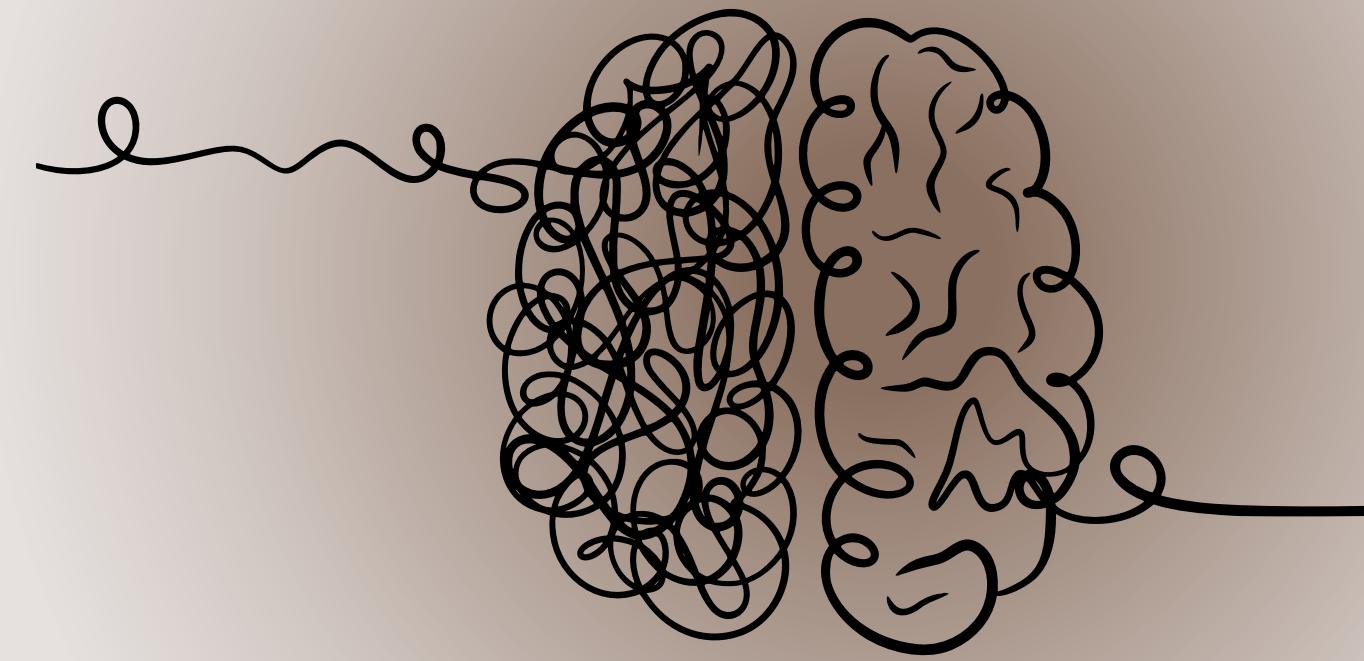




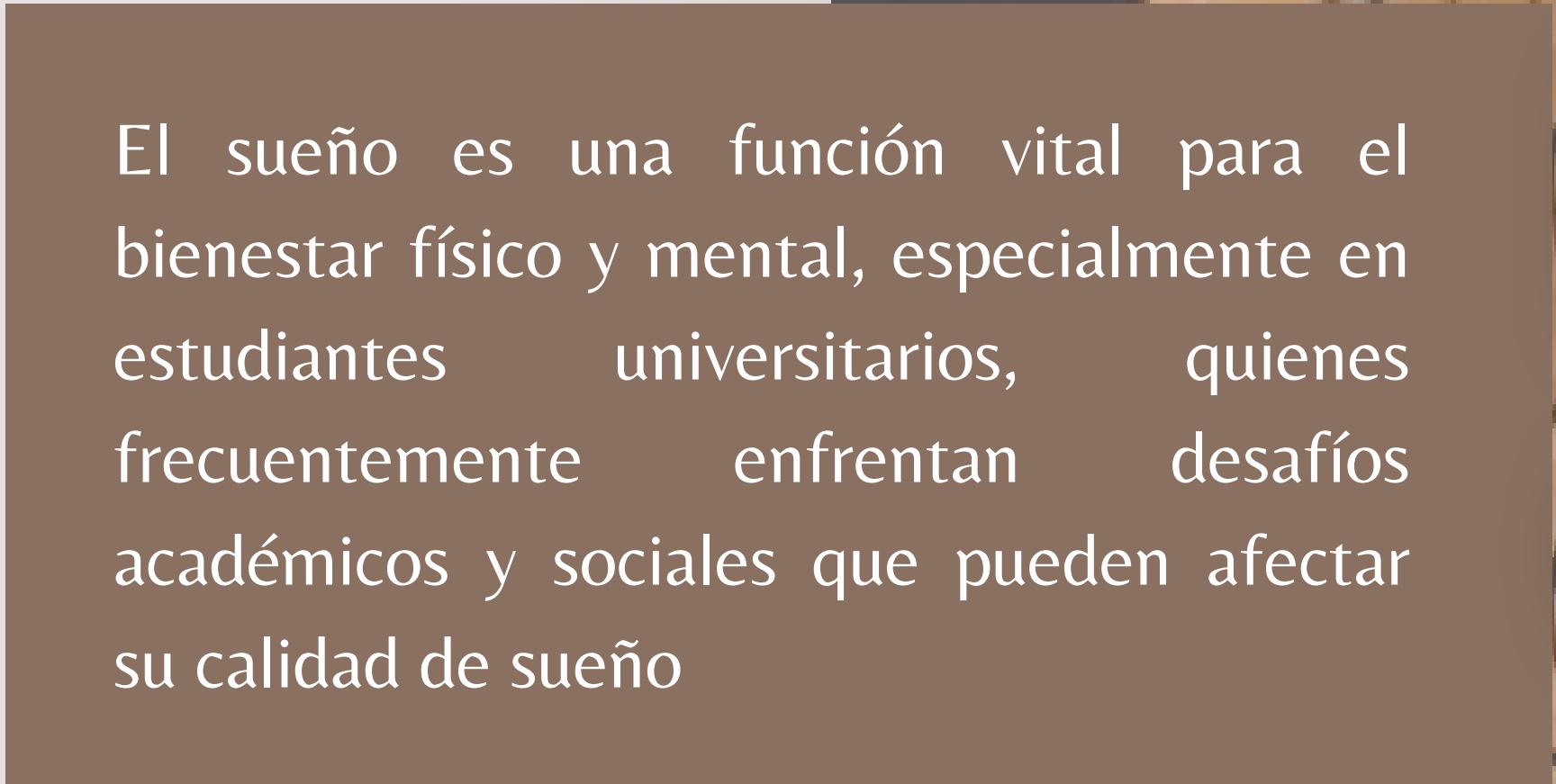
Cigarán Alvaro; Oviedo Nadira; Tello Bruno; Tito Kimberly

# Impacto de las Bebidas Energéticas y la Cafeína en la Calidad de sueño y Actividad Cerebral

Estudio en Estudiantes Universitarios utilizando EEG y Ultracortex



# Función del sueño



El sueño es una función vital para el bienestar físico y mental, especialmente en estudiantes universitarios, quienes frecuentemente enfrentan desafíos académicos y sociales que pueden afectar su calidad de sueño

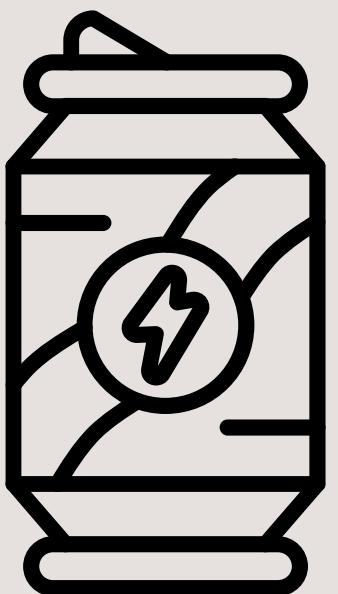
## CAFEÍNA

Bloquea  
receptores de  
adenosina



## TAURINA

Puede producir  
efectos  
neuroprotectores



# Bebidas Energéticas

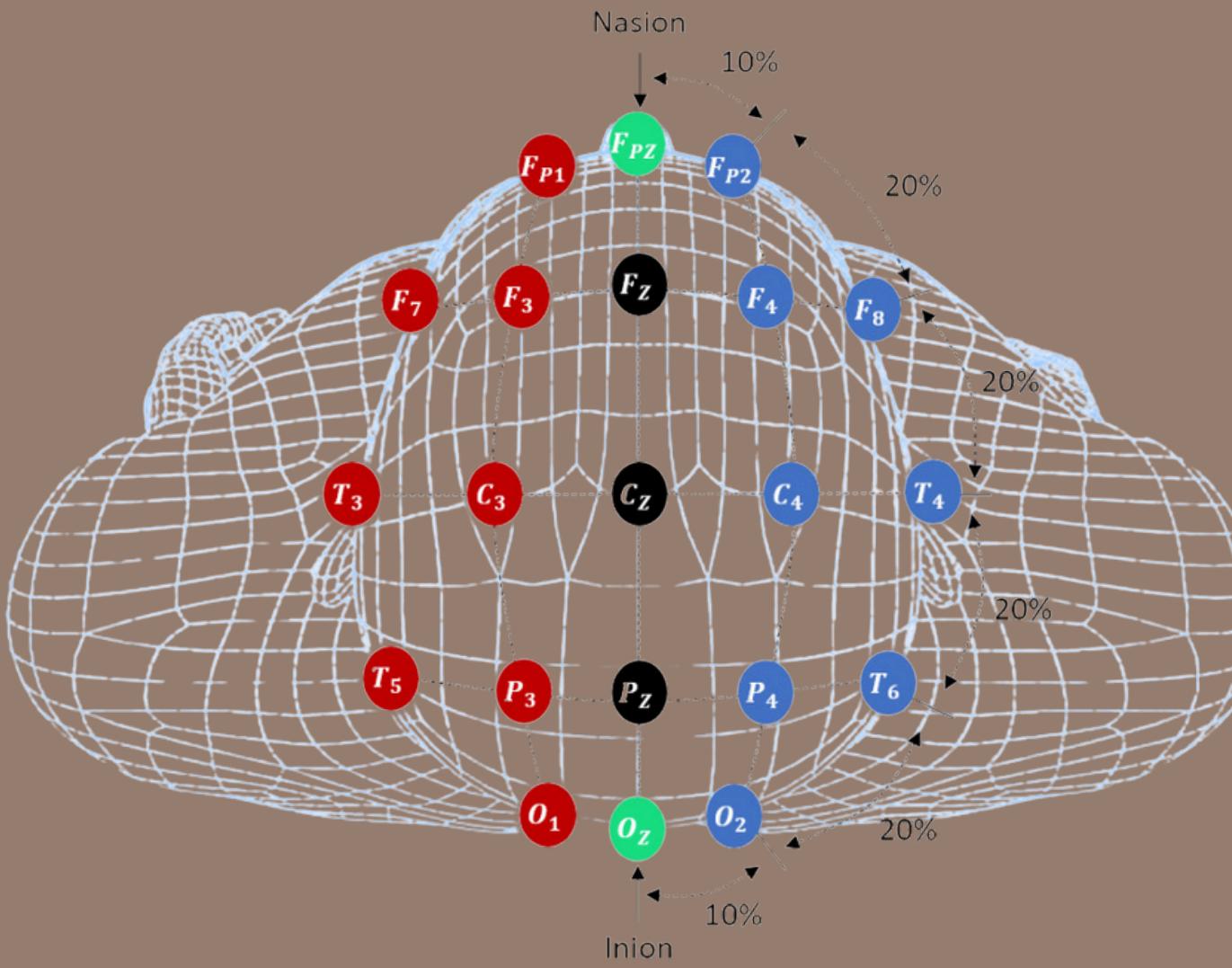
## Efectos Negativos

- Mala calidad de sueño
- Ansiedad
- Insomnio
- Afecta la función cognitiva
- Afecta el comportamiento

# Metodología



# Sistema 10-20



## Stroop test

GREEN	BLUE	BLUE
RED	RED	RED
BLUE	RED	BLUE
RED	GREEN	GREEN
GREEN	BLUE	RED

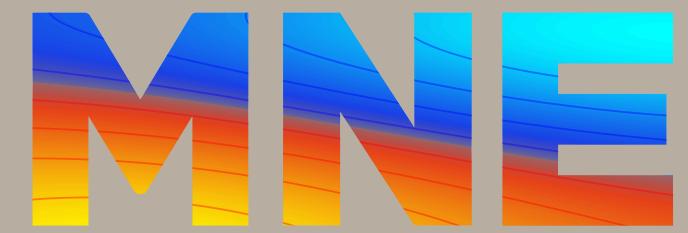
## Selective Attention



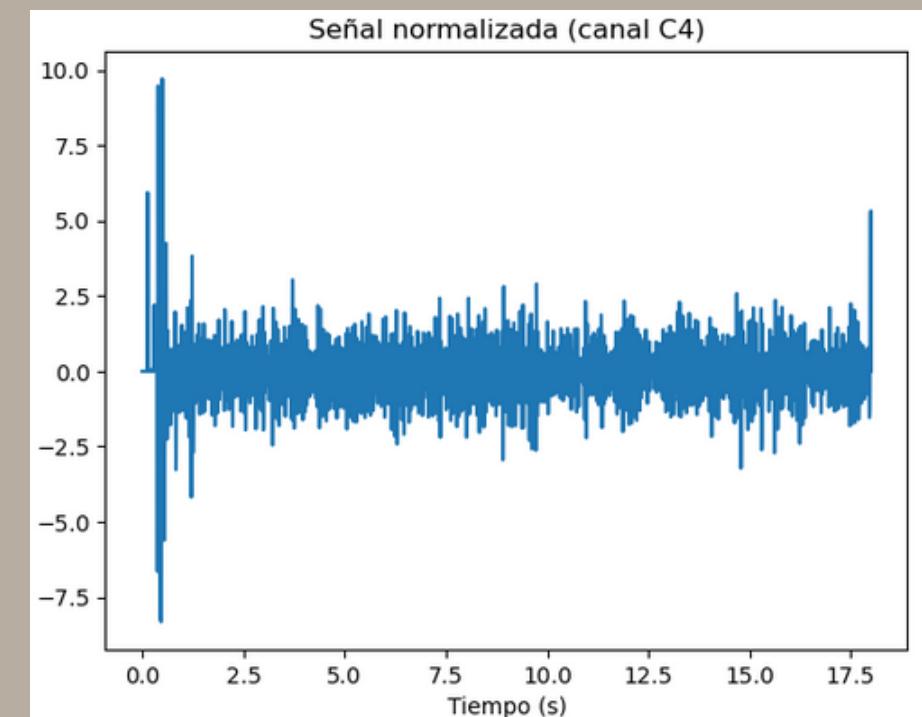
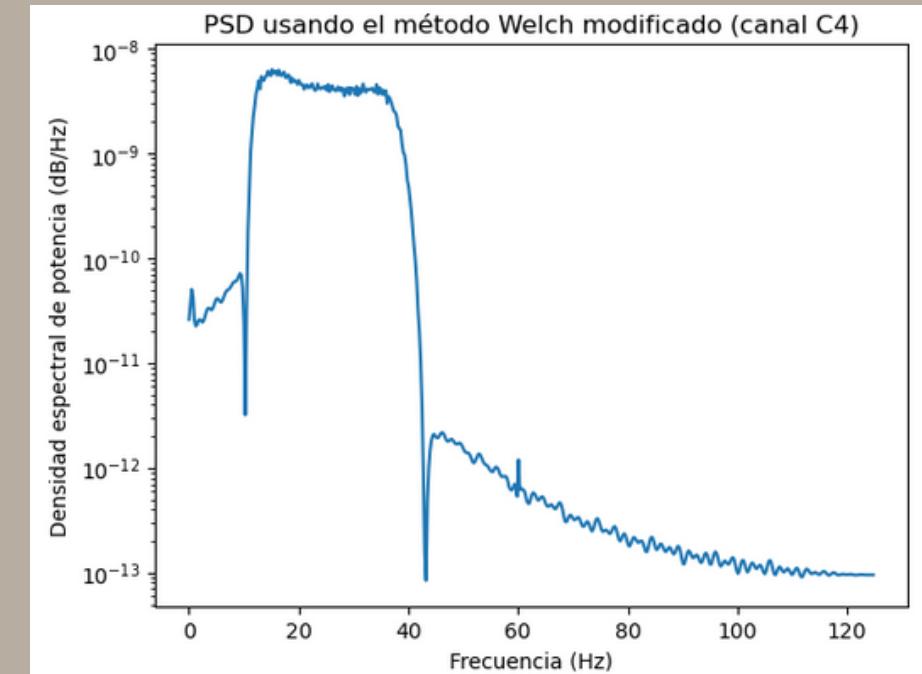
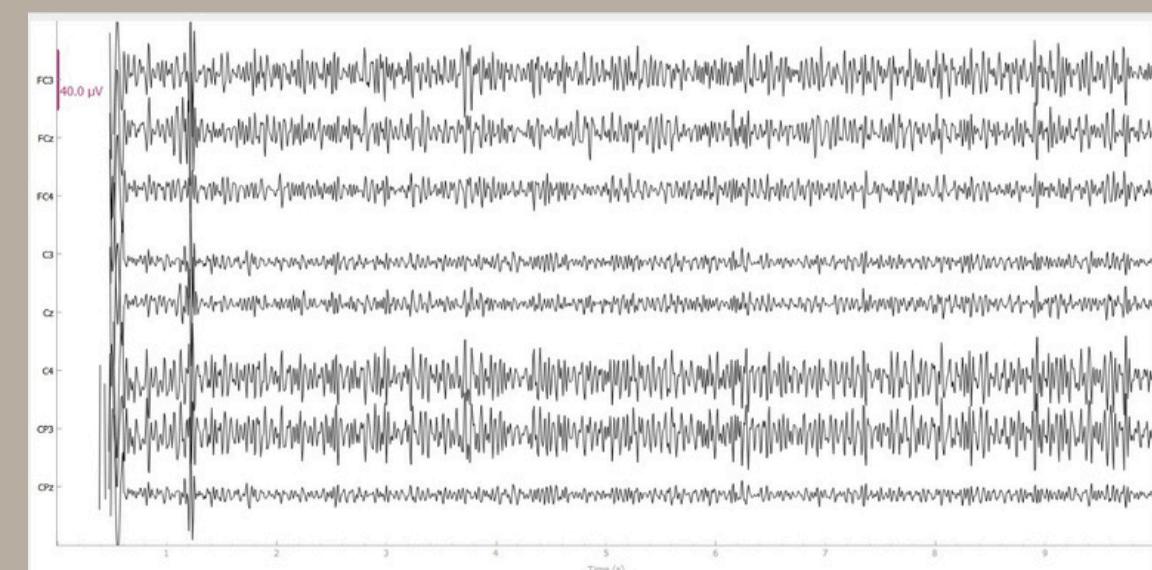
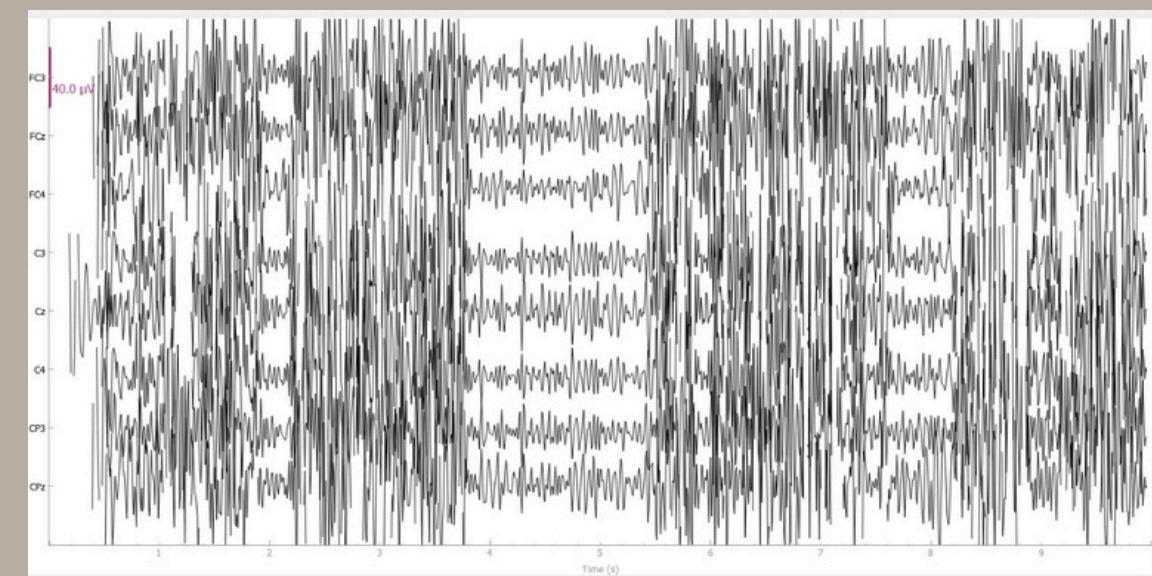
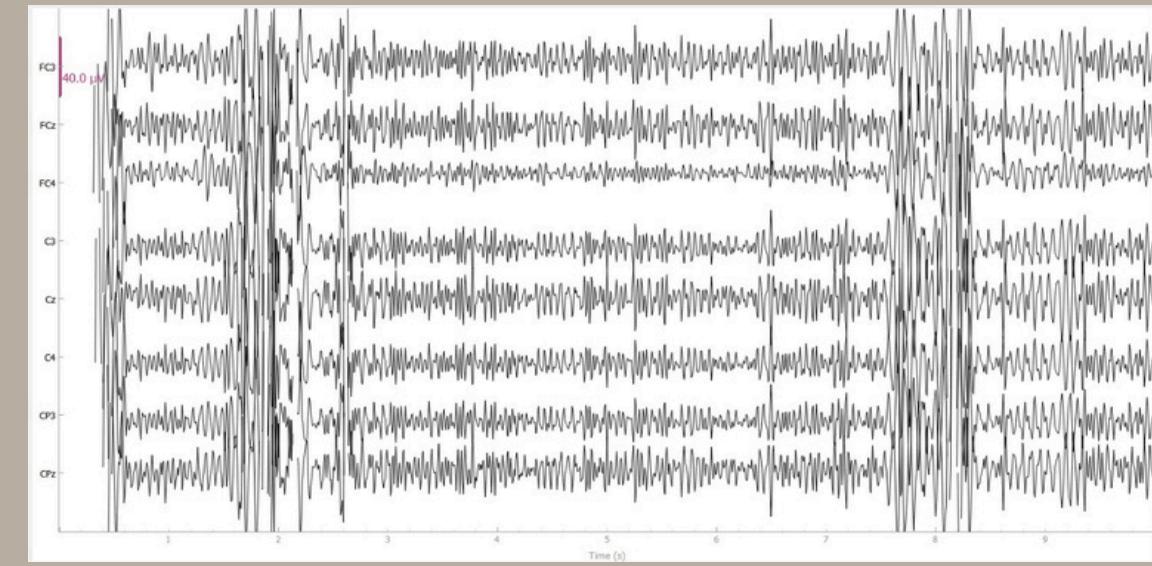
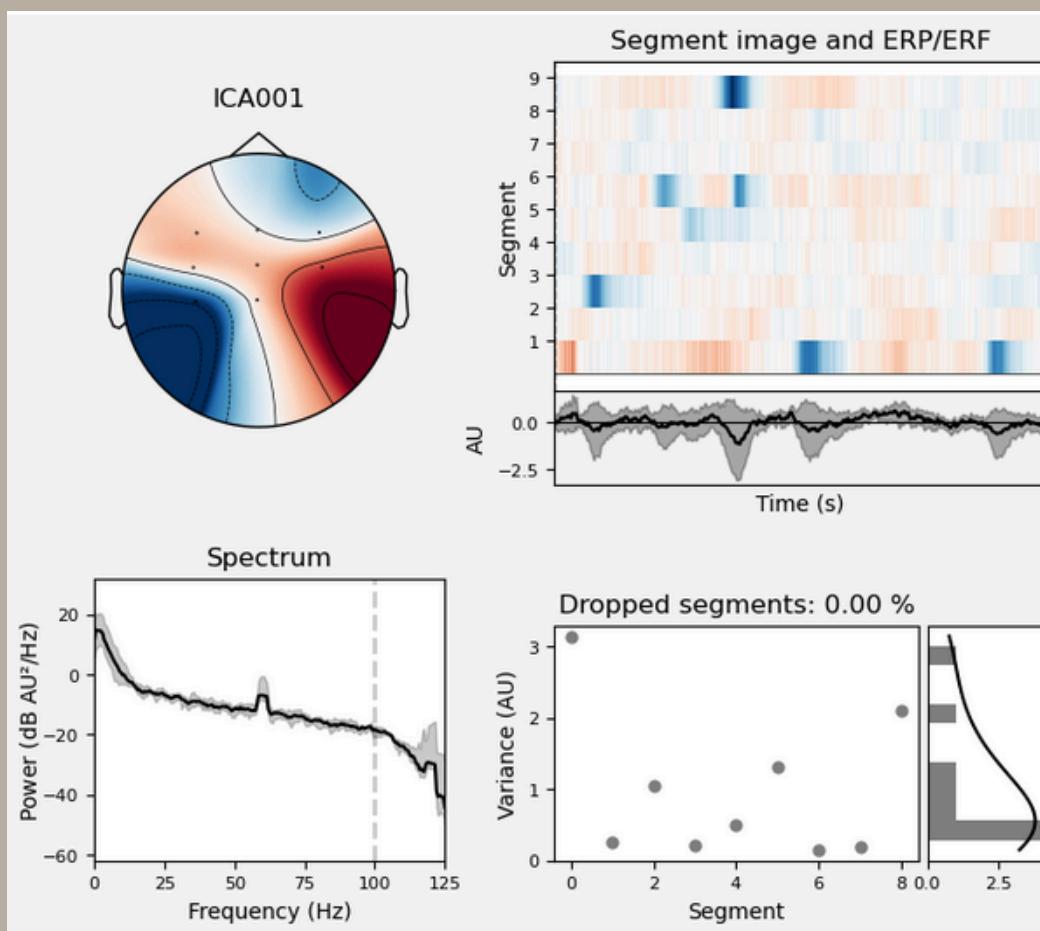
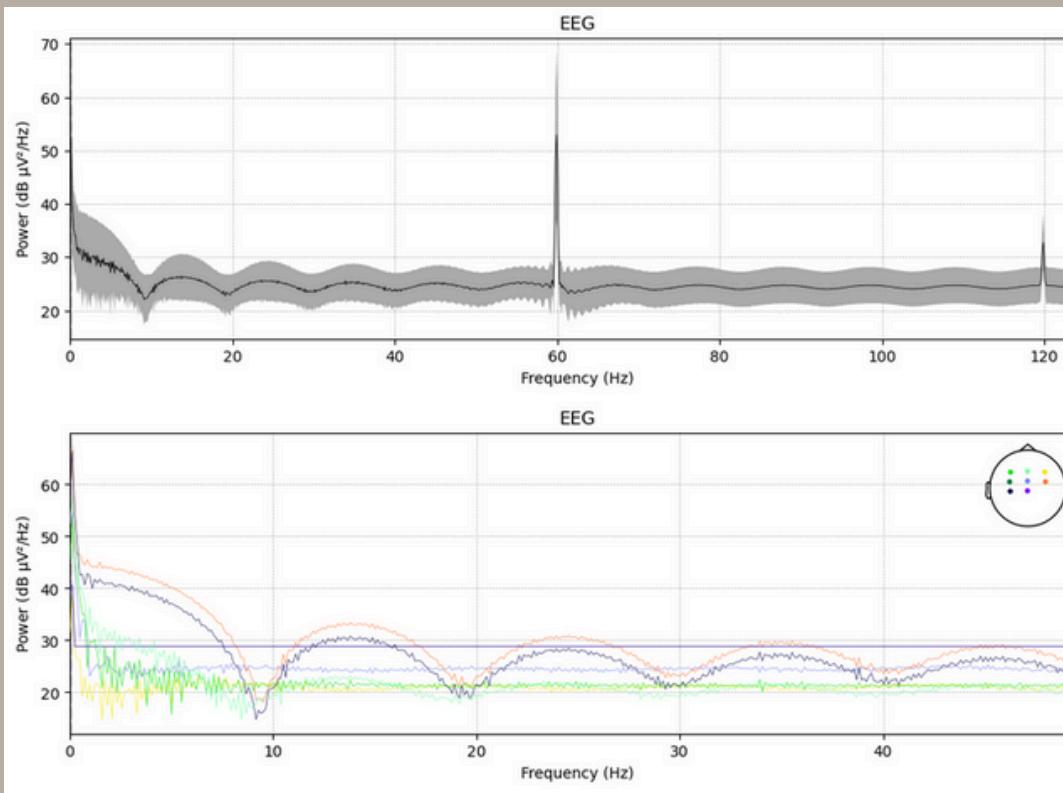
## Digit span

154823 → 326451

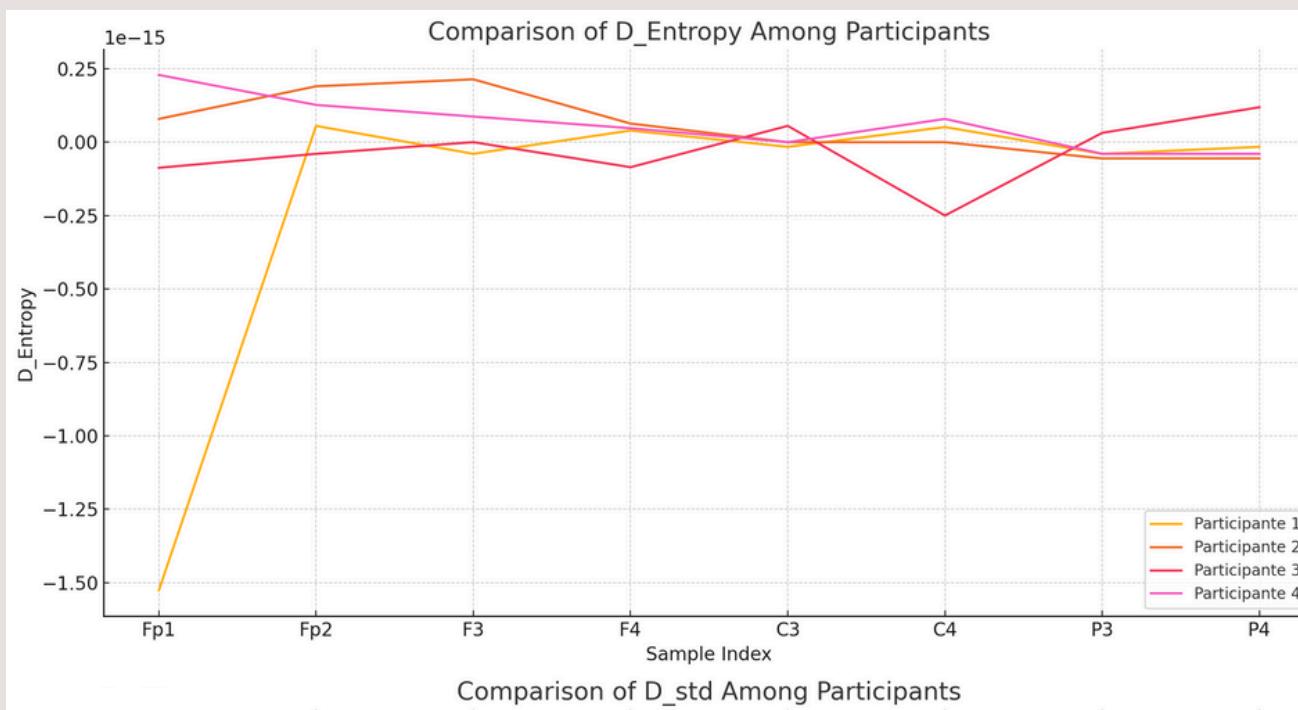
# Pre-procesamiento



MEG + EEG ANALYSIS & VISUALIZATION



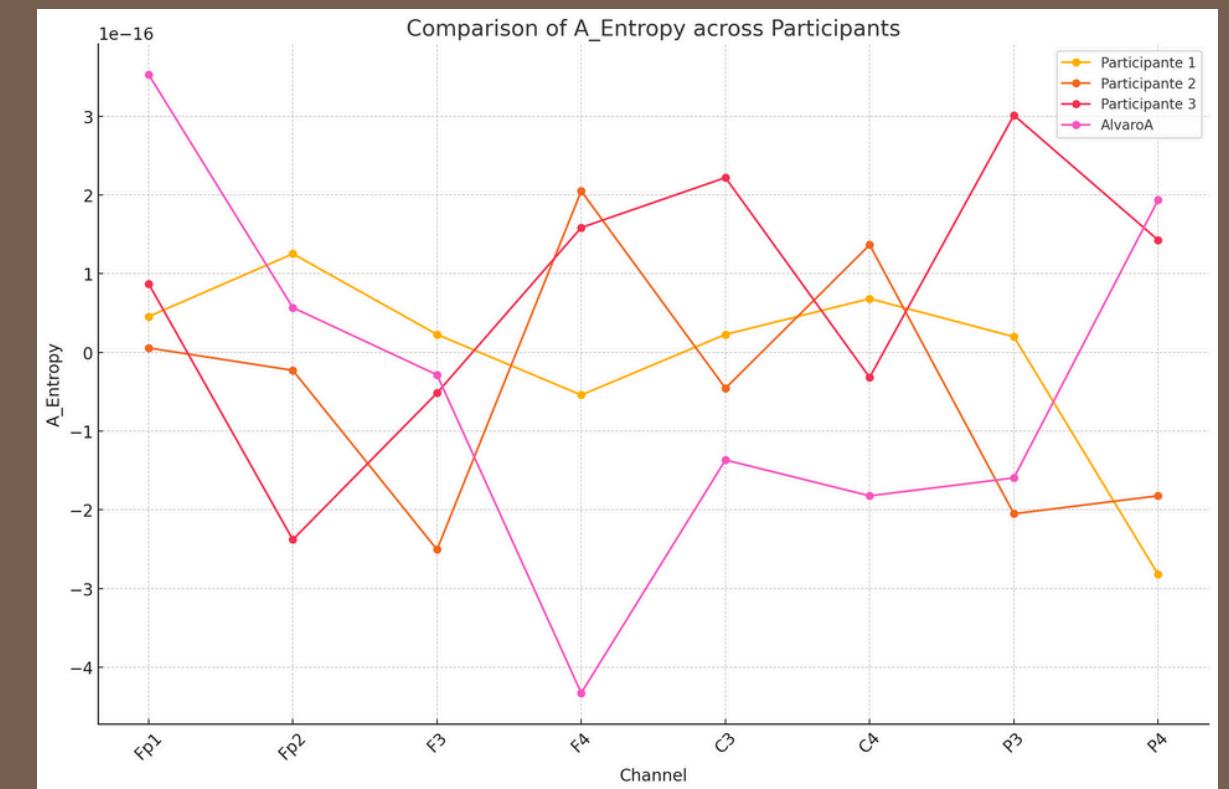
# Resultados



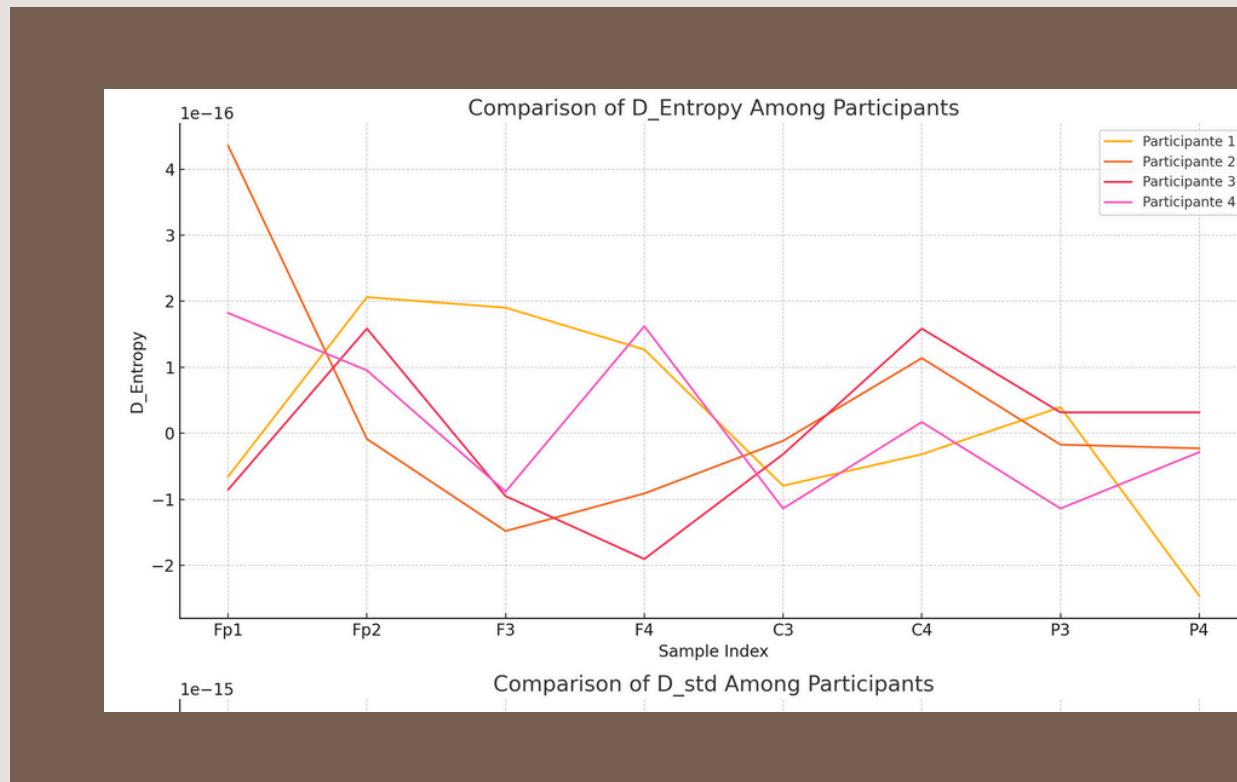
## Stroop Test

- cD\_Energy    cA\_Energy
- D\_Entropy    A\_Entropy
- D\_std            A\_std

## Digit Span



## Selective Attention



# Resultados

Participant	Selective Attention Test	Digit Span Test	Stroop Test	Combined Score
Participant 1	12	12	11	35
Participant 2	9	9	9	27
Participant 3	6	6	7	19
Participant 4	3	3	3	9

# Discusión



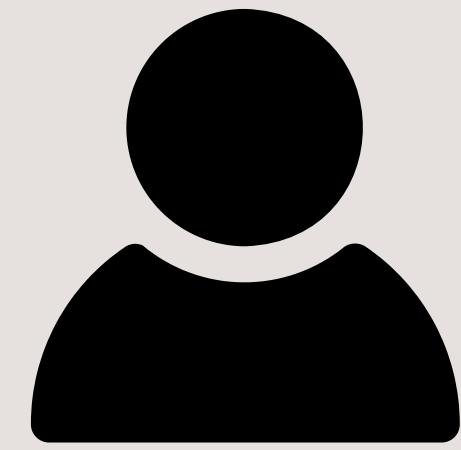
Participante 1



Calidad de sueño



Consumo de cafeína



Participante 2



Calidad de sueño



Consumo de cafeína



Participante 3



Calidad de sueño



Consumo de cafeína



Participante 4



Calidad de sueño



Consumo de cafeína

1er Puesto

2do Puesto

3er Puesto

4to Puesto

# Conclusión

Se halló una relación del efecto de la cafeína en la calidad de sueño y actividad cerebral.

Limitaciones:

- Sesgo
- Cantidad de data
- Configuración del ultracortex
- Pruebas con protocolos más detallados

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Muchas  
Gracias