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Association between post-COVID-19 sleep disturbance and neurocognitive function: A comparative study based on propensity score matching

Key words: Coronavirus disease 2019 (COVID-19), Post-COVID-19, Sleep disturbance, Neurocognitive function, Digital assessment

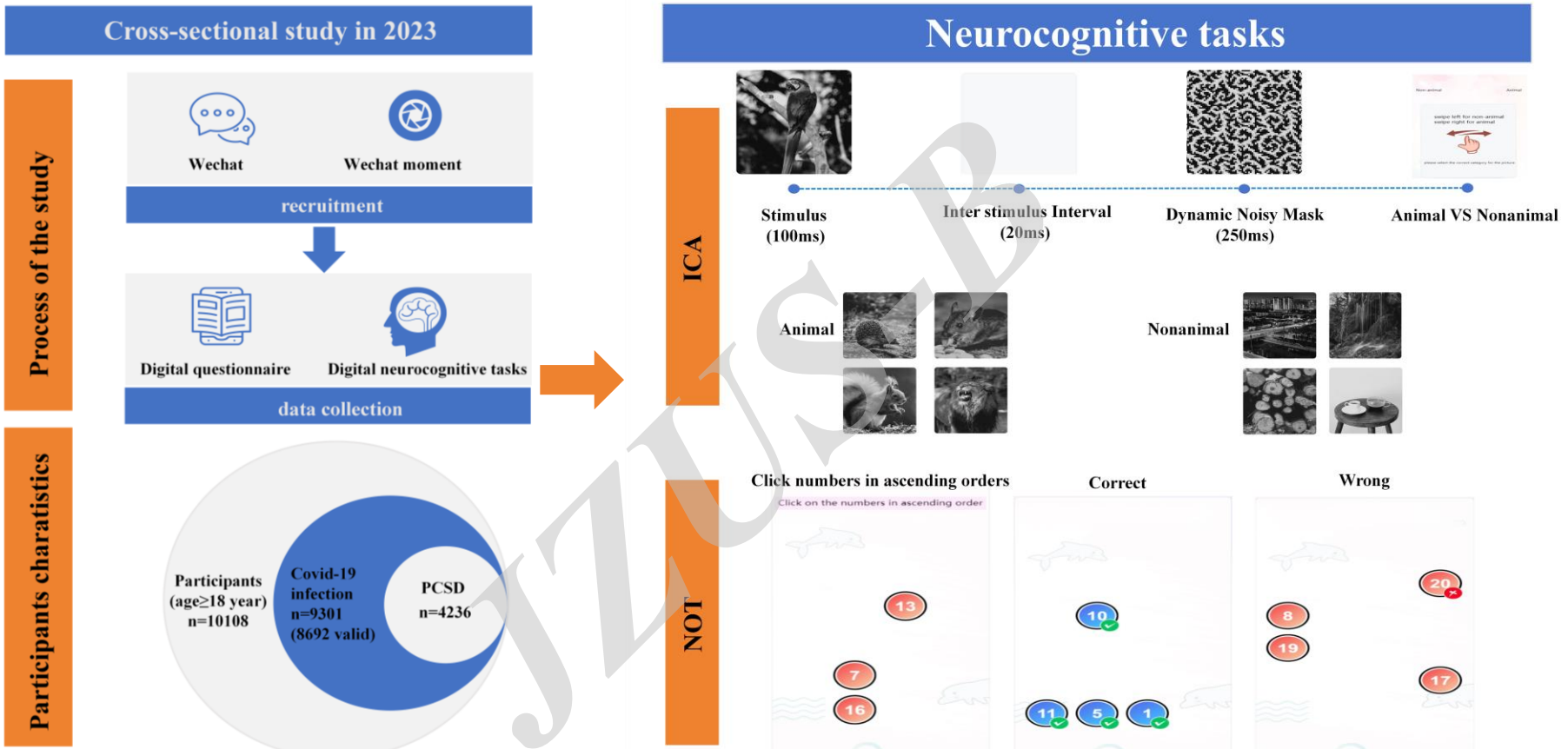
Research Summary

- This study aimed to identify the impact of PCSD on neurocognitive function and explore the associated risk factors for the worsening of this condition. This cross-sectional study was conducted via the web-based assessment in mainland China.

- This cross-sectional study was conducted via the web-based assessment in mainland China. Neurocognitive function was evaluated by the modified online Integrated Cognitive Assessment (ICA) and the Number Ordering Test (NOT).

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Research Summary



Flowchart of study and Process of the ICA and the NOT
Abbreviations: PCSD, post-COVID-19 sleep disturbance; ICA, Integrated Cognitive Assessment; NOT, Number Ordering Test.

Innovation points

● The study employed a large-scale digital cognitive assessment tool. This will help clinicians and researchers use the digital cognitive function assessment method, which is efficient, quick, and repeatable, providing a preliminary research foundation for future longitudinal studies.

●The study utilized propensity score matching (PSM) to balance the covariates between groups.

●The study explored the impact of post-COVID-19 sleep disturbance on neurocognitive functions.

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Innovation points

- **Summary**

PCSD was related to impaired neurocognitive performance. Aging, ethnicity, and lower education level were found to be independent risk factors for worsened neurocognitive performance in PCSD individuals.

For survivors with long-term PCSD, adopting interventions such as cognitive behavioural therapy for insomnia may be a promising option to improve sleep quality and neurocognitive performance.

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