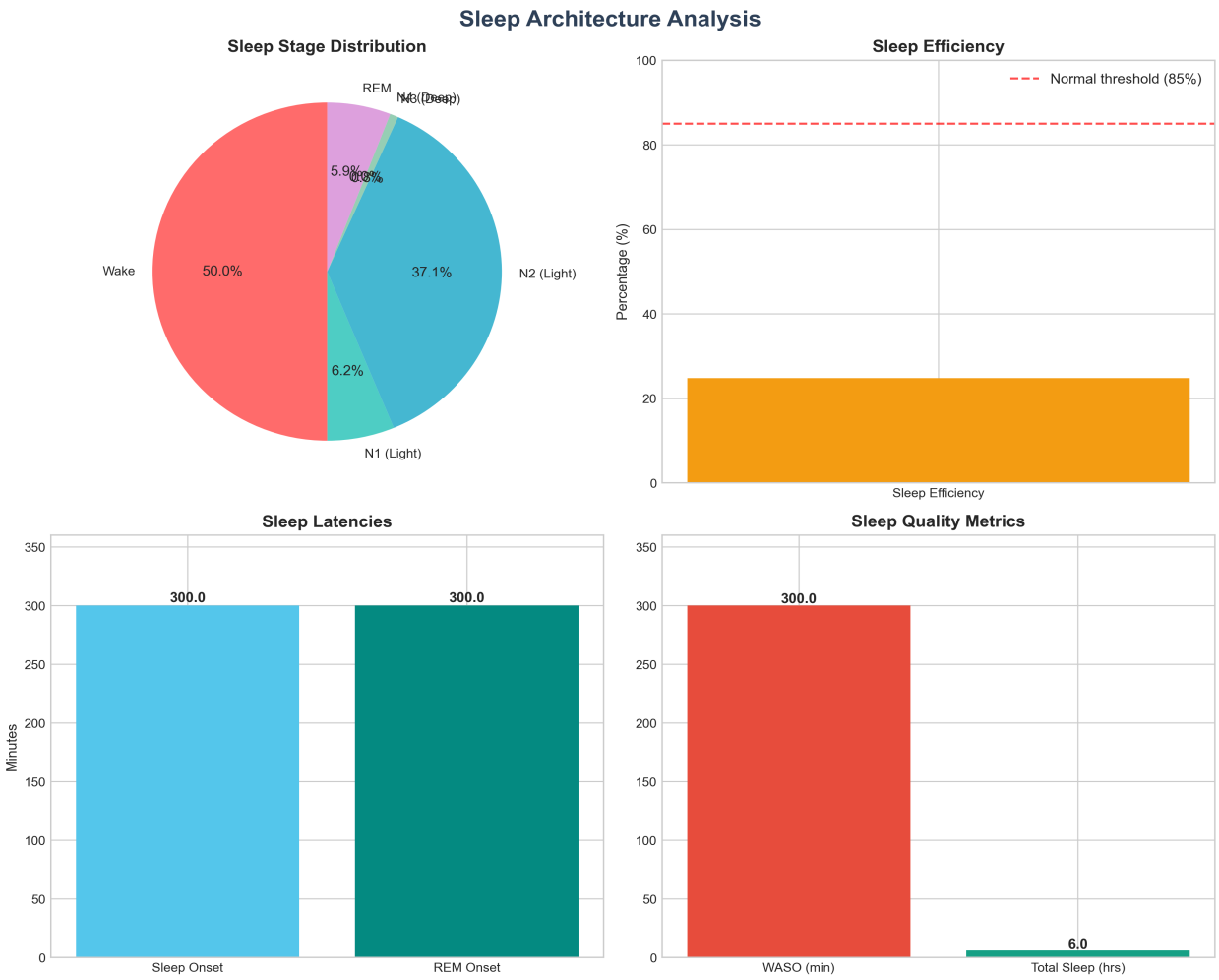
| | |
|---|---|
| **Subject ID** | 52 |
| **Age** | 69 years |
| **Sex** | M |
| **Study Type** | Healthy Controls |
| **Number of Nights** | 1 |
| **Recording Dates** | Single night |

## Executive Summary

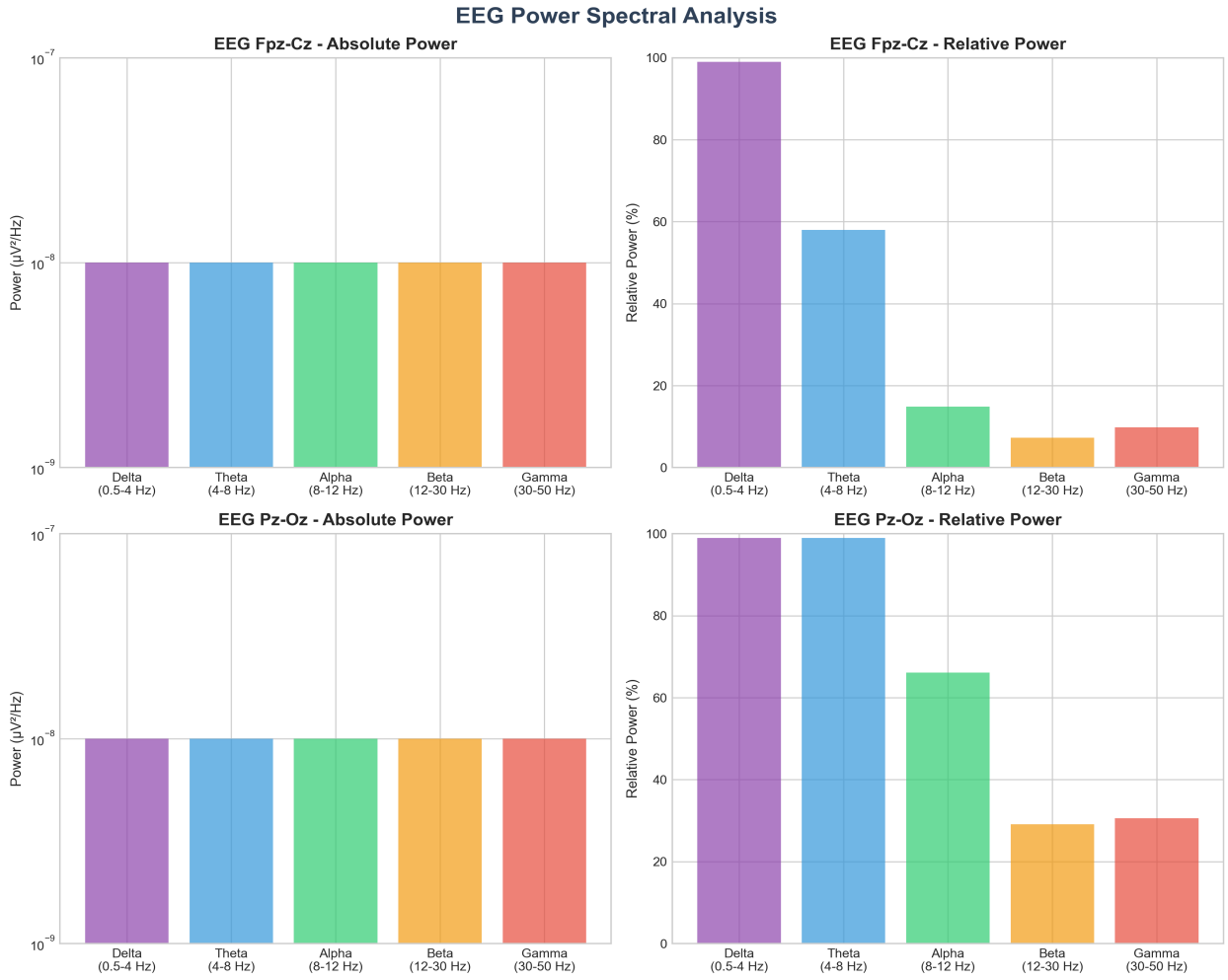
This report presents a comprehensive analysis of a single night polysomnographic recording for Subject 52, a 69-year-old M participant from the Sleep Cassette (healthy controls) study.

| Metric | Value | Clinical Interpretation |
|---|---|---|
| Sleep Efficiency | 24.8% | Below Normal (<85%) |
| Sleep Latency | 534.0 min | Prolonged (>30min) |
| REM Latency | 552.0 min | Atypical |
| REM Sleep | 11.8% | Atypical |
| Wake After Sleep Onset | 496.0 min | Elevated (>30min) |

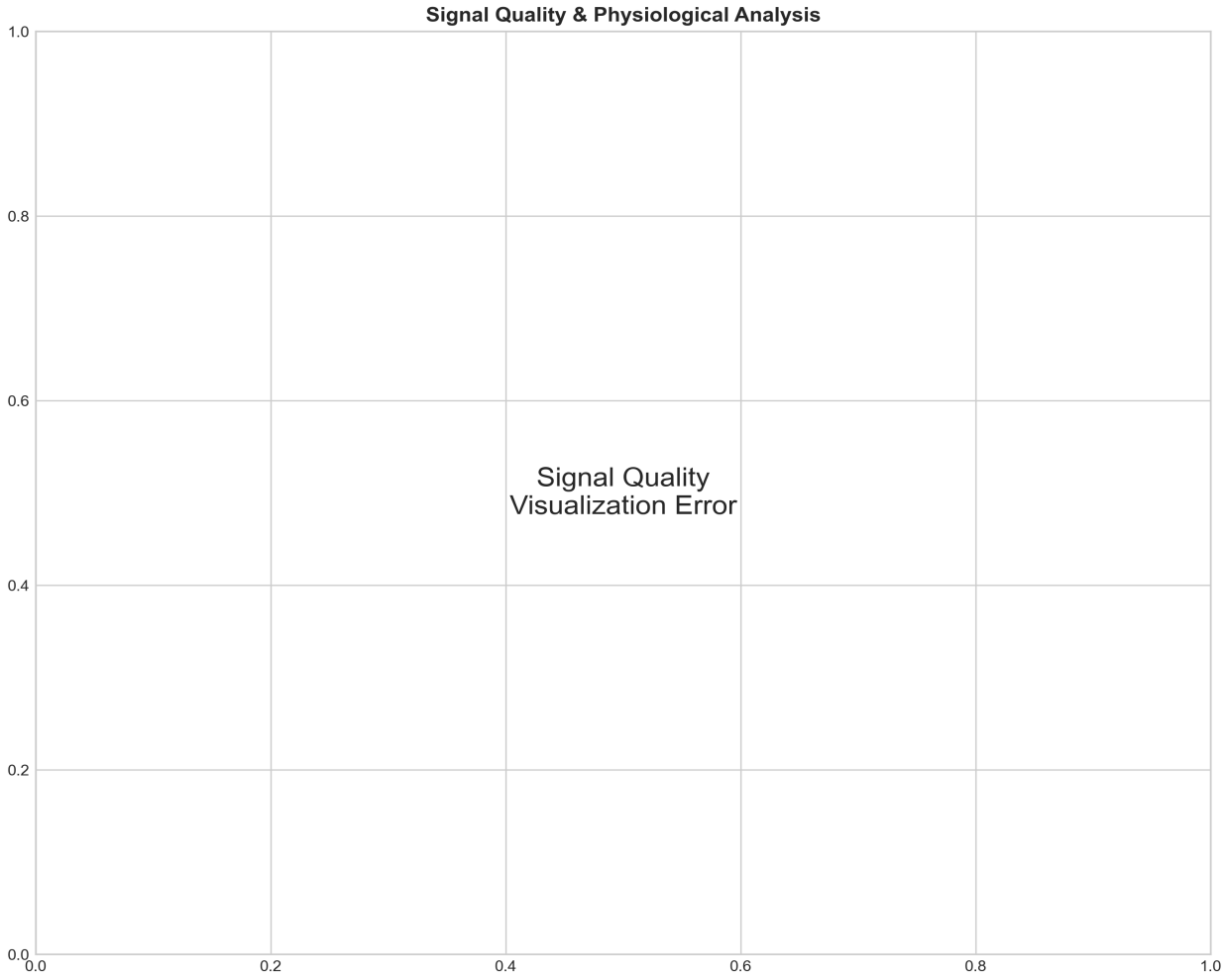
# Sleep Architecture Analysis



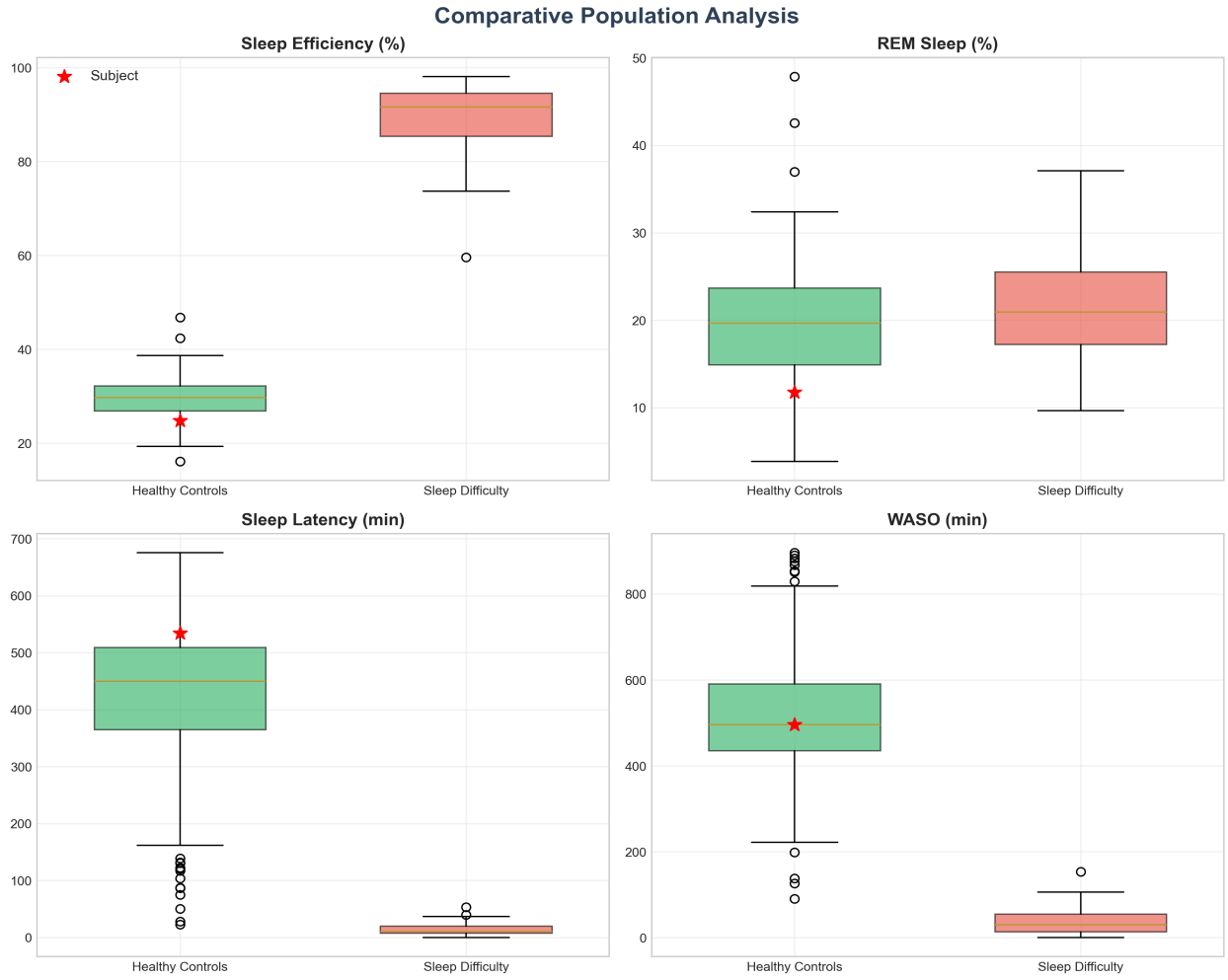

# Neurophysiological Analysis - EEG Power Spectrum


EEG Power Spectral Analysis
EEG Fpz-Cz - Absolute Power
Power (μV²/Hz)
$10^{-7}$
$10^{-8}$
$10^{-9}$
Delta (0.5-4 Hz)
Theta (4-8 Hz)
Alpha (8-12 Hz)
Beta (12-30 Hz)
Gamma (30-50 Hz)
EEG Fpz-Cz - Relative Power
Relative Power (%)
0
20
40
60
80
100
EEG Pz-Oz - Absolute Power
EEG Pz-Oz - Relative Power

## 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: 24.8% (Below normal)
• REM Sleep: 11.8% (Atypical)
• Deep Sleep: 1.5% (Reduced)
• Sleep Continuity: Fragmented (WASO: 496.0 min)

## Key Findings

• **Reduced Sleep Efficiency**: At 24.8%, sleep efficiency is below the normal threshold of 85%, indicating potential sleep quality issues.
• **Reduced REM Sleep**: REM sleep comprises 11.8% of total sleep, which is below the normal range of 20-25%.
• **Reduced Deep Sleep**: Deep sleep stages (N3+N4) comprise 1.5% 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:**
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