

# Effects of food and sleep realignment onto circadian rhythms, on memory functions in adolescent patients with obesity

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## Introduction

## Methods

- Time-Restricted Eating (TRE) is a nutritional intervention approach that emphasises the realignment of meal timing onto circadian rhythms, without caloric restriction. Most TRE studies have focused on the metabolic benefits of TRE in adults. Furthermore, TRE effects on brain health such as cognitive functions, anxiety, and depression have never been analysed.

### Aims

- To evaluate the impact of TRE on memory and mood of adolescents suffering from obesity

### Inclusion criteria

- Adolescents with obesity
- BMI > 95th IOTF-30
- Aged 12 to 17, ♀ & ♂
- No psychiatric disorders

### Home-based enquiries on meal and sleep patterns



### Clinical intervention of nutritional rehabilitation

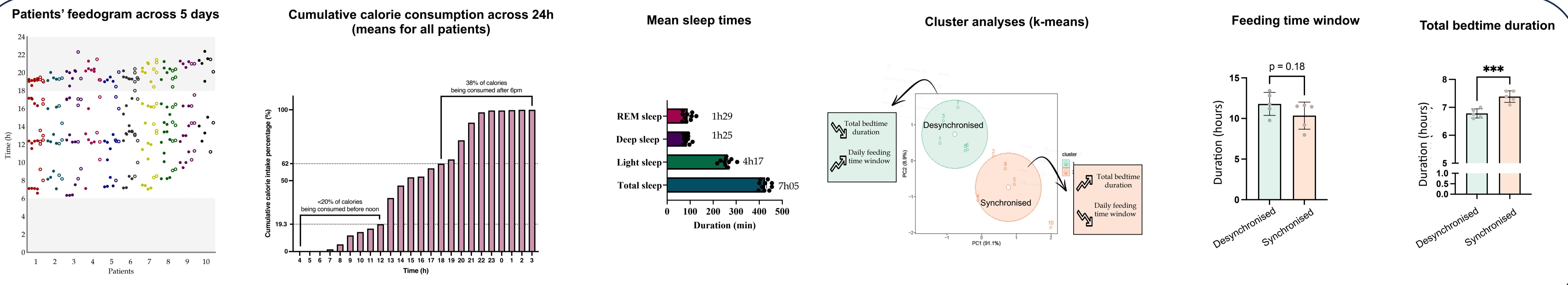


### Pre and post-intervention analyses of mood, memory and fat mass



## Preliminary Results

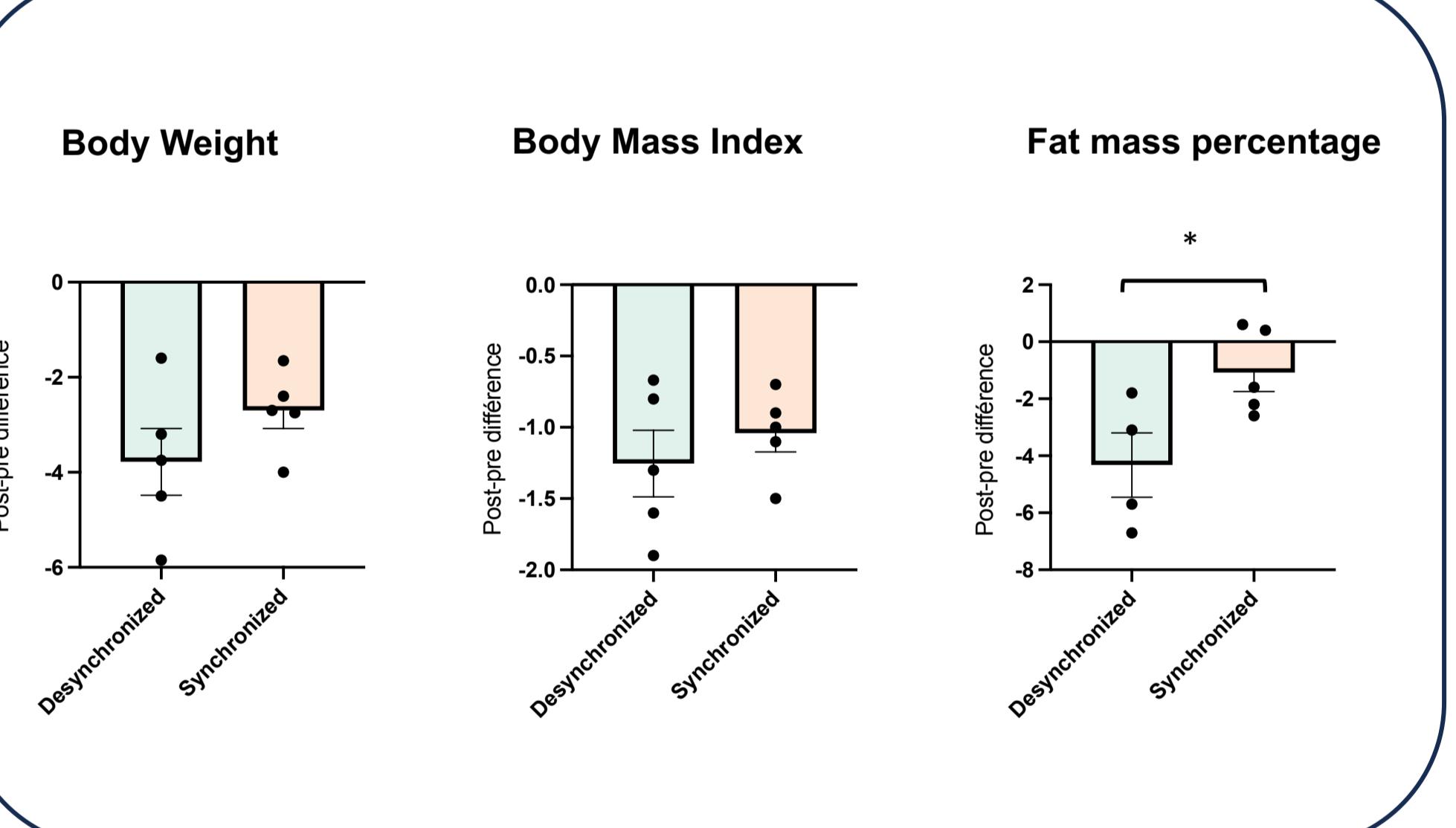
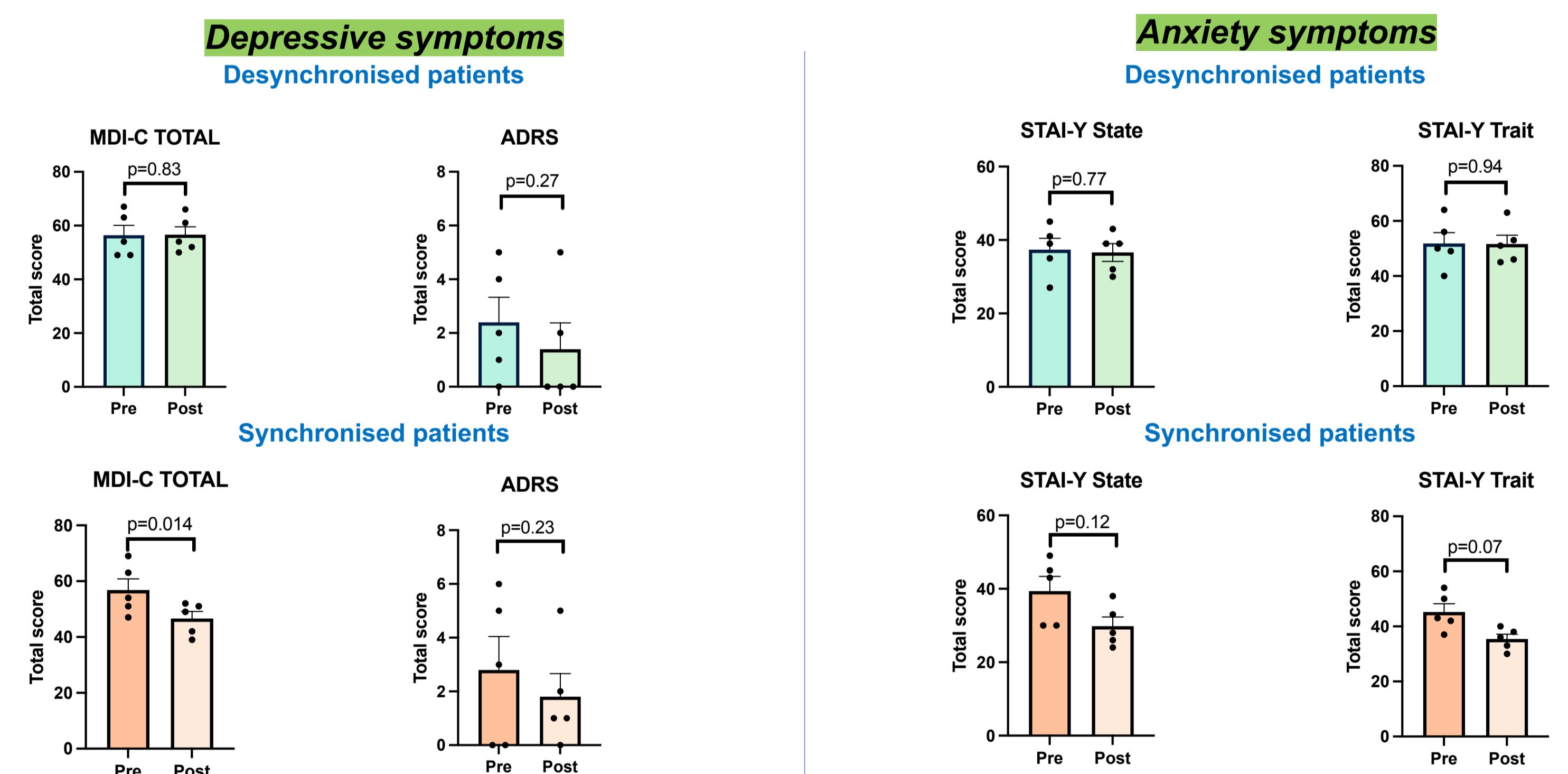
### Home-based Enquiries & Patients Categorisation



### Pre-Post Clinical Intervention Analyses

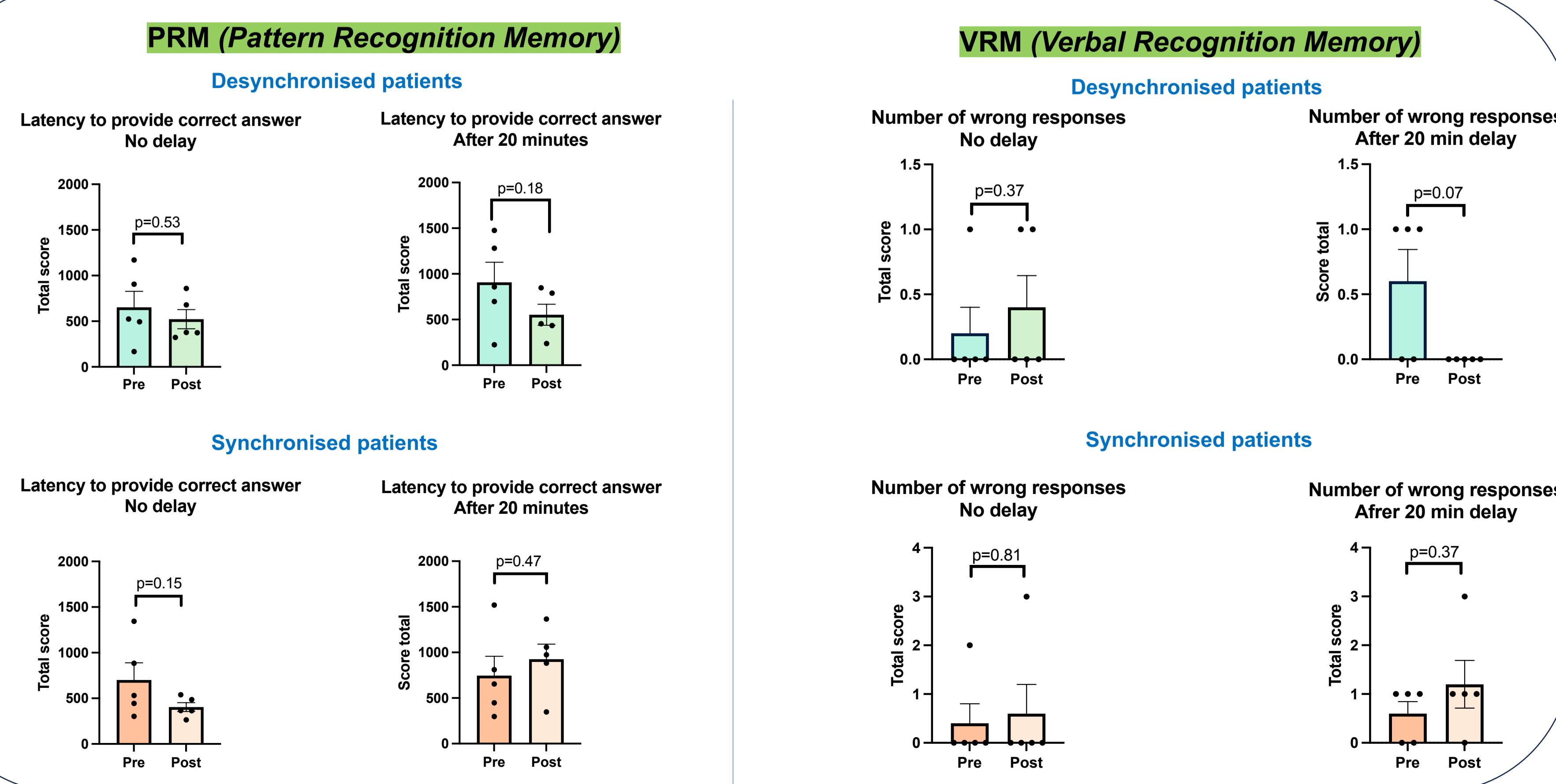
#### Mood analyses

#### Anthropometric measures



### Memory analyses

## Discussion



- Patients can be categorised in Synchronised and Desynchronised according to feeding and sleeping times
- TRE increases beneficial effects on fat mass in Desynchronised patients
- TRE does not affect mood symptoms
- TRE increases beneficial effects on long-term memory in Desynchronised patients
- Results are preliminary and need confirmation with higher number of patients and adjustment on age and sex.