Marwin Machay Indio do Brasil do Carmo

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EDUCATION

University of California, Davis, Ph.D. Quantitative Psychology   2023–Present
Advisor: Philippe Rast, Ph.D.
Research topics: Intra-individual variability, Mixed-effects location scale models, Bayesian inference, Gaussian graphical models
University of São Paulo, M.Sc. Psychiatry   2021–2023
Recipient of a Master's Fellowship from Sao Paulo Research Foundation (FAPESP)
Advisor: Renatha El-Rafihi Ferreira, Ph.D.
Rio de Janeiro State University, Bachelor in Psychology   2014–2019
Federal Institute of Education, Science and Technology, B.Tech. Chemical Processes   2008–2013

PUBLICATIONS

Peer-reviewed

* *denotes manuscript in Portuguese*

1. Rafihi-Ferreira, R., Hasan, R., Toscanini, A. C., Linares, I. M. P., Borges, D. S., Brasil, I. P., **Carmo, M.**, Neto, F. L., Morin, C. (2024). Acceptance and commitment therapy versus cognitive behavioral therapy for insomnia: A randomized controlled trial. *Journal of Consulting and Clinical Psychology.* https://doi.org/10.1037/ccp0000881

2. **Carmo, M. M. I. B.**, Leme, V. B. R., Quiterio, P. L. (2024). Social skills and people with disabilities: overview of Brazilian research. *Psicologia Escolar e Educacional.* https://doi.org/10.1590/2175-35392024-246235-T

3. Rafihi-Ferreira, R., **Carmo, M. M. I. B.**, Bassoli, L., Hasan, R., Aizawa, I. M. I., & Toscanini, A. C. (2022). Cognitive and psychological factors associated with severe insomnia in Brazilian women: A cross-sectional study. *Psicologia: Reflexão e Crítica.* https://doi.org/10.1186/s41155-022-00243-x

4. *Quiterio, P. L., Nunes, L. R. O. P., Camelo, B. L., Silva, J. P., & **Carmo, M. M. I. B.** (2021). Promoting the social skills of future teachers focusing on inclusive education. *Estudos e Pesquisa em Psicologia.* https://doi.org/h43p

5. *Quiterio, P. L., Leme, V. B. R., **Carmo, M. M. I. B.**, Silva, J. P., & Camelo, B. L. (2021). Family guidance program developed in the applied psychology service of a public university. *Psicologia Clínica.*

6. ***Carmo, M. M. I. B.**, Gilla, C. G., & Quiterio, P. L. (2020). A study about the inclusion of people with disabilities in the Brazilian labour market. *Interação em Psicologia.* https://doi.org/h43q

7. Ferreira, W. H., **Carmo, M. M. I. B.**, Silva, A. L. N., & Andrade, C. T. (2014). Effect of structure and viscosity of the components on some properties of starch-rich hybrid blends. *Carbohydrate polymers.* https://doi.org/f6w475

Under Review

1. **Carmo, M.**, Williams, D. R., & Rast, P. Beyond Average Scores: Identification of Consistent and Inconsistent Academic Achievement in Grouping Units. Under review at *Journal of Educational and Behavioral Statistics.* [preprint]

2. **Carmo, M.**, Rafihi-Ferreira, R., Paulos-Guarnieri, L., & Pires, M. L. N. The Sleep Acceptance Scale (SAS): Development, Psychometric Properties, and Applications. Under review at *Behavioral Sleep Medicine..*

3. Conway, B. A., **Carmo, M. M. I. B.**, Filho, H. S. L. S., Alves, M. M., Hasan, R., Toscanini, A. C., & Rafihi-Ferreira, R. Personality traits and insomnia: direct and anxiety-mediated associations. Under review at *Journal of Sleep Research.*

Working Papers

1. **Carmo, M.**, Morin, C. M., Hasan, R., Toscanini, A. C., & Rafihi-Ferreira, R. *The network of dysfunctional beliefs about sleep: a structural re-analysis of the DBAS-16.* [preprint]

Blogs

1. **Carmo, M. M. I. B.** (2022). Simulating post selection inference. [post]
2. **Carmo, M. M. I. B.** (2021). Regression Artifact - Re-running Farmus et. al (2019). [post]

SOFTWARE DEVELOPMENT

ivd. An R package for random effects selection in the scale part of Mixed Effects Location Scale Models using a spike-and-slab prior on the random effects of the scale. [Github repo

Model selection app. A Shiny app designed for performing simulations of statistical inferences after model selection procedures. Its purpose is to illustrate the problems that arise when model selection, parameters estimation and statistical inferences are undertaken with the same data set. [App] [Github repo]

Brazilian Research Funding app. In this app I explore the open database of the National Council for Scientific and Technological Development (CNPq), a Brazilian Government research funding agency. [App] [Github repo]

RESEARCH AND WORK EXPERIENCE

University of California, Davis   September 2023–Present
Graduate Student Teaching Assistant   Davis, CA
- Statistical Analysis of Psychological Data II (3 quarters)
- Data Visualization in the Social Sciences (1 quarter)
- General Psychology (1 quarter)

Psicometria Online Academy   May 2022–October 2024
Virtual Teaching Assistant (Psychometrics)   Rio de Janeiro, Brazil (*remote*)

PsicoDados   January 2022–December 2022
Statistical Consultant   Rio de Janeiro, Brazil (*remote*)

Psychology of Human Development Laboratory - UERJ   August 2019–August 2020
Research Assistant   Rio de Janeiro, Brazil
Recipient of FAPERJ's Training and Technical Qualification fellowship

Socio-Emotional Development, Inclusion and Social Skills Laboratory - UERJ   July 2017–July 2019
Undergraduate Research Project   Rio de Janeiro, Brazil
Recipient of UERJ's Department of Scholarships funding for undergraduate research project

Biodegradable Polymer Research Laboratory - UFRJ   June 2011–March 2013
Undergraduate Research Project   Rio de Janeiro, Brazil

OTHER RELEVANT EXPERIENCE

Measuring Psychology Study Goup and Community   February 2022–October 2023
Founder and facilitator   Online

- Created a global community of 200+ members interested in discussions, collaborations, and networking in the field of measurement in the human sciences;
- Organized bi-weekly meetings and led study sessions on measurement theory;
- Orchestrated invited presentations by renowned scholars like Dr. Derek C. Briggs, Dr. Laura F. Bringmann, Dr. Markus I. Eronen, Dr. Alexander Christensen, Dr. James Grice, and others.

SKILLS

Programming

- R: exploratory data analysis, data cleaning, data visualization, statistical data analyses, programmatic reporting (R Markdown/ Quarto), web scraping, dashboards, packages development, Shiny apps development.
- Python: exploratory data analysis, data cleaning, data visualization.

Tools

- Statistical softwares: R, SPSS, JASP, JAMOVI
- Reporting: RMarkdown, Quarto, LaTeX

- Version control: Git and Github
- Reference management: Zotero
- Data collection and management: REDCap

RELEVANT COURSEWORK

Mathematics & Statistics
Multivariable Calculus, Linear Algebra, Probability Theory, Machine Learning, Structural Equation Modeling, Applied Bayesian Statistics.

Programming
Monte Carlo Simulations, Data Visualization, Data Cleaning and Management.

FIRST-AUTHOR PRESENTATIONS

1. 2024 – Poster presentation: A holistic view of academic performance: beyond averages with MELSM and spike-and-slab. *89th Annual Meeting of the Psychometric Society*, Prague, Czech Republic. [poster]

2. 2022 – Poster presentation: Development of the Sleep Acceptance Scale (SAS). *XIX Brazilian Congress of Sleep*, Goiania, Brazil.

3. 2022 – Oral presentation: Understanding model selection bias via simulation. *VI International Seminar on Statistics with R*, Online. [slides][video]

4. 2022 – Oral presentation: A network approach of Insomnia and Dysfunctional Beliefs and Attitudes About Sleep. *VII Psychiatric Clinic Congress*, São Paulo, Brazil. **Recipient of Best Oral Presentation Award** [slides]

5. 2022 – Poster presentation: Network structure of acceptance of sleep difficulties and insomnia. *VII Psychiatric Clinic Congress*, São Paulo, Brazil. [poster]

6. 2021 – Poster presentation: The association between sleep-related cognitions, psychological flexibility, and insomnia symptoms. *XVIII Brazilian Congress of Sleep*, São Paulo, Brazil. **Recipient of Top Posters Award** [poster] [abstract]

7. 2019 – Poster presentation: Effects of a parent training program to clinical and non-clinical samples. *VII International Seminar on Social Skills*, Maranhão, Brazil. **Recipient of 3rd place for Best Poster Award**

8. 2018 – Poster presentation: A study on the inclusion of people with disabilities in the Brazilian labor market. *12th Regional Exhibition of Practices in Psychology*, Rio de Janeiro, Brazil.

9. 2018 – Poster presentation: Assessment of the effects of a parent training program. *VII Brazilian Congress of Cognitive Therapy for Children and Adolescents*, Bahia, Brazil. **Recipient of 3rd place for Best Poster Award**