

POOR SLEEP QUALITY AND INSOMNIA SCORES ARE ASSOCIATED WITH HIGHER AGGRESSION USING PSAP IN UNDERGRADUATE STUDENTS

M. Cavas, V. Sánchez-Moreno, N. Rengel, J.F. Navarro

University of Málaga, Psychology, Málaga, Spain

INTRODUCTION

Sleep quality has been suggested as a relevant factor in aggressive behavior, with poorer sleep quality related to aggression (Van Veen et al., 2021). However, aggression is usually assessed by self-reported instruments, and laboratory tools that measure aggression have not been used. The aim of this study is to explore the possible relationship between sleep quality, insomnia, and chronotype with the responses in a computer game widely used to measure aggressive behavior in laboratory settings, The Point Subtraction Aggression Paradigm (PSAP).

METHOD

56 undergraduate students completed the following questionnaires: The Spanish versions of the Pittsburg Sleep Quality Index (PSQI), the Composite Scale of Morningness (CSM), and the Insomnia Severity Index (ISI); the Aggression Questionnaire by Buss and Perry (1992), and the Instrumental and Expressive Aggression Questionnaire (CAIE) by Rodríguez and Peña (2019). To obtain an objective measure of aggressive behavior, the PSAP was used. This test, designed by Cherek (1981), consists on an online computer game to earn points. Participants have three options to respond, one of them is stealing, the number of steals is considered a behavioral index of aggression (Geniole et al., 2017).

RESULTS

Sleep latency ($r=.40$, $p<.01$), total PSQI score ($r=.33$, $p<.01$) and ISI score ($r=.30$, $p<.05$) showed significant correlations with the number of aggressive responses in the PSAP. Also, sleep duration ($r=.24$, $p<.05$), total PSQI score ($r=.33$, $p<.05$) and ISI score ($r=.25$, $p<.05$) were significantly correlated with total AQ score. Similarly, scores in instrumental aggression as measured with CAIE correlated with total PSQI score ($r=.26$, $p<.05$). Finally, evening subjects, as measured with CSM scale, exhibited significant correlations with aggressive responses in the PSAP ($r=.80$, $p<.05$), and instrumental CAIE. CSM evening type correlated with poorer sleep quality as measured through PSQI score ($r=-.28$, $p<.01$).

CONCLUSION

Poor sleep quality, higher insomnia score and evening chronotype are associated with higher aggression in a laboratory measure.

REFERENCES

- Geniole, S., MacDonell, E., & McCormick, C. (2017). The Point Subtraction Aggression Paradigm as a laboratory tool for investigating the neuroendocrinology of aggression and competition. *Hormones and Behavior*, 92:103-116. doi: 10.1016/j.yhbeh.2016.04.006.
- Van Veen, M., Lancel, M., Beijer, E., Remmelzwaal, S. & Rutters, F. (2021). The association of sleep quality and aggression: A systematic review and meta-analysis of observational studies. *Sleep Medicine Reviews*, 59:101500. doi: 10.1016/j.smr.2021.101500.

CONTACT

María Cavas, PhD mcavas@uma.es