Education

Methodology and Statistics for the Behavioural, Biomedical and Social Sciences MSc
2022
Utrecht University
Utrecht, Netherlands

B.A. Psychology
2017
Texas State University
San Marcos, Texas

Research and Professional Experience

Data Scientist (Supervisor: Alessandro De Nadai, PhD)
Data Science Initiative, *Texas State University*
2019-2020
Job Description: Employed data scientist for campus-wide effort supported by the University president which synergizes grant-funded data science projects across campus departments (e.g., computer science, mathematics, statistics, biomedicine, social science).

> **Responsibilities:**
> - Using R/RStudio, Mplus, and SPSS to analyze data and run statistical tests
> - Database management and data cleaning prior to running analyses
> - Grant writing and manuscript preparation
> - Training other team members on data collection and analysis methods and protocols

Lab Research Assistant and **Statistical Analyst** (Supervisor: Alessandro De Nadai, PhD)
Department of Psychology, *Texas State University*
2018-2019
Research Topics: Mental health research to improve diagnosis and dissemination for anxiety, obsessive-compulsive disorder (OCD), and depression.

> **Responsibilities:**
> - Data acquisition, management, and analysis
> - Article review and meta-analytic coding
> - Grant writing and manuscript preparation

Research Assistant (Supervisor: Yueqin Hu, PhD)
Department of Psychology, *Texas State University*
2019-Present
Research Topic: To develop new autoregressive models and compare their performance to ordinary differential equation (ODE) models via simulation studies.

> **Responsibilities:**
> - Generating data using simulation methods
> - Using R/RStudio to build and implement statistical models
> - Manuscript preparation, review, and submission

Research Assistant (Supervisor: Crystal Oberle, PhD)

Department of Psychology, *Texas State University*
2017-2018
Research Topic: To examine the kinds of activities individuals with orthorexia engage in for the purposes of improving or maintaining optimal physical and mental health.

Responsibilities:
- Developing and administering surveys
- Coding, entering, and quality checking data
- Assembling online data collection
- Recruiting, contacting, and scheduling participants

Research Assistant (Supervisor: Kelly Haskard-Zolnierek, PhD)
Department of Psychology, *Texas State University*
2016-2017
Research Topics: To examine the effects of different communication styles on patient adherence to medical regimens, and to develop the components of a health behavior self-management dashboard.

Responsibilities:
- Study design and statistical analysis
- Coordinating online data collection
- Recruiting, contacting, and scheduling participants

Technical Skills

- R/RStudio
- Python
- GitHub
- Linux
- SAS
- Mplus
- Statistical Package for the Social Sciences (SPSS)

Publications

De Nadai, A. S., Quast, T., Little, T. B., Westerberg, K., Patyk, K., Monahan, M. F., Storch, E. A., & Gregory, S. T. (2022). Intervention cost-effectiveness for pediatric anxiety and OCD: A systematic review and integrated database model. *Journal of Affective Disorders*, 298, 110-118. doi: 10.1016/j.jad.2021.10.127

Oberle, C.D., Klare, D. L., & Patyk, K.C. (2019). Health beliefs, behaviors, and symptoms associated with orthorexia nervosa. *Eating and Weight Disorders.*

Rech, M., Weinzimmer, S., Geller, D., McGuire, J. F., Schneider, S. C., Patyk, K. C., De Nadai, A. S., Cepeda, S. C., Small, B. J., Murphy, T. K., Wilhelm, S., & Storch, E. A. (in press). Symptom trajectories of early responders and remitters among youth with OCD. *Journal of Obsessive Compulsive and Related Disorders*. doi: 10.1016/j.jocrd.2020.100580

Conferences, Presentations, & Posters

De Nadai, A. S., Little, T. B., Quast, T., Westerberg, K., Patyk, K., Etherton, J. E., Monahan, M. F., Storch, E. A., & Gregory, S. T. (2020, November). Cost-effectiveness of interventions for pediatric depression: A systematic review and simulation study. In B. T. Yates (Chair), *Cost-effectiveness and cost-benefit analyses of CBT and alternative interventions for childhood attachment, anxiety, depression, alcohol abuse, and suicide prevention: Methods as well as findings.* Symposium conducted at the annual meeting of the Association for Behavioral and Cognitive Therapies, Online Conference.

De Nadai, A. S., Quast, T., Little, T. B., Westerberg, K., Patyk, K., Monahan, M. F., Storch, E. A., & Gregory, S. T. (2019, July). Cost-effectiveness of interventions for pediatric OCD. In A. S De Nadai (Chair), *Treatment considerations in pediatric OCD: Personalizing gold-standard care.* Symposium conducted at the annual meeting of the International OCD Foundation, Austin, TX.

De Nadai, A. S., Quast, T., Little, T. B., Westerberg, K., Patyk, K., Monahan, M. F., Storch, E. A., & Gregory, S. T. (2019, November). Cost-effectiveness of interventions for pediatric anxiety and obsessive compulsive disorder. In A. S. De Nadai (Chair), *Cost-effectiveness of CBT: Critical information for dissemination and implementation.* Symposium conducted at the annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.

Etherton, J. E., Little, T. B., Quast, T., Westerberg, K., Patyk, K., Monahan, M. F., Storch, E. A., Gregory, S. T., & De Nadai, A. S. (2020, March). Cost-effectiveness of treatments for pediatric depression. Symposium accepted for presentation at the annual meeting of the Anxiety and Depression Association of America, San Antonio, TX. (Conference canceled due to COVID-19)

Gutierrez, C., Mouton-Odum, S., Bicak, Z., Patyk, K. C., & De Nadai, A. S. (2020, November). *Using unsupervised machine learning to generate clinically actionable information in excoriation disorder.* Poster presented at the 54th annual meeting of the Association for Behavioral and Cognitive Therapies, Online Conference.

Myers, M. M., Mouton-Odum, S., Patyk, K. C., & De Nadai, A. S. (2020, April). *Heterogeneity in reasons for hair-pulling episodes: Using unsupervised machine learning to identify subgroups and personalize clinical intervention.* Poster accepted for presentation at the International Conference on Body-Focused Repetitive Behaviors, Chicago, IL. (Conference canceled due to COVID-19)

Patyk, K., Quast, T., Little, T. B., Westerberg, K., Monahan, M. F., Storch, E. A., Gregory, S. T., & De Nadai, A. S. (2020, March). Cost-effectiveness of interventions for pediatric anxiety and OCD. Symposium accepted for presentation at the annual meeting of the Anxiety and Depression Association of America, San Antonio, TX. (Conference canceled due to COVID-19)

Grants, Honors, and Scholarships

2019 - Recipient of full scholarship to National Institutes of Health (NIH) R25-funded Summer Institute for Research Education in Biostatistics at Boston University
- Program modules in biostatistics, epidemiology, clinical trials, statistical genetics, as well as SAS and R programming
- Completed and presented faculty supervised analysis project using data from the National Health and Nutrition Examination Survey