

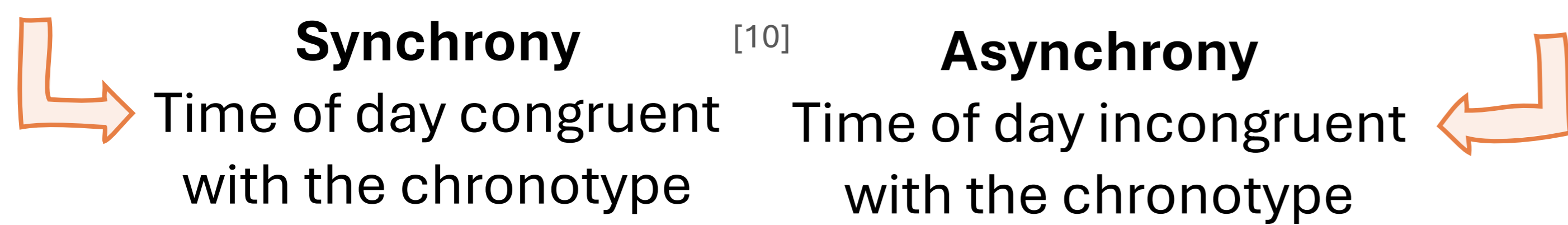
INTRODUCTION

Working memory (WM) is a central system for the **temporary maintenance and updating of information**^[1,2], whose **performance can be influenced by both** biological and emotional factors, such as:

Biological factors:

Chronotype^[3, 6, 8, 13]

- Morning type: peak activation in the early morning hours ☀
- Intermediate type: timing flexibility for peak activation
- Evening type: peak activation in the last hours of the day 🌙



Emotional factors:

- Emotional induction^[12, 15, 22]
- Emotional regulation (ER)^[4, 19]
- Tasks with emotional valence stimuli^[15, 16]

But... What is the the combined effect of chronotype and emotional factors on WM?

Study 1: creating a model to analyse pathways between ER, psychological distress and chronotype.

GOALS

Study 2: assess performance on a manipulated* Operation Span Task (OSPAN) at synchronous and asynchronous moments.

METHOD

SAMPLE

Inclusion criteria:

- Portuguese university students, native speakers of European Portuguese

Exclusion criteria:

- No mental disorder
- No use of medication that could interfere with the studies aims

Study 1

Correlational

$n = 345$

18-58 years old

($M = 23.00$; $SD = 6.42$)

Study 2

Quasi-experimental

☀ $n = 25$ 🌙 $n = 32$

18-25 years old

($M = 21.07$; $SD = 1.80$)

INSTRUMENTS/TASKS & PROCEDURE

Study 1

Moment 1

Online questionnaire

- Informed Consent
- Sociodemographic Questionnaire
- MEQ-H&O
- DERS-SF
- CERQ-Short
- DASS-21

Study 2

Moment 2

Synchronous/Asynchronous session

- STAI-Y1
- OSPAN*

1 week interval

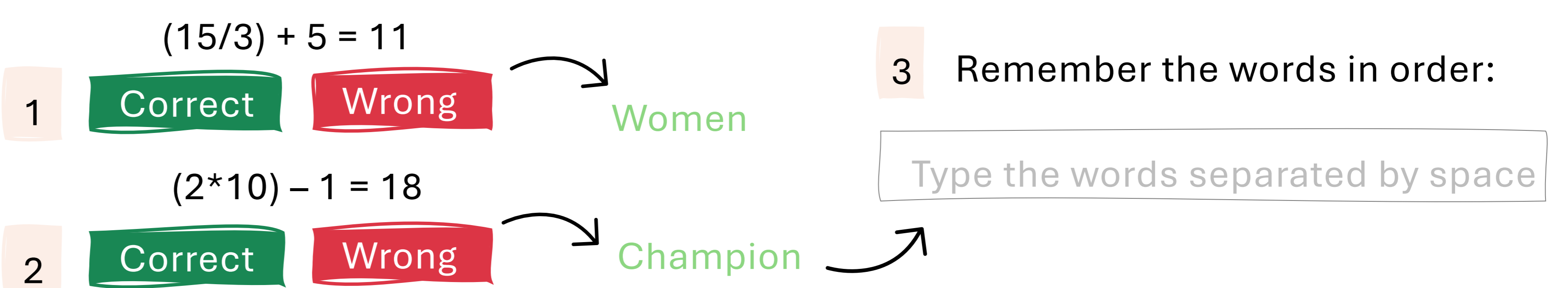
Study 2

Moment 3

Asynchronous/Synchronous session

- STAI-Y1
- OSPAN*

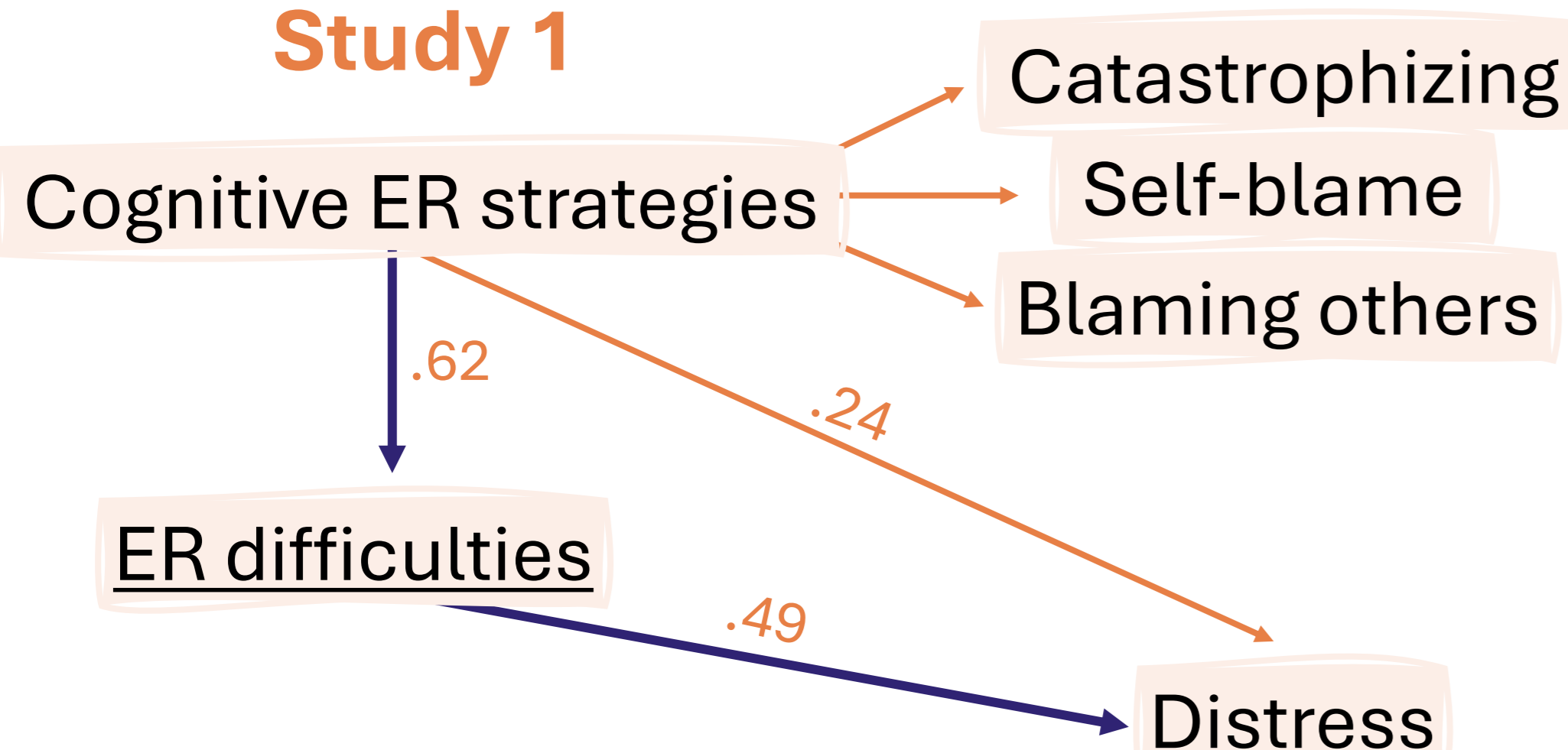
Task example



*manipulated with emotional (negative and positive) and neutral valence stimuli

RESULTS

Study 1



Acceptable adjustment for both groups (morning and evening types)

Study 2

Memory performance (correct words, correct attempts, and mathematical errors) appears to be **unaffected** by **circadian typology** and **synchronicity**, regardless of **emotional valence** (positive, negative, and neutral), even after controlling the levels of **ER difficulties**, **distress**, and **momentary anxiety**.

REFERENCES

SCAN ME



For more information:
inesoliveiraify@gmail.com

CONCLUSIONS

Although no direct effects of circadian rhythms or emotionality on WM were observed, these findings point to a meaningful interplay between cognitive and emotional mechanisms, that should not be examined in isolation and appears consistent across chronotypes.