

Natasha N DeMeo

Research Data Analyst

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Portfolio: <https://nddemeo.netlify.app> • LinkedIn: [linkedin.com/in/natasha-demeo](https://www.linkedin.com/in/natasha-demeo) • Google Scholar: scholar.google.com/citations?user=3Z3W8QoAAAAJ&hl

- Interdisciplinary research analyst with 10+ years working on NIH-funded projects, specializing in data management and analysis (powered by statistical programming) for complex study designs incorporating multiple data types (e.g., biomarkers, smart device/sensor data, self-reports/interviews) and longitudinal assessments
- Extensive experience successfully implementing, consulting, and teaching research methods, foundational statistical concepts, and statistical programming (R/SAS) across social science and health-related applications
- Innovative and driven problem-solver and a quick learner with a talent for 'tech'

EDUCATION

Pennsylvania State University • M. Sc. in Biobehavioral Health (BBH)* 08/2021

Award: Selected by College of Health and Human Development as single 2018 recipient of University Graduate Fellowship Award (1 of 80 university-wide) for incoming students; provided \$30K base stipend for 2 years and complete tuition remission

*Doctoral training from 2018 to 2023; exited as doctoral candidate with M.Sc. (GPA: 4.0/4.0)

University of North Florida • B. A. in Psychology and B.Sc. in Biology* 12/2016

*Dual Degrees, Graduated *Summa Cum Laude*

SELECT COURSEWORK & ADDITIONAL TRAINING

Graduate Courses: Foundational Research Methods/Statistics, General Linear Modeling, Multilevel Modeling, Intermediate R for Statistics, Psychological Measurement Methods and Models

CenterStat Introduction to Structural Equation Modeling, 5-Day Workshop by Drs. Curran & Bauer

APA Advanced Training Institute (Competitive Admittance): 'Analysis of Intensive Longitudinal Data: Experience Sampling and Ecological Momentary Assessment', 5-Day Workshop by Drs. Bolger, Grimm, Laurenceau, & Ram

Penn State Research Data Skills Seminar Series, Five 1-Hour Trainings by Dr. Ezray

Penn State Advanced Multi-Level Modeling Course, Non-Credit Weekly Course by Dr. Mogle

Penn State Research Integrity and Scholarly Ethics Course, 3-Credit Course by Drs. Verderame & Showalter

SKILLS

Languages/Tools: R, SAS, SPSS, Python, SQL, JavaScript, Shiny, Qualtrics • **Full Research Lifecycle (Pre-Study to Post-Study Processes)** • **Regulatory/Privacy Guidelines (IRB, HIPAA)** • **Digital Collaboration Tools (Zoom, Slack/Teams, Asana)**

RESEARCH EXPERIENCE

Statistical and Research Analyst III

Mogle Lab in Psychology/Institute of Engaged Aging* • Clemson University • Remote 07/2023 – Present

*Part-time (25 hours/week) until 02/2024 while working directly on a collaborative project between Clemson/Rowan

- Lead data manager/analyst for 2 multi-year studies (~\$750K NIH funding), producing high-quality, analysis-ready

datasets from repeated-measure surveys, cognitive assessments, and health data using statistical programming (R)

- Applied advanced statistical training to describe patterns for variables at the group-, person-, and day-level to appropriately account for nesting of repeated measures data across time points in alignment with key study aims
- Developed tools (showcased in portfolio) to streamline data management and analysis workflows, shaving hours off each project and increasing quality/consistency of documentation, including data dictionaries and annotated code
- Developed a user-friendly, Shiny-based interactive dashboard to explore psychometric/statistical properties of repeated-measure survey questions, translating PI's vision into a data-driven research tool for grant submission
- Quickly resolved countless issues for team members related to statistical programming and cross-platform compatibility (e.g., SPSS, R, SAS, etc.) and provided routine reviews/validation of SAS and R code
- Prepared and led a workshop introducing Rowan and Clemson trainees to working with long-form/repeated-measures data, including actual and simulated data examples in R
- Trained and supervised research personnel in data management, statistical analysis, and manuscript preparation; directly contributed to revisions of 3 in progress manuscripts

Arigo Lab in Clinical Psychology* • Rowan University • Remote

07/2023 – 02/2024

**Part-time (25 hours/week) for project R03HL160602: Coordinated Analysis in High Cardiovascular Disease Risk Samples*

- Lead data manager/analyst for \$150K, multi-year NIH study – a coordinated analysis across 6 separate datasets (2 national, observational; 4 intervention clinical trials) with notable contributions to data/analytical quality such as:
 - Increased overall sample pool by ~2K participants by identifying additional subsamples and resolving missing data in health histories and biomarkers
 - Corrected a significant oversight by a past analyst that included participants with pre-existing cardiovascular disease, which affected the accuracy and validity of the analytical sample
- Developed data-informed analysis plans, prepared SAS code, and applied/interpreted mixed effects models to examine linear/non-linear trends and individual differences in sensor-detected physical activity over time
 - Advised clinical researcher team at Rowan on appropriate analyses given patterns of missingness, research design, statistical power of each study, and ability to harmonize variables across each dataset
 - Results submitted to 2 international conferences within first 2 months and presented 3 times within first year
 - Progress on data management and analyses directly contributed to obtaining additional \$150K of funding
- Created detailed documentation and data archiving: 6 final dataset data dictionaries, harmonization guide, sample characteristic tables, annotated records of cleaning/analysis, study design summaries for each dataset
- Communicated progress, recommendations, findings, and maintained detailed project timelines (per grant requirements) to multi-site, multi-disciplinary team through weekly meetings and other methods

Graduate Researcher

Graham-Engeland Lab in Biobehavioral Health • Penn State University • University Park, PA

08/2018 – 08/2023

- Managed/documented 5 years of STRAIN survey data collection/processing for the multi-million-dollar, longitudinal Einstein Aging Study through coordination with multi-site team/external consultants; data management and associated analyses contributed to obtaining an additional \$32 million in project funding in 2022
- Conducted rigorous secondary analyses on daily experiences/personality using NIH-funded ESCAPE data (proposal and statistical plan accepted in year 1); completed high-quality master's thesis by 3rd semester, published in 2021 in

a top-tier journal as first author

- Developed (co-PI), implemented, and processed data for an online study of ‘social distancing’ from Mar. to Dec. 2020 to examine targeted questions on personality, loneliness, and health, resulting in 2K+ participants and novel findings presented at two conferences
- Designed and programmed a survey to assess BBH students’ graduate program satisfaction/experiences, with nuanced privacy protection measures (despite informality/no IRB oversight), achieving >90% response rate and delivering actionable insights to faculty
- **Independent Collaboration:** Initiated and led an international team in characterizing the diversity of scientists and participants (and the availability of such info) involved in developing the “Big Five” Personality traits and related scales with implications for generalizability; prepared and presented invited talk; full manuscript under revision
- Received college-level awards, including \$2K funding for research and professional development, due to excellence in research productivity, quality, and academic service in 2021 and 2022

Research Assistant

McLean Lab in Neuroscience • Mayo Clinic • Jacksonville, FL

03/2016 – 07/2018

- Led two funded studies on neurodegenerative diseases using biomolecular techniques with tissue/cell culture models, resulting in a custom assay to detect protein interactions and identifying promising drug candidates via functional screening
- Planned study designs, conducted wet lab experiments, and performed quantitative/qualitative analyses; regularly updated the team on progress/results and contributed to manuscripts/presentations
- Managed lab operations, oversaw cell culture maintenance, trained lab members, and supervised 1-2 students

Toglia Lab in Psychology • University of North Florida • Jacksonville, FL (Hybrid)*

12/2014 – 07/2018

** Unpaid, part-time role with time and involvement varying by semester; intermittent collaboration ongoing*

- Supported cognitive psychology research projects by conducting literature reviews, leading IRB submissions, contributing to study designs/materials, interpreting results, and co-authoring abstracts/manuscripts

Nguyen Lab in Neuroscience • Mayo Clinic • Jacksonville, FL*

01/2015 – 03/2016

** Transitioned from training to paid role in a small clinical lab led by a renowned surgeon; served as the sole formal lab personnel handling daily operations from 08/2015 to 03/2016*

- Managed lab operations and assisted with biomolecular experiments and data analysis

TEACHING EXPERIENCE

Instructor

Pennsylvania State University

BBH 505L – Foundational Statistical Concepts and Research Methods Lab

08/2021 – 08/2023

Lecture Instructor: Dr. Michael Russell

Enrollment: ~16 graduate students in Fall 2021 and 2022

- Selected from BBH graduate students to develop and teach new lab for required first-year graduate course covering:
 - interrelationship between study design, analytical approaches, and interpretation

- basic statistical theory (central limit theorem, distributions, hypothesis testing, power)
- applying and interpreting general(ized) linear models using statistical programming (R and SAS)
- Taught in Fall 2021 and 2022 (with very positive feedback) and added to course materials through 2023, providing successor with fully updated and annotated course materials (demos, assignments, etc.), incorporating brand new material on statistical programming terminology and best practices, and additional course implementation notes

BBH 143 – Drugs, Behavior, & Health**07/2021–08/2021**

Enrollment: ~30 undergraduate students in Summer (Semester II) 2021; online course

- Developed materials/schedule and taught course on recreational/therapeutic drug use, covering biological mechanisms, health impacts, societal norms, legal/historical contexts, and underlying biological, psychological, and social factors influencing use/misuse, including alcohol, nicotine, opiates

Teaching Assistant*Pennsylvania State University***BBH 411w – Research Applications in Biobehavioral Health** (Dr. Michael Russell)**01/2022–05/2022****BBH 416 – Health Promotion II** (Dr. Kari Kugler)**01/2020–05/2020****BBH 432 – Biobehavioral Aspects of Stress** (Dr. Idan Shalev)**08/2019–12/2019***University of North Florida***EXP 3604 – Cognitive Psychology** (Dr. Michael Toglia)**08/2017–12/2017****SERVICE**

Emerging Editorial Board Member – Personality and Social Psychology Review (Sage)	03/2022 – Present
Committee Member (Diversity and Inclusion) – Association for Research in Personality	02/2021–12/2023
Member of PSU BBH Graduate Curriculum Stats & Methods Working Group	01/2023–08/2023
Panel Moderator for PSU BBH Founder’s Day Event	04/2022
Guest Discussant for “Let’s Talk Grad School” Event	03/2021
Poster Judge for PSU BBH Research Forum	04/2019
Discussant for HHD Student Council’s Grad School Info Event	10/2018
Founding President of UNF Neuroscience Club	08/2015 – 06/2016

GRANTS AND FUNDING**Edward R. and Helen Skade Hintz Graduate Education Enhancement Fellowship Award****04/2022**

College of Health and Human Development • Pennsylvania State University

Funding: \$2000

Award Period: 07/2022–06/2023

Edward R. and Helen Skade Hintz Graduate Education Enhancement Fellowship Award

04/2021

College of Health and Human Development • Pennsylvania State University

Funding: \$2000

Award Period: 07/2022–06/2023

Fund for Graduate Recruitment

02/2018

Biobehavioral Health Development • Penn State University

Funding: \$2000

Award Period: 08/2018–06/2020

University Graduate Fellowship Award

02/2018

College of Health and Human Development • Penn State University

Funding: \$30K base stipend Y1 (matched by department Y2); full tuition remission in Y1

Award Period: 08/2018–05/2020

Selected by College of Health and Human Development as single 2018 recipient (1 of 80 university-wide) for incoming students

Student Travel Award

07/2016

Student Government • University of North Florida

Funding: \$500

Award Period: 07/2016–06/2017

Not Funded**National Science Foundation Graduate Research Fellowship Program (2020)**

10/2019

Role: Principal Investigator

Field: Psychology- Personality and Individual Differences

Title: Introversion and Types of Negative Daily Life Experiences

Funding: \$34K stipend per year for 3 years; up to \$12K per year tuition coverage

Outcome: Rated as 'excellent' (highest rating) on intellectual merit and broader impacts by 2 reviewers and 'good' by 1 reviewer; not selected for funding

AWARDS AND HONORS

Selected for Inaugural Emerging Editorial Board of PSPR

03/2022

Phi Kappa Phi Honor Society Member, Penn State Chapter

04/2022–03/2023

Competitive admission to APA Advanced Training Institute

06/2020

Psi Chi National Honor Society in Psychology Member	05/2015–12/2016
Dean's List, University of North Florida	05/2014–12/2016
Florida Academic Scholars Award	08/2012–12/2016
College President's List, Florida State College at Jacksonville	08/2012–12/2013
Employee Memorial Scholarship	2013
Foundation Touch Tomorrow Scholarship	2012
Stein Scholars in Math, Engineering, & Sciences Scholarship	2012
Mayo Clinic Dependent Scholarship	2012

RESEARCH OUTPUTS

Peer-Reviewed Publications

- Fagen, S. J., Burgess, J. D., Lim, M. J., Amerna, D., Kaya, Z. B., Farooqi, A. H., Perisetla, P., **DeMeo, N. N.**,... & McLean, P. J. (2023). Honokiol decreases alpha-synuclein mRNA levels and reveals novel targets for modulating alpha-synuclein expression. *Front. Aging Neurosci.*, 15, 1179086. <https://doi.org/10.3389/fnagi.2023.1179086>
- DeMeo, N. N.**, Smyth, J. M., Scott, S. B., Almeida, D. M., Sliwinski, M. J., & Graham-Engeland, J. E. (2023). Introversion and the frequency and intensity of daily uplifts and hassles. *J. Pers.*, 91(2), 354–368. <https://doi.org/10.1111/jopy.12731>
- Song, S., **DeMeo, N. N.**, Almeida, D. M., Majd, M., Engeland, C. G., & Graham-Engeland, J. E. (2022). The longitudinal connection between depressive symptoms and inflammation: Mediation by sleep quality. *PloS One*, 17(5), e0269033. <https://doi.org/10.1371/journal.pone.0269033>
- Graham-Engeland, J., **DeMeo, N. N.**, Jones, D. R., Mathur, A., Smyth, J. M., Sliwinski, M. J., McGrady, M. E., Lipton, R. B., Katz, M. J., & Engeland, C. G. (2022). Individuals with both higher recent negative affect and physical pain have higher levels of C-reactive protein. *Brain, Behav., & Immun.- Health*, 21, 100431. <https://doi.org/10.1016/j.bbih.2022.100431>
- Toglia, M. P., Schmuller, J., Surprenant, B. G., Hooper, K. C., **DeMeo, N. N.**, & Wallace, B. L. (2022). Novel approaches and cognitive neuroscience perspectives on false memory and deception. *Front. Psychol.*, 13, 721961. <https://doi.org/10.3389/fpsyg.2022.721961>
- Park, J.-H., Burgess, J. D., Farooqi, A. H., **DeMeo, N. N.**, Fiesel, F. C., Springer, W., ... & McLean, P. J. (2020). Alpha-synuclein-induced mitochondrial dysfunction is mediated via a sirtuin 3-dependent pathway. *Mol. Neurodegener.*, 15(1), 5. <https://doi.org/10.1186/s13024-019-0349-x>
- DeMeo, N. N.** (1st), Burgess, J. D. (1st), Blackburn, P. R., Gass, J. M., Richter, J., Atwal, H. K., van Gerpen, J. A., & Atwal, P. S. (2018). Co-occurrence of a novel PDGFRB variant and likely pathogenic variant in CASR in an individual with extensive intracranial calcifications and hypocalcaemia. *Clin. Case Rep.*, 6(1), 8–13. <https://doi.org/10.1002/ccr3.1265>

In Prep & Under Review Publications

- DeMeo, N. N.** (1st), McCabe, K.O. (1st), Baranski, E., Beck, E.D., Clark, D.A., Garrison, S.M., Soto, C.J., Syed, M., & Thalmayer, A.G. (In preparation). Whose personality traits? Diversity and inclusion in Big Five conceptualization and measurement.

DeMeo, N. N. (In preparation for Health Psychol. Rev.). Introversion's associations with mental illness and mental health: A scoping review. Pre-registration: <https://osf.io/8sqxt>

Gandhi, K. D., Schak, K., **DeMeo, N. N.**, & Tye, S. J. (Under review at *Ther Adv Psychopharmacol*). Inflammation, obesity, and depression: Interconnected disorders with treatment implications.

Presentations

Mogle, J. (presenter), **DeMeo, N. N.**, Almeida, D., Darling, A., & Greaney, J. (2024, June 3-6). Measurement bias in daily reports of memory lapses: Is reporting influenced by study design? Oral presentation by Mogle in L. Koenig (Chair), "Is Measurement Reactivity an Issue in Intensive Ambulatory Assessment Research? Effects, Mechanisms, and How to Move Forward." Society for Ambulatory Assessment 2024, Ann Arbor, MI, USA.

Arigo, D. (presenter), Baga, K., **DeMeo, N. N.**, & Mogle, J. A. (2024, June 3-6). Physical activity measurement reactivity in an at-risk group: Coordinated analysis across three studies. Oral presentation by Arigo in L. Koenig (Chair), "Is Measurement Reactivity an Issue in Intensive Ambulatory Assessment Research? Effects, Mechanisms, and How to Move Forward." Society for Ambulatory Assessment 2024, Ann Arbor, MI, USA.

Mogle, J. (presenter), **DeMeo, N. N.**, Almeida, D., Darling, A., & Greaney, J. (2024, May 23-26). Measurement bias in daily reports of memory lapses: Is reporting influenced by study design? Oral presentation in "Associations Between (Daily) Experiences and Cognition." American Psychological Society 2024 Convention, San Francisco, CA, USA.

Arigo, D., Baga, K. (presenter), **DeMeo, N. N.**, & Mogle, J. (2024, March 13-16). Physical activity measurement reactivity in an at-risk group: Coordinated analysis across two studies. Oral presentation by Baga in V.J. Silfee (Chair), "Live Research Spotlight 11: Physical Activity." Society for Behavioral Medicine 2024 Convention, Philadelphia, PA, USA.

Arigo, D., Bercovitz, I. (presenter), **DeMeo, N. N.**, Gular, S., & Travers, L. (2024, March 13-16). D2 – Pain variability over 10 years among midlife and older adults. Poster presentation by Bercovitz in "Poster Session D." Society for Behavioral Medicine 2024 Convention, Philadelphia, PA, USA.

DeMeo, N. N. (co-presenter), & McCabe, K.O. (co-presenter). (2022, February). Whose personality traits? Diversity and inclusion in big five conceptualization and measurement. Invited oral presentation in E.E. Nofle & O. Atherton (Chairs), "Diversity, Equity, and Inclusion Panel and Discussion." Invited presentation for the annual Dynamics in Personality Development pre-conference at the Society for Personality & Social Psychology conference.

Graham-Engeland, J.E. (presenter), Engeland, C. G., **DeMeo, N. N.**, Van Bogart, K., & Graham-Engeland, J.E. (2021, September). Negative mood in daily life as a predictor of inflammation: A stress story. Oral presentation in J.E. Graham-Engeland (Chair), "The interaction between cortisol and the immune system in health and disease." Invited plenary session for the annual meeting of the International Society of Psychoneuroendocrinology.

DeMeo, N. N. (presenter), Van Bogart, K., & Graham-Engeland, J.E. (2021, March). Mismatch between enacted and preferred introversion-related behaviors: Implications for well-being and associations with trait introversion. Oral presentation given at the Pennsylvania State Graduate Exhibition (virtual due to COVID-19 pandemic; recording and slides available upon request).

DeMeo, N. N. (presenter), Van Bogart, K., & Graham-Engeland, J.E. (2021, February). Discordance between enacted and preferred introversion-related behaviors: Implications for well-being and associations with trait introversion. Poster presentation given at the Society for Personality and Social Psychology Health Pre-Conference (virtual due to COVID-19 pandemic; poster available at <https://osf.io/b3fyc/>).

DeMeo, N. N. (presenter), Scott, S., Jones, D., Smyth, J., Sliwinski, M.J., Almeida, D., & Graham-Engeland, J.E. (2020, March*). Low extraversion is associated with fewer and less enjoyable daily uplifts, and certain hassles. Poster was to be presented at the American Psychosomatic Society annual meeting, Long Beach, CA. *Conference canceled due to COVID-19 pandemic; abstract now published in the July-August 2020 online issue of Psychosomatic Medicine (doi:10.1097/PSY.0000000000000835).

- Song, S. (presenter), Almeida, D. M., Majd, M., Engeland, C. G., **DeMeo, N. N.**, & Graham-Engeland, J. E. (2019, August). Depressive symptoms predict levels of inflammation 10 years later and the role of sleep quality: Findings from the Midlife in the United States (MIDUS) study. Poster presented at the Korean Psychological Association's Annual Meeting, Seoul, South Korea.
- Delenclos, M. (presenter), Burgess, J. D., Perisetla, P., Fagen, S., **DeMeo, N. N.**, & McLean, P. J. (2019, June). Honokiol, a natural compound to alleviate alpha-synucleinopathies? Poster presented at the World Parkinson Congress conference, Kyoto, Japan.
- Burgess, J. D. (presenter), Delenclos, M., Perisetla, P., Park, J.-H., **DeMeo, N. N.**, & McLean, P. J. (2018, September). Honokiol, a natural compound to alleviate alpha-synucleinopathies? Poster presented at the Southeastern Neurodegenerative Disease conference, Orlando, Florida, USA.
- Park, J.-H., Delenclos, M., Faruqi, A., **DeMeo, N. N.**, & McLean, P. J. (2017, November). Sirtuin3 regulates mitochondrial dynamics in α -synuclein-induced loss of mitochondrial function. Poster presented at the Society for Neuroscience conference, Washington, D.C., USA.
- Park, J.-H. (presenter), Delenclos, M., Faruqi, A., **DeMeo, N. N.**, & McLean, P. J. (2017, May). A role of sirtuin 3 in alpha-synuclein-induced mitochondrial dysfunction. Poster presented at the Mitochondrial Biogenesis and Dynamics in Health, Disease and Aging conference, West Palm Beach, Florida, USA.
- Toglia, M. P. (presenter), Schmuller, J., Korostenskaja, M., Castillo, E. M., **DeMeo, N. N.**, & Wallace, B. (2017, January). Lexical decision-primed false memories: Behavioral approaches and neurophysiological perspectives. Poster presented at the Society for Applied Research in Memory and Cognition conference XII, Sydney, Australia.
- Toglia, M. P. (co-presenter), Schmuller, J., Korostenskaja, M., **DeMeo, N. N. (co-presenter)**, & Castillo, E. M. (2016, July). Behavioral and neurophysiological perspectives on lexical decision-primed false memories. Poster presented at the International Conference on Memory 6, Budapest, Hungary.