

# The impact of chronobiological variables on face processing and their interplay with individual differences

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## FIGURE 1

Trial scheme of the facial emotion recognition task used in study<sup>2</sup> (published in <https://doi.org/10.3390/bs13010038>).

## FIGURE 2

Simple main effects of chronotype (rMEQ) on response times (RT) in identifying anger from faces, according to the expressive suppression levels, as reported in study<sup>2</sup> (published in <https://doi.org/10.3390/bs13010038>).

Chronobiological variables, such as chronotype, time-of-day and sleep, have been shown to significantly affect various cognitive functions, as well as emotional processing. These effects are due to the interaction between the homeostatic sleep pressure and circadian factors, the most important of which, in humans, being the light-dark cycle, and to the person's preference and predisposition for morning or evening activities. Considering the prominent role that human faces occupy in our daily lives, being a highly relevant stimulus in personal, social and professional settings, two published articles, under the FCT funded project DORIAN (PTDC/PSI-GER/31082/2017), highlighted the important impact of chronobiological variables on face processing. A scoping review study<sup>1</sup> explored the impact of sleep on face recognition memory, showing an overall positive effect of sleep on memory for faces. However, the significant methodological variability between studies calls for the need of controlling

confounding variables in future replications. Another study explored how individual differences in terms of chronotype and emotion regulation ability impacted the recognition of facial expressions of emotion, in particular expressive suppression<sup>2</sup>, highlighting the importance of considering the interplay between circadian preferences and other individual characteristics, such as emotion regulation strategy, to reach a better understanding of emotional functioning.

## Reference

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