# NICHOLAS C. JACOBSON, Ph.D.

## Work

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#### **ACADEMIC APPOINTMENTS**

8/19-present Assistant Professor, Departments of Biomedical Data Science and Psychiatry Center for Technology and Behavioral Health
Geisel School of Medicine at Dartmouth College
Faculty Member in Graduate Program in Quantitative Biomedical Sciences
Hanover, New Hampshire

7/19-8/19 **Postdoctoral Fellow,** Department of Psychiatry Massachusetts General Hospital Harvard Medical School Boston, Massachusetts

#### **ACADEMIC HISTORY**

7/18-6/19 *Clinical Fellow*, Department of Psychiatry Massachusetts General Hospital Harvard Medical School Boston, Massachusetts

## 8/15-8/19 **Doctor of Philosophy in Clinical Psychology**

The Pennsylvania State University

University Park, Pennsylvania

Dissertation: Meta-Analyses of the Distinct Neurological Activation and Bidirectional

Longitudinal Associations between Anxiety and Depression

Advisor: Michelle G. Newman, Ph.D.

- Winner of the College of the Liberal Arts Raymond Lombra Graduate Student Award for the Excellence in Research in the Social Sciences, Pennsylvania State University
- Winner Best Research Paper Award in Psychology, Pennsylvania State University
- Winner of Federation of the Association of Behavioral and Brain Sciences (FABBS): Dissertation Research Excellence Award
- Honorable Mention, Association for the Psychological Science Student Caucus Student Research Awards

## 8/11-8/15 *Master of Science in Psychology*

The Pennsylvania State University

University Park, Pennsylvania

Thesis: Anxious Moods as a Risk Factor for Depressed Moods: An Ecological Momentary Assessment of Those with Clinical Anxiety and Depression

Advisor: Michelle G. Newman, Ph.D.

• Honorable Mention, Anne Anastasi General Psychology Graduate Student Award

# 8/11-8/15 **Bachelor of Science in Psychology**

Truman State University

Kirksville, Missouri

Minors in Statistical Methods, English, and Justice Systems

Graduated summa cum laude in May 2011

Thesis: Effectiveness of Cognitive-Behavioral Therapy in Reducing Anxiety among those with Autism Spectrum Disorders: A Meta-Analysis

Advisor: Jeffrey R. Vittengl, Ph.D.

• Winner of the Regional Research Award from Psi Chi: International Honor Society

## **PUBLICATIONS**

\* Denotes current or former students <u>Underline</u> denotes first or last author

#### **Peer-Reviewed Journal Articles**

- 38. <u>Jacobson, N.C.</u>, Lekkas, D.\*, Huang, R.\*, & Thomas, N.\* Deep Learning Paired with Wearable Passive Sensing Data Predicts Deterioration in Anxiety Disorder Symptoms across 17-18 Years. *Journal of Affective Disorders*. https://doi.org/10.1016/j.jad.2020.12.086
- 37. Nemesure, M.D\*, Heinz, M. V.\*, Huang, R.\* & <u>Jacobson, N. C.</u> Predictive Modeling of Psychiatric Illness using Electronic Medical Records and a Novel Machine Learning Approach with Artificial Intelligence. *Scientific Reports*. <a href="https://doi.org/10.1038/s41598-021-81368-4">https://doi.org/10.1038/s41598-021-81368-4</a>
- 36. <u>Jacobson, N.C.</u> & Nemesure, M.D.\* (2020, In press). Using Artificial Intelligence to Predict Change in Depression and Anxiety Symptoms in a Digital Intervention: Evidence from A Transdiagnostic Randomized Controlled Trial. *Psychiatry Research*. https://doi.org/10.1016/j.psychres.2020.113618
- 35. Meyer, N., Joyce, D. W., Karr, C., Dijk, D.J., **Jacobson, N.C.** & MacCabe, J. (2020, In press). The Temporal Dynamics of Sleep Disturbance and Psychopathology in Psychosis: A Digital Sampling Study. *Psychological Medicine*.
- 34. <u>Jacobson, N.C.</u>, Yom-Tov, E., Lekkas, D.\*, Heinz, M.\*, Liu, L.\*, Barr, P.J. (2020, In press). Impact of Online Mental Health Screening Tools on Help-Seeking, Care Receipt, and Suicidal Ideation and Suicidal Intent: Evidence from Internet Search Behavior in a Large U.S. Cohort. *Journal of Psychiatric Research*. <a href="https://doi.org/10.1016/j.jpsychires.2020.11.010">https://doi.org/10.1016/j.jpsychires.2020.11.010</a>
- 33. Dosovitsky, G., Pineda, B., Chang, C., **Jacobson, N.C.** & Bunge, E.L. (2020, In press). Artificial Intelligence Chatbot for Depression: Descriptive Study of Usage. *JMIR Formative Research*, 4, e17065. <a href="https://doi.org/10.2196/17065">https://doi.org/10.2196/17065</a>
- 32. Newman, M. G., **Jacobson, N.C.**, Rackoff, G. N., Jones, M., & Taylor, C. B. (2020, In press). A randomized controlled trial of a smartphone-based application for the treatment of anxiety. *Psychotherapy Research*. https://doi.org/10.1080/10503307.2020.1790688
- 31. Sofis, M. J., Pike, C.K, **Jacobson, N.C.**, Liu, L.\*, Budney, A.J., Borodovsky, J.T. (2020, In press). Sifting Through the Weeds: Differential Relationships Between Cannabis Use Frequency Measures and Delay Discounting. *Addictive Behaviors*.
- 30. <u>Jacobson, N. C.</u> & Chung, Y.J.\* (2020, In press). Passive Sensing of Prediction of Moment-to-Moment Depressed Mood among Undergraduates with Clinical Levels of Depression Sample using Smartphones. *Sensors*, 20, 3572. <a href="http://dx.doi.org/10.3390/s20123572">http://dx.doi.org/10.3390/s20123572</a>

- 29. Nelson, B. W., Low, C., **Jacobson, N. C.**, Areán, P., Torous, J., & Allen, N.B.(2020). Guidelines for Wrist-Worn Consumer Wearables Assessment of Heart Rate in Biobehavioral Research. *npj Digital Medicine*, *3*, 90. <a href="https://doi.org/10.1038/s41746-020-0297-4">https://doi.org/10.1038/s41746-020-0297-4</a>
- 28. <u>Jacobson, N.C.</u>, Lekkas, D.\*, Price, G.P.\*, Heinz, M.V.\*, Song, M.\*, O'Malley, A.J. & Barr, P.J. (2020). Flattening the Mental Health Curve: COVID-19 Stay-at-Home Orders Are Associated With Alterations in Mental Health Search Behavior in the United States, *JMIR Mental Health*, 7, e19347. http://dx.doi.org/10.2196/19347
- 27. Lord, K.A.\*, **Jacobson, N. C.,** Suvak, M., & Newman, M. G. (2020). Social Criticism Moderates the Relationship Between Anxiety and Depression 10 Years Later. *Journal of Affective Disorders*, 1, 15-22. <a href="http://dx.doi.org/10.1016/j.jad.2020.05.030">http://dx.doi.org/10.1016/j.jad.2020.05.030</a>
- 26. <u>Jacobson, N. C.</u>, Summers B., & Wilhelm, S. (2020). Digital Biomarkers of Social Anxiety Symptom Severity: Digital Phenotyping using Passive Smartphone Sensors. *Journal of Medical Internet Research (JMIR)*, 22, e16875. http://dx.doi.org/10.2196/16875
- 25. <u>Jacobson, N.C.</u> Bentley, K. H., Walton, A., Wang, S.B., Fortgang, R.G., Millner, A.J. Coombs, G. C., Rodman, A.M., Coppersmith, D.D.L. (2020). Ethical Dilemmas Created by Mobile Health and Machine Learning within Research in Psychiatry. *Bulletin of the World Health Organization*, *98*, 270-276. <a href="http://dx.doi.org/10.2471/BLT.19.237107">http://dx.doi.org/10.2471/BLT.19.237107</a>
- 24. Wilhelm, S., Weingarden, H., Ladis, I. Braddick, V., Shin, J. & <u>Jacobson, N.C.</u> (2020). Cognitive Behavioral Therapy in the Digital Age: Presidential Address. *Behavior Therapy*, 1, 1-14. http://dx.doi.org/10.1016/j.beth.2019.08.001
- 23. **Jacobson, N.C.** & O'Cleirigh, C.M. (2019, in press). Objective Digital Phenotypes of Worry Severity, Pain Severity, and Pain Chronicity in Persons Living with HIV. *The British Journal of Psychiatry*. http://dx.doi.org/10.1192/bjp.2019.168
- 22. <u>Jacobson, N.C.</u>, Weingarden, H., & Wilhelm, S. (2019). Using Digital Phenotyping to Accurately Detect Depression Severity. *Journal of Nervous and Mental Disease*, 207, 893-896. http://dx.doi.org/10.1097/NMD.000000000001042
- 21. **Jacobson, N.C.**, Weingarden, H., & Wilhelm, S. (2019). Digital Biomarkers of Mood Disorders and Symptom Change. *Nature Partner Journal (npj): Digital Medicine*, 2, 1-2. <a href="http://dx.doi.org/10.1038/s41746-019-0078-0">http://dx.doi.org/10.1038/s41746-019-0078-0</a>
- 20. Newman, M. G., **Jacobson, N. C.,** Zainal, N. H., Shin, K. E., Szkodny, L. E., Sliwinski, M. J. (2019). The effects of worry in daily life: An ecological momentary assessment study supporting the tenets of the Contrast Avoidance Model. *Clinical Psychological Science*, 7, 794-810. <a href="http://dx.doi.org/10.1177/2167702619827019">http://dx.doi.org/10.1177/2167702619827019</a>
- 19. **Jacobson, N. C.,** Chow, S. M., & Newman, M.G. (2019). The Differential Time-Varying Effect Model (DTVEM): A tool for diagnosing optimal measurement and modeling intervals in intensive longitudinal data. *Behavior Research Methods*, *51*, 295-315. <a href="http://dx.doi.org/10.3758/s13428-018-1101-0">http://dx.doi.org/10.3758/s13428-018-1101-0</a>
- 18. <u>Jacobson, N. C.</u> & Roche, M. J. (2018). Current evolutionary adaptiveness of anxiety: Extreme phenotypes of anxiety predict increased fertility across multiple generations. *Journal of Psychiatric Research*, *106*, 82-90. http://dx.doi.org/10.1016/j.jpsychires.2018.10.002
- 17. Roche, M. J, <u>Jacobson</u>, N. C., & Phillips. J. (2018). Expanding the validity of the Level of Personality Functioning Scale Observer-Report and Self-Report versions across psychodynamic and interpersonal paradigms. *Journal of Personality Assessment*, 100, 571-580. http://dx.doi.org/10.1080/00223891.2018.1475394
- 16. Ji, L., Chow, S. M., Schermerhorn, A. C., **Jacobson, N. C**. & Cummings, M. (2018). Handling missing data in the modeling of intensive longitudinal data. *Structural Equation Modeling*, 25, 715-736. <a href="http://dx.doi.org/10.1080/10705511.2017.1417046">http://dx.doi.org/10.1080/10705511.2017.1417046</a>

- 15. Roche, M.J. & **Jacobson, N.C.** (2018). Elections have consequences for student mental health: An accidental daily diary study. *Psychological Reports*. *122*, 451–464. http://dx.doi.org/10.1177/0033294118767365
- 14. Newman, M.G., LaFreniere, L.S., & <u>Jacobson, N.C.</u> (2018). Relaxation-induced anxiety: Effects of peak and trajectories of change on treatment outcome for generalized anxiety disorder. *Psychotherapy Research*, 68, 616-629. http://dx.doi.org/10.1080/10503307.2016.1253891
- 13. <u>Jacobson, N. C.</u> & Newman. M. G. (2017). Anxiety and depression as bidirectional risk factors for one another: A meta-analysis of longitudinal studies. *Psychological Bulletin*, 143, 1155-1200. <a href="http://dx.doi.org/10.1037/bul0000111">http://dx.doi.org/10.1037/bul0000111</a> (Winner of the College of the Liberal Arts Raymond Lombra Graduate Student Award for the Excellence in Research in the Social Sciences, Pennsylvania State University; Winner Best Research Paper Award in Psychology, Pennsylvania State University).
- 12. Frank, B., **Jacobson, N. C.,** Hurley, L. & McKay, D (2017). A theoretical and empirical modeling of anxiety integrated with RDoC and temporal dynamics. *Journal of Anxiety Disorders*, 51, 39-46. http://dx.doi.org/10.1016/j.janxdis.2017.09.002
- 11. <u>Jacobson, N. C.</u>, Lord, K. A.\*, & Newman, M. G. (2017). Perceived emotional social support in bereaved spouses mediates the relationship between anxiety and depression. *Journal of Affective Disorders*, 211, 83-91. <a href="http://dx.doi.org/10.1016/j.jad.2017.01.011">http://dx.doi.org/10.1016/j.jad.2017.01.011</a>
- 10. Roche, M. J., **Jacobson, N. C.**, & Roche, C. A. (2017). Teaching strategies for personality assessment at the undergraduate level. *Journal of Personality Assessment*, 99, 117-125. <a href="http://dx.doi.org/10.1080/00223891.2016.1147450">http://dx.doi.org/10.1080/00223891.2016.1147450</a>
- 9. <u>Jacobson, N. C.</u> (2016). Current evolutionary adaptiveness of psychiatric disorders: Fertility rates, parent—child relationship quality, and psychiatric disorders across the lifespan. *Journal of Abnormal Psychology*, *125*, 824-839. http://dx.doi.org/10.1037/abn0000185
- 8. Newman, M. G., **Jacobson, N. C.,** Erickson, T. M., & Fisher, A. J. (2016). Interpersonal problems predict differential response to cognitive versus behavioral treatment in a randomized controlled trial. *Behavior Therapy*, 48, 56-68. <a href="http://dx.doi.org/10.1016/j.beth.2016.05.005">http://dx.doi.org/10.1016/j.beth.2016.05.005</a>
- 7. Roche, M. J., **Jacobson, N. C.,** & Pincus, A. L. (2016). Using repeated daily assessments to uncover oscillating patterns and temporally-dynamic triggers in structures of psychopathology: Applications to the DSM–5 alternative model of personality disorders. *Journal of Abnormal Psychology*, *125*, 1090-1102. http://dx.doi.org/10.1037/abn0000177
- 6. <u>Jacobson, N. C.</u>, Newman, M. G., & Goldfried, M. R. (2016). Clinical feedback about empirically supported treatments for obsessive-compulsive disorder. *Behavior Therapy*, 47, 75-90. <a href="http://dx.doi.org/10.1016/j.beth.2015.09.003">http://dx.doi.org/10.1016/j.beth.2015.09.003</a>
- 5. <u>Jacobson, N. C.</u> & Newman, M.G. (2016). Perceptions of close and group relationships mediate the relationship between anxiety and depression over a decade later. *Depression and Anxiety*, 33, 66-74. <a href="http://dx.doi.org/10.1002/da.22402">http://dx.doi.org/10.1002/da.22402</a>
- Newman, M. G., Castonguay, L.G., Jacobson, N.C. & Moore, G. (2015). Adult attachment as a moderator of treatment outcome for GAD: Comparison between CBT plus supportive listening and CBT plus interpersonal and emotional processing therapy. *Journal of Consulting and Clinical Psychology*, 83, 915-925. <a href="http://dx.doi.org/10.1037/a0039359">http://dx.doi.org/10.1037/a0039359</a>
- 3. <u>Jacobson, N. C.</u>, & Newman, M. G. (2014). Avoidance mediates the relationship between anxiety and depression over a decade later. *Journal of Anxiety Disorders*, 28, 437-445. http://dx.doi.org/10.1016/j.janxdis.2014.03.007
- 2. <u>Jacobson, N. C.</u>, Kramer, S. L., Tharp, A. G., Harmon, K. A., Cejas, G. P., & Costa, S. C. (2013). Deficits of encoding in hypnosis: A result of altered state of awareness.

- *American Journal of Clinical Hypnosis*, *55*, 360-369. http://dx.doi.org/10.1080/00029157.2012.696286
- Jacobson, N. C. Kramer, S., Tharp, A., Costa, S., & Hawley, P. (2011). The effects of encoding under hypnosis and post-hypnotic suggestion on academic performance. American Journal of Clinical Hypnosis, 53, 247-254.
   <a href="http://dx.doi.org/10.1080/00029157.2011.10404354">http://dx.doi.org/10.1080/00029157.2011.10404354</a> (Winner: Clark L. Hull Award for Scientific Excellence in Writing on Experimental Hypnosis from the American Journal of Clinical Hypnosis).

## **Book Chapters**

- 2. Newman, M. G., **Jacobson, N. C.**, & Castonguay, L. (2014). Interpersonal and emotion-focused processing psychotherapy for generalized anxiety disorder. In P. M. Emmelkamp & T. Ehring (Eds.), *International Handbook of Anxiety Disorders: Theory, Research and Practice, Volume II*: Wiley Blackwell.
- 1. Szkodny, L. E., **Jacobson, N. C.,** & Newman, M. G. (2014). Generalized anxiety disorder. In G. O. Gabbard (Ed.), *Gabbard's Treatments of Psychiatric Disorders*, *5th Edition*: American Psychiatric Publishing.

# **Statistical Software**

1. **Jacobson, N. C.** & Chow, S. M. (2020). The Differential Time-Varying Effect Model (DTVEM): A tool for diagnosing optimal measurement and modeling intervals in intensive longitudinal data. R package version 1.010. Available at: http://www.nicholasjacobson.com/project/dtvem/

# **Manuscripts in Review**

- 22. <u>Jacobson, N. C.</u>, Evey, K.J., Wright, A.G.C. & Newman, M.G. Integration of Discrete and Global Structures of Affect Across Three Large Samples: Specific Emotions Within-Persons and Global Affect Between-Persons. *Revise and Resubmit, Emotion*. doi: https://doi.org/10.31234/osf.io/gb5up
- 21. Barr, P.J., Ryan, J, & <u>Jacobson, N.C.</u> Precision Assessment of COVID-19 Phenotypes Using Large-Scale Clinic Visit Audio Recordings. *Revise and Resubmit, Journal of Medical Internet Research (JMIR)*.
- 20. <u>Jacobson, N.C.</u>, Chen, W.\*, Huang, R.\* Standalone Apps for Anxiety and Depression Show Promising Early Efficacy: Synthesis of Meta-Analytic Results. *Revise and Resubmit, Meta-Psychology*. doi: <a href="https://doi.org/10.31234/osf.io/v48w9">https://doi.org/10.31234/osf.io/v48w9</a>
- 19. <u>Jacobson, N.C.</u>, Abreu, V., & Limb, A.N. Using Wearables to Predict Clinical Anxiety: Digital Biomarkers of Sleep are able to Accurately Predict Anxiety Symptom Severity. *Revise and Resubmit, Frontiers in Psychiatry*.
- 18. Shin, K., Newman, M.G., & <u>Jacobson, N.C.</u> Emotion Network Density as a Potential Clinical Marker: Comparison of Ecological Momentary Assessment and Daily Diary. *Revise and Resubmit, British Journal of Clinical Psychology*.
- 17. Lekkas, D.\* & <u>Jacobson, N. C.</u> Analyzing the Effect of Compliance on Long-Term Stress Outcomes in Digital Mindfulness Interventions Using Machine Learning. *Revise and Resubmit, Mindfulness*.
- 16. <u>Jacobson, N.C.</u> & Feng, B.Y.\* Digital Phenotyping of Generalized Anxiety Disorder: Using Artificial Intelligence to Accurately Predict Symptom Severity Using Wearable Sensors in Daily Life. *Revise and Resubmit, Translational Psychiatry*.
- 15. <u>Jacobson, N. C.</u> & Wilhelm, S. Large Open Trial of a Personalized Smartphone Intervention: Using Digital Phenotyping to Deliver Personalized Feedback on Maintenance Factors Reduce Anxiety and Depressive Affect in Daily Life.

- 14. <u>Jacobson, N.C.</u> & Newman, M.G. Anxious Moods as a Risk Factor for Depressed Moods: An Ecological Momentary Assessment of Those with Clinical Anxiety and Depression.
- 13. <u>Jacobson, N.C.</u> & Erickson, T. Low Emotion Differentiation as a Transdiagnostic Risk Factor: Quantitative and Qualitative Idiographic and Nomothetic Measurements in Predicting Anxiety, Depression, and Personality Pathology.
- 12. Newman, M. G., Kanuri, N., Rackoff, G., **Jacobson, N.C.,** Jones, M., Thomas, N., Abbott, J.A.M., Nadkarni, A., Velleman, R., & Taylor, C. B. Efficacy of a Mobile Intervention for Generalized Anxiety in Indian University Students.
- 11. Zanail, H. & <u>Jacobson, N.C.</u> Reliability (or Lack Thereof) of Smartphone-Delivered Visual Dot Probe Attention Bias Indices. doi: https://doi.org/10.31219/osf.io/gj4eq
- 10. Fitzsimmons-Craft, E.E., Taylor, C.B., Newman, M.G., Zainal, N.H., Rojas-Ashe, E.E., Lipson, S.K, Firebaugh, M.L., Ceglarek, P, Topooco, N., **Jacobson, N.C.**, Graham, A.K., Kim, H.M., Eisenberg, D. & Wilfley, D.E. Harnessing Mobile Technology to Reduce Mental Health Disorders in College Populations: A Randomized Controlled Trial Study Protocol
- 9. Sofis, M.J., Lemley, S.M., **Jacobson, N.C**., & Budney, A.J. Initial Evaluation of Domain-Specific Episodic Future Thinking on Delay Discounting and Cannabis Use.
- 8. Wu, K.\*, McFadden, J.\* & <u>Jacobson, N.C.</u> Determining Timing Effects of Microrandomized Trials Using Intensive Longitudinal Data and the Differential Time-Varying Effect Model. doi: <a href="https://doi.org/10.31234/osf.io/bt93s">https://doi.org/10.31234/osf.io/bt93s</a>
- 7. Hart, A., Rais, D., Prestele, E. & <u>Jacobson, N.C.</u> Using Passive Smartphone Sensor Data and Personalized Machine Learning Models to Predict Moment-to-Moment Fatigue, Mood, Arousal, and Rumination Collected via Ecological Momentary Assessments.
- 6. Lekkas, D.\*, Price, G.\* & <u>Jacobson, N.C.</u> Using Smartphone App Use and Lagged-Ensemble Machine Learning for the Prediction of Work Fatigue and Boredom
- 5. Lekkas, D.\*, Klein, R. J.\*, & **Jacobson, N.C.** Predicting Acute Suicidal Ideation on Instagram Using Ensemble Machine Learning Models.
- 4. Chan, W.W., Fitzsimmons-E.E., Smith, A.C., Firebaugh, M., Fowler, L.A., DePietro, B.; Topooco, N., Taylor, C.B., & <u>Jacobson, N.C.</u> Challenges in Designing a Mental Health Prevention Chatbot: Lessons Learned from the Field
- 3. Wang, Y.\*, Abreu, V.\*, Faddenn, J.\*, Bhattacharya, S.\*& <u>Jacobson, N.C.</u> Anxiety Disorders Strongly Predict an Increased Risk of Developing Eating Disorders: An Investigation of Bidirectional Sequential Comorbidity within a Large Nationally Representative Sample of Adults in the United States
- 2. Klein, R.J.\*, Gyorda, J.\*, Lekkas, D.,\* & <u>Jacobson, N.C.</u> Dysregulated Emotion and Substance Experimentation in Childhood: A Large Nationally Representative Cohort Study.
- 1. Lekkas, D.\* & <u>Jacobson, N.C.</u> Using Artificial Intelligence and Longitudinal Location Data to Differentiate Persons who Develop Posttraumatic Stress Disorder Following Childhood Trauma

## **Manuscripts in Preparation**

- 2. Petersen, C.L.\* & <u>Jacobson, N.C.</u> A large open trial of an integrated mobile health platform targeting behavioral health in persons with chronic health conditions using wearable devices, smartphones, and contact with healthcare providers
- 1. Coppersmith, D.D.L., Kleiman, E.M., Dempsey, W., Wang, S.B., **Jacobson, N.C.**, Millner, A.J., Bentley, K.H., Fortgang, R.G., Xinrui, R., Mair, P., Huffman, J.C., & Nock, M.K. Real-Time Multimodal Assessment and The Temporal Dynamics of Suicidal Thoughts.

## RESEARCH SUPPORT

Funded Principal Investigator: Personalized Deep Learning Models of Rapid

Changes in Major Depressive Disorder Symptoms using Passive Sensor Data

from Smartphones and Wearable Devices

R01 MH123482

Total Costs \$2,806,489

Funded Co-Investigator: National Institute of Drug Abuse (NIDA) Northeast Node of

the National Drug Abuse Clinical Trials Network (3 UG1 DA040309 06S1)

Total Costs \$4,020,602

Funded Principal Investigator: Frank and Myra Weiser Scholar in the

Neurosciences: Geisel School of Medicine, Dartmouth College

Total Costs \$25,000

Funded Principal Investigator: National Institute of Drug Abuse (NIDA) P30 Pilot

(P30DA029926)

Digital Intervention to Treat Anxiety and Depression among Persons Receiving

Treatment for Opioid Use Disorder

Total Cost \$13,170

Funded Co-Investigator: National Institute of Drug Abuse (NIDA) P30 Pilot

(P30DA029926)

Iterative Effects of Episodic Future Thinking on Delay Discounting and Cannabis

Use

Total Cost \$15,700

Funded Co-Investigator: National Institute of Drug Abuse (NIDA) P30 Pilot

(P30DA029926)

Evaluation of an Ecological Momentary Intervention of Implementation

Intentions Delivered by Text Message to Reduce Cigarette Smoking

Total Cost \$17,200

Funded Startup Funds and Salary Support, Dartmouth College

Funded Consultant: National Institute of Mental Health (NIMH) R01

(R01MH115128)

Harnessing Mobile Technology to Reduce Mental Health Disorders in College

**Populations** 

Total Cost \$3,832,085

Funded Consultant: National Institute of Mental Health (NIMH) R01

(R01MH100455)

Using Technology to Improve Eating Disorders Treatment

Total Cost \$760.445

2019 Postdoctoral Fellow: Lee Baer fund for OCD Research and Teaching

Advance the knowledge and treatment of Obsessive Compulsive Disorder by

understanding the causes, neurobiological mechanisms, and clinical

manifestations

2010-2011 Principal Investigator: Psi Chi Undergraduate Research Grant

Strengths and Weaknesses in Test-Taking: In what ways do Anxiety and

*Impulsivity Impact Negative Test Performance?* 

Total Costs \$850

2010 Principal Investigator: TruScholars Research Grant

Strengths and Weaknesses in Test-Taking: In what ways do Anxiety and

*Impulsivity Impair Test Performance?* 

Total Costs \$4,500

## RESEARCH AWARDS

- Fall 2019 International Travel Award, Society for Ambulatory Assessment
- Fall 2018 Alies Muskin Career Development Leadership Program Award from the Anxiety and Depression Association of America (ADAA)
- Spring 2018 Federation of Associations in Behavioral and Brain Sciences (FABBS) Doctoral Dissertation Research Excellence Award to acknowledge and honor graduate student scientists who have conducted doctoral dissertation research of superior scientific quality and broader societal impact.
- Spring 2018 College of the Liberal Arts Raymond Lombra Graduate Student Award for the Excellence in Research in the Social Sciences, Pennsylvania State University
- Spring 2018 Best Research Paper Award in Psychology, Pennsylvania State University
- Spring 2014 Marty Murphy Award for Excellence in Psychology, Based on Excellence in Research and Exceptional Collegiality, Pennsylvania State University
- Spring 2014 Honorable Mention, Society for Personality Assessment for Presenting "Using an ecological momentary assessment approach to examine the relationship between neuroticism and conscientiousness and variability in constructive and unconstructive thought processes"
- Spring 2013 Honorable Mention, Association for the Psychological Science Student Caucus Student Research Awards for Presenting "The Temporal Relationship Between Anxiety and Depression: A Meta-Analysis"
- Spring 2012 Honorable Mention, Anne Anastasi General Psychology Graduate Student Award by the American Psychological Association's First Division
- Fall 2011 Best Student Poster Award from Anxiety Special Interest Group for presenting "Evaluating Quantity and Quality of Worrisome and Intrusive Thoughts and their Triggers: An Ecological Momentary Assessment Approach"
- Spring 2011 Clark L. Hull Award for Scientific Excellence in Writing on Experimental Hypnosis from the American Journal of Clinical Hypnosis
- Spring 2011 Regional Research Award from Psi Chi for presenting "The Effectiveness of Cognitive-Behavioral Therapy in Reducing Anxiety among those with Autism Spectrum Disorders: A Meta-Analysis"
- Spring 2011 Best Oral Presentation from Psi Chi Annual Research Symposium for presenting "Learning in Hypnosis: Applications to Academic Performance"

#### **Honors**

- Fall 2011 *Pennsylvania State University Graduate Fellowship* (93 awarded of the approximately 1,700 graduate students)
- Spring 2011 President's Certificate of Recognition for Outstanding Academic Achievement Awarded by Truman State University
- Fall 2009 APA Student Affiliate Membership Awarded by Truman State University
- Fall 2009 *President's List* (4.0/4.0 GPA for Fall 2008, Spring 2009, Fall 2009, Fall 2010, and Spring 2011 semesters at *Truman State University*)

#### SCIENTIFIC PRESENTATIONS

## **Invited Presentations**

2. **Jacobson, N.C.** (2020, November). Oral presentation presented at Clinical Research Methods and Statistics SIG, Association for Behavioral and Cognitive Therapies (ABCT) in November 2020 Philadelphia, PA (delivered virtually due to COVID-19).

1. **Jacobson, N.C.** (2020, October). Using passive sensing to predict psychopathology across multiple time scales. Oral symposium presented at Technology in Psychiatry Summit in October 2020 Boston, MA (delivered virtually due to COVID-19).

#### **Conference Presentations**

- 72. Nemesure, M.D., Heinz, M.V., Huang, R., & **Jacobson, N.C.** (2020, November). Predictive Modeling of Psychiatric Illness using Electronic Medical Records and a Novel Machine Learning Approach with Artificial Intelligence. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2020 Philadelphia, PA.
- 71. **Jacobson, N.C.** (2020, November). Experiences in Conducting a Large Global Intervention Trial: Recommendations and Lessons Learned. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2020 Philadelphia, PA.
- 70. Nemsure, M.D\*, Heinz, M. V.\*, Huang, R.\* & **Jacobson, N. C.** (2020, April). *Predictive Modeling of Psychiatric Illness in College Population Using Novel Machine Learning Approach with Artificial Intelligence*. Poster presented at American Psychiatric Association in April 2020 Philadelphia, PA. Note: Conference Cancelled due to COVID-19.
- 69. **Jacobson, N.C**. (2020, March). Passive Sensing of Prediction of Moment-to-Moment Depressed Mood among Persons with Clinical Levels of Depression Sample using Smartphones. Oral symposium presented at Anxiety and Depression Association of America (ADAA) in March 2020 San Antonio, TX. Chairs: **Jacobson, N.C.** & Summers, B. Note: Conference Cancelled due to COVID-19.
- 68. **Jacobson, N.C**. (2020, March). *Passively Collected Digital Biomarkers of Worry Severity among Persons Living with HIV*. Oral symposium presented at Anxiety and Depression Association of America (ADAA) in March 2020 San Antonio, TX. Note: Conference Cancelled due to COVID-19.
- 67. **Jacobson, N.C**. (2020, March). *Using Artificial Intelligence to Predict the Level of Personality Functioning based on Life History Narratives*. Oral symposium presented at Society of Personality Assessment in March 2020 San Diego, CA. Note: Conference Cancelled due to COVID-19.
- 66. **Jacobson, N.C**. (2020, March). *Using Machine Learning and Personality Traits to Understand the Predictability of Day-to-Day Affective Dynamics*. Oral symposium presented at Society of Personality Assessment in March 2020 San Diego, CA. Note: Conference Cancelled due to COVID-19.
- 65. **Jacobson**, N.C. (2020, January). *It's Time to Ask When: Investigating the Timing of Dynamics in Intensive Longitudinal Data*. Oral symposium presented at Society of Ambulatory Assessment (SAA) in January 2020 Melbourne, Australia.
- 64. **Jacobson, N.C.** (2020, January). *Compliance Thresholds in Intensive Longitudinal Data:* Worse than Listwise Deletion: Call for Action. Oral symposium presented at Society of Ambulatory Assessment (SAA) in January 2020 Melbourne, Australia.
- 63. **Jacobson, N.C**. (2019, November). Digital Phenotyping in a Large Sample across the Globe: Passive Digital Biomarkers of Anxiety Depend on the Global Geospatial Context. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2019 Atlanta GA. Chairs: **Jacobson, N.C.** & Wilhelm, S.
- 62. **Jacobson, N.C**. (2019, November). *Large Global Open Trial of a Personalized Smartphone Intervention: Personalized Feedback Leads to Large Reductions in Anxiety and Depression in a Transdiagnostic Sample*. Oral symposium presented at Association

- for Behavioral and Cognitive Therapies (ABCT) in November 2019 Atlanta GA. Chairs: Frumkin, M. & Rodebaugh, T.
- 61. **Jacobson, N.C**. (2019, November). *Objective digital phenotypes of worry severity, pain severity and pain chronicity in persons living with HIV*. Poster presented at Anxiety Disorders Special Interest Group: Association for Behavioral and Cognitive Therapies (ABCT) in November 2019 Atlanta GA.
- 60. **Jacobson, N. C.,** Weingarden, H., & Wilhelm, S. (2019, March). *Digital Biomarkers of Mood Disorders and Symptom Change*. Poster presented at Anxiety and Depression Association of America (ADAA) in March 2019 Chicago, IL.
- 59. **Jacobson, N. C**. & Newman, M.G. (2018, November). *Bayesian Generalized Additive Models: Investigating the Non-Linear Relationships among Clinical Anxiety, Clinical Depression, and Momentary Affect in Daily Life*. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2018 Washington, DC. Chair: De Nadai, A.
- 58. **Jacobson, N. C**. & Newman, M.G. (2018, November). *Replicability of Ideographic Models of Psychopathology: Applications to Ideographic Dynamic Factor Models of Affect in a Transdiagnostic Sample*. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2018 Washington, DC. Chairs: De Nadai, A. & Henderson, C.
- 57. **Jacobson, N. C**. & Newman, M.G. (2018, April). *Depression Variability Predicts Later Anxiety for Those with Depressive Disorders*. Oral symposium presented at Anxiety and Depression Association of America (ADAA) in April 2018 Washington, DC. Chairs: Shin, K.E. & Newman, M.G.
- 56. Roche, M.J., Phillips, J., & **Jacobson, N.C.** (March, 2018). Examining the validity of the Level of Personality Functioning Scale across self and observer reports. Oral symposium presented at Society for Personality Assessment Annual Convention, in March 2018 Washington, D.C. Chair: Roche, M.J.
- 55. **Jacobson, N.C.** & Newman, M.G. (2017, November). *Cross-sectional and Longitudinal Associations among Facets of Neuroticism with Anxiety and Depressive Disorders*. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2017 San Diego, CA. Chair: Khazanov G. K.
- 54. **Jacobson, N.C.** & Newman, M.G. (2017, November). *Non-Linear Timing Effects on Change: Using the Differential Time-Varying Effect Model to Examine Timing Effects of Interventions*. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2017 San Diego, CA. Chair: De Nadai, A. S.
- 53. **Jacobson, N.C.** & Newman, M.G. (2017, November). *Effect of Depression Variability on Later Anxiety for Those with Depressive Disorders*. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2017 San Diego, CA. Chairs: Shin, K.E. & Newman, M. G.
- 52. Newman, M. G., LaFreniere, L. S. & **Jacobson**, N. C. (2017, April). *Peak and trajectories of change in relaxation induced anxiety as predictors of outcome from CBT for GAD*. Oral symposium presented to the 37th Annual Meeting of the Anxiety and Depression Association of America, San Francisco, CA. Chairs: LaFreniere, L. S. & Newman, M. G.
- 51. Newman, M. G., **Jacobson, N. C.** Szkodny, L. E. & Sliwinski, M. J. (2017, April). Contrast avoidance in daily life. In M. G. Newman (chair), The contrast avoidance model: Reconceptualizing worry in GAD and as a transdiagnostic process. Oral symposium presented to the 37th Annual Meeting of the Anxiety and Depression Association of America, San Francisco, CA. Chair: Newman, M. G.

- 55. **Jacobson, N. C.** & Newman, M.G. (2016, October). *Anxiety and Depression as Bidirectional Risk Factors for One Another: A Meta-Analysis of Longitudinal Studies*. Oral symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in October 2016 New York, NY. Chairs: & **Jacobson, N.C.** & Newman, M. G.
- 49. Newman, M. G., **Jacobson, N. C.** and Szkodny, L. E. & Sliwinski, M. J. (2016, October). *Contrast avoidance in daily life. The contrast avoidance model: Reconceptualizing worry in GAD and as a transdiagnostic process*. Oral symposium presented to the 50th Annual Meeting of the Association for Behavioral and Cognitive Therapies, New York, N. Y. Chair: Erickson, T. M.
- 48. Newman, M. G., & LaFreniere, L. S. & **Jacobson, N. C.** (2016, June). *Peak and trajectories of change in relaxation induced anxiety as predictors of outcome from CBT for GAD*. Oral symposium presented at the 46th Annual Meeting of the Society for Psychotherapy Research, Jerusalem, Israel. Chairs: Solomonov, N. and McCarthy, K. S.
- 47. **Jacobson, N. C.** & Newman, M.G. (2016, April). *Anxiety Disorders as a Longitudinal Risk Factor for Depressive Disorders: A Meta-Analysis*. Oral symposium presented at Anxiety and Depression Association of America (ADAA) in April 2016 Philadelphia, PA. Chairs: **Jacobson, N.C.** & Newman, M. G.
- 46. Lord, K., **Jacobson, N. C.,** & Newman M. G. (2016, April). Social support in bereaved spouses mediates the relationship between anxiety and depression. Poster presented at the 36th Annual Convention of the Anxiety and Depression Association of America, Philadelphia, PA.
- 45. Lord, K. **Jacobson, N. C.,** & Newman M. G. (2016, April). Social criticism moderates the relationship between anxiety disorders and depressive disorders 10 years later. Poster presented at the 36th Annual Convention of the Anxiety and Depression Association of America, Philadelphia, PA.
- 44. **Jacobson, N. C.,** Newman, M.G., & Goldfried, M. (2015, November). *Effectiveness, Strengths, and Limitations of Empirically Supported Treatments for Obsessive-Compulsive Disorder based on Feedback from Clinicians*. Oral symposium presented at Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL. Chairs: Szkodny, L. & **Jacobson, N.C.**
- 43. **Jacobson, N. C.,** Chow, S, & Newman, M.G. (2015, November). *Analyzing All Nonlinear Dynamics in Intensive Longitudinal Data*. Oral symposium presented at Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL. Chairs: **Jacobson, N.C.** & Rappaport, L.
- 42. **Jacobson, N. C.,** Rappaport, L., Atkins, D., & Rogge, R. (2015, November). *Causal Inference in Clinical Research: Direct Effects and Mediation*. Panel discussion at Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL. Chairs: Rappaport, L.
- 41. Newman, M.G., Castonguay, L.G., **Jacobson, N. C.,** & Moore, G. (2015, November). Adult Attachment as a Moderator of CBT Versus CBT Plus Interpersonal and Emotional Processing Therapy for GAD. Oral symposium presented at Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL. Chairs: Antony, M.
- 40. Reeves, J., Baldwin, S., Moore, M. Rappaport, L. & **Jacobson, N. C.** (2015, November). *Extensions of Structural Equation Modeling to Clinical Research*. Symposium presented at Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL. Chairs: Rappaport, L. Discussant: **Jacobson, N. C.**
- 39. LaFreniere, L.S., Newman, M.G., & **Jacobson, N.C.** (2015, November). *Relaxation-induced anxiety: Effects on treatment outcome for generalized anxiety disorder.* Poster presented at Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL.

- 38. Roche, M., **Jacobson, N. C.** & Pincus, A. (2015, August) *Examining the Static and Dynamic features of personality dysfunction in the Alternative Model of DSM-5*. Oral symposium submitted to the American Psychological Association in 2015 at Toronto, Canada.
- 37. **Jacobson, N. C.,** Newman, M. G., & Goldfried, M. R. (2015, June). *Clinical Feedback about Empirically Supported Treatments for Obsessive-Compulsive Disorder*. Oral presentation at the Society for Psychotherapy Research in June 2015 at Philadelphia, PA.
- 36. Newman, M. G., Castonguay, L.G., & **Jacobson**, **N. C.** (2015, June). Attachment as a moderator of CBT for GAD with and without interpersonal and emotional processing techniques. Oral presentation at the Society for Psychotherapy Research in June 2015 at Philadelphia, PA.
- 35. **Jacobson, N. C.,** Chow, S., & Newman, M. G., (2015, June). *The Differential Time-Varying Effect Model (DTVEM): Identifying Optimal Time Lags in Intensive Longitudinal Data*. Paper presented at the biennial conference of the Society for Ambulatory Assessment, University Park, PA.
- 34. Ji, L., Chow, S-M., **Jacobson, N.C.,** Schermerhorn, A.C. & Cummings, E.M. (2015, June). *Handling missing data in the modeling of ambulatory assessment data.* Paper presented at the biennial conference of the Society for Ambulatory Assessment, University Park, PA.
- 33. Mortazavi, A, Soto, J. & **Jacobson, N.C.** (2015, February). Positive emotion, drinking motivation, and problematic drinking: A case for cultural variations. Poster presentation at the Society for Personality and Social Psychology in February 2015 at Long Beach, NJ.
- 32. **Jacobson, N. C.,** & Newman, M. G. (2014, November). *Analyzing All Longitudinal Interdependencies in Intensive Longitudinal Data Simultaneously with Person-Specific Models*. Oral symposium accepted to Association of Behavioral and Cognitive Therapies in November 2014 at Philadelphia, PA. Chairs: **Jacobson, N.C.** & Rappaport, L.
- 31. **Jacobson, N. C.,** Laurenceau, J.P, Atkins, D., & Wright; A. G. (2014, November). *Intensive Data: Bringing Intensive Longitudinal Data and Ambulatory Assessment to Clinical Research and Practices.* Panel discussion at Association of Behavioral and Cognitive Therapies in November 2014 at Philadelphia, PA. Chairs: Rappaport, L.
- 30. **Jacobson, N. C.,** Newman, M. G., & Goldfried, M. R. (2014, November). *Clinical Experiences in Conducting Empirically Supported Treatments: Obsessive-Compulsive Disorder*. Poster presentation at the Association of Behavioral and Cognitive Therapies in November 2014 at Philadelphia, PA.
- 29. Szkodny, L. E., **Jacobson, N. C.**, & Newman, M. G. (2014, November). *Relationship Between PTSD Symptomatology and Variability in Daily Thought Processes Using an Ecological Momentary Assessment Approach*. Poster presentation at the Association of Behavioral and Cognitive Therapies in November 2014 at Philadelphia, PA.
- 28. **Jacobson, N. C.** & Newman, M. G. (2014, March). *Anxiety Predicting Depression across Minutes, Hours, and Days: An Ecological Momentary Assessment.* Oral symposium accepted to Anxiety and Depression Association of at Chicago, IL. Chairs: **Jacobson, N.C.** & Newman, M. G.
- 27. Szkodny, L. E., **Jacobson, N. C.**, & Newman, M. G. (2014, March). Using an ecological momentary assessment approach to examine the relationship between neuroticism and conscientiousness and variability in constructive and unconstructive thought processes. Poster presented at the Annual Meeting of the Society for Personality Assessment, Arlington, VA. **Honorable Mention, for the Best Student Poster Award.**
- 26. Newman, M.G, Castonguay, L., **Jacobson, N.C.** & Fisher, A.J. (2013, November). *Attachment as a Moderator of CBT for GAD With and Without Interpersonal and*

- *Emotional Processing Techniques*. Oral presentation at the Association of Behavioral and Cognitive Therapies in November 2013 at Nashville, TN.
- 25. Newman, M. G., Yen, J., Mitra, P., Murphy, W., **Jacobson, N. C.**, and Kim, H. (2013, November). *Supervised Machine Learning Classification of Journals Entries About Emotional Personal Experiences*. Paper presented at The American Medical Informatics Association, Washington, D. C.
- 24. **Jacobson, N. C.,** Newman, M. G., & Goldfried, M. R. (2013, June). *Clinical Experiences in Conducting Empirically Supported Treatments: Obsessive-Compulsive Disorder*. Oral presentation at the Society for the Exploration of Psychotherapy Integration in June 2013 at Barcelona, Spain.
- 23. Jacobson, N. C., & Newman, M. G. (2013, May). The Temporal Relationship Between Anxiety and Depression: A Meta-Analysis. Poster presentation at the Association for the Psychological Science (APS) Conference in May 2013 at Washington DC. Honorable Mention, Association for the Psychological Science Student Caucus Student Research Awards.
- 22. **Jacobson, N. C.,** & Newman, M. G. (2013, May). *Avoidance Mediates Earlier Anxiety and Later Depression over a Decade Later*. Poster presentation at the Association for the Psychological Science (APS) Conference in May 2013 at Washington DC.
- 21. **Jacobson, N. C.,** & Newman, M. G. (2013, May). *Anxiety Predicts Depression over the Course of Minutes, Hours, and Days: An Ecological Momentary Assessment.* Poster presentation at the Association for the Psychological Science (APS) Conference in May 2013 at Washington DC.
- 20. **Jacobson, N. C.,** & Newman, M. G. (2013, April). State Anxiety Predicting State Depression across Hours: An Ecological Momentary Assessment. Poster presentation at the Association for the Workshop on Intensive Longitudinal Methods: Analysis of Diary and Experience Sampling Data Conference in April 2013 at State College, Pennsylvania.
- 19. **Jacobson**, N. C., & Newman, M. G. (2012, November). *The Temporal Relationship Between Anxiety and Depression: A Meta-Analysis*. Poster presented at the Association for Behavioral and Cognitive Therapies, National Harbor, Maryland.
- 18. **Jacobson, N. C.,** & Newman, M. G. (2012, November). *Testing the Mediating Role of Avoidance Between Anxiety and Depression*. Poster presented at the Association for Behavioral and Cognitive Therapies, National Harbor, Maryland.
- 17. **Jacobson, N. C.,** & Newman, M. G. (2012, November). *Anxiety as a Temporal Predictor of Depression during Brief Time Periods: An Ecological Momentary Assessment*. Poster presented at the Association for Behavioral and Cognitive Therapies, National Harbor, Maryland.
- 16. **Jacobson, N.C.,** & Constance, J (2012, November). *Effectiveness of Cognitive-Behavioral Therapy in Reducing Anxiety among those with Autism Spectrum Disorders: a Meta-Analysis*. Poster presentation at the Association for Behavioral and Cognitive Therapies, National Harbor, Maryland.
- 15. **Jacobson, N.C.,** & Constance, J (2012, May). Effectiveness of Cognitive-Behavioral Therapy in Reducing Anxiety among those with Autism Spectrum Disorders: a Meta-Analysis. Poster presentation at the Society for Psychotherapy Research in May 2012 at Virginia Beach, VA.
- 14. **Jacobson, N. C.** (2012, May). Strengths and Weaknesses in Test-Taking: In What Ways Do Anxiety and Impulsivity Impact Test Performance? Poster presentation at the Association for the Psychological Science (APS) Conference in May 2012 at Chicago, IL.

- 13. **Jacobson, N. C.** Kramer, S., Tharp, A., Harmon, K., Cejas, G. & Costa, S. (2012). *Deficits of Encoding in Hypnosis: A Result of Altered State of Awareness*. Poster presentation at the Association for the Psychological Associations Annual Conference in May 2012 at Chicago, IL.
- 12. **Jacobson, N. C.,** & Constance (2012, May). Effectiveness of Cognitive-Behavioral Therapy in Reducing Anxiety among those with Autism Spectrum Disorders: A Meta-Analysis. Poster presentation at the Association for the Psychological Science National Conference in May 2012 at Chicago, IL.
- 11. Szkodny, L. E., Mogle, J.A., **Jacobson, N. C**, Newman, M. G., Sliwinski, M. J. (2011, November). Evaluating Quantity and Quality of Worrisome and Intrusive Thoughts and their Triggers: An Ecological Momentary Assessment Approach. Poster presentation at Association for Behavioral and Cognitive Therapies Anxiety Special Interest Group in November, 2011 at Toronto, Ontario. **Best Student Poster Award from Anxiety Special Interest Group.**
- 10. **Jacobson, N. C.**, Kramer, S., Tharp, A., Harmon, K., Cejas, G., & Costa, S. (2011, May). *Learning in Hypnosis: Applications to Academic Performance*. Poster presentation at the Midwestern Psychological Association Conference in May 2011 at Chicago, IL.
  - Regional Research Award from Psi Chi: International Honor Society in Psychology.
- 9. Constance, J., & **Jacobson, N. C.** (2011, May). Effectiveness of Cognitive-Behavioral Therapy in Reducing Anxiety among those with Autism Spectrum Disorders: a Meta-Analysis. Poster presentation at the Midwestern Psychological Association Conference in May 2011 at Chicago, IL.
- 8. **Jacobson, N. C.**, Jacobson, B., Clark, S. & Breault, M. (2011, May). *Male Preferences in the Female Body Type*. Poster presentation at the Midwestern Psychological Association Conference in May 2011 at Chicago, IL.
- 7. **Jacobson, N. C.,** & Vittengl, J. (2011, May). Strengths and Weaknesses in Test-Taking: In What Ways Do Anxiety and Impulsivity Impact Test Performance? Poster presentation at the Midwestern Psychological Association Conference in May 2011 at Chicago, IL.
- 6. Ruberton, P., **Jacobson, N. C.**, Bangert, L., Constance, J., Pearlstein, J., & Vittengl, J. (2011, May). Seeing the Good in Life: The Effects of Gratitude Reflection on Perceived Life Events and Subjective Well-Being. Poster presentation at the Midwestern Psychological Association Conference in May 2011 at Chicago, IL.
- 5. Schickler, A., Brown, J., Ruberton, P., Constance, J., **Jacobson, N. C.**, Pearlstein, J., Spalding, K, Conner, D. & Vittengl, J. (2011, May). *Statistics Skills Preferred by Psychology Graduate Programs*. Poster presentation at the Midwestern Psychological Association Conference in May 2011 at Chicago, IL.
- 4. **Jacobson, N. C.,** & Vittengl, J. (2011, March). *Strengths and Weaknesses in Test-Taking: In What Ways Do Anxiety and Impulsivity Impact Test Performance?* Poster presentation before congress in March at Jefferson City, MO.
- 3. **Jacobson, N. C.,** Kramer, S., Tharp, A., Costa, S., & Hawley, P. (2010, June). *Testing under a Trance: The Effect of Post-Hypnotic Suggestion on Academic Performance*. Poster presentation at the Midwestern Psychological Association Annual Conference in June 2010 at Chicago, IL.
- 1. **Jacobson, N. C.,** Kramer, S., Tharp, A., Costa, S., & Hawley, P. (2010, May). *Testing under a Trance: The Effect of Post-Hypnotic Suggestion on Academic Performance*. Poster presentation at the Missouri Psychological Association's Annual Conference in May 2010 at Lake of the Ozarks, MO.
- 1. **Jacobson, N. C.,** Jacobson, B, Clark, S., & Breault, M. (2010, May). *She Makes Me Look Like That?: The Effects of Radiating Beauty in Romantic Relationships*. Poster

presentation at the Association for the Psychological Science (APS), National Conference, in May 2010 at Boston, MA.

# Symposia Chaired

- 7. Novel Technology Based Assessment of Psychopathology (2019, November). Symposium presented at Anxiety and Depression Association of America (ADAA) in March 2020 at San Antonia, TX.
- 6. Utilizing Technology to Extend the Social Impact of Cognitive Behavioral Science in National and International Samples. (2019, November). Symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in November 2019 at Atlanta, GA.
- 5. Anxiety and Depression: Specificity, Overlap, and Interrelatedness. (2016, October). Symposium presented at Association for Behavioral and Cognitive Therapies (ABCT) in October 2016 at New York, NY.
- 4. *Novel Analytic Methods to Clinical Psychology*. (2015, November). Symposium presented at the Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL.
- 3. Closing the Research-Practice Gap: Advances in the Dissemination and Implementation of Empirically Supported Treatments for Psychiatric Disorders. (2015, November). Symposium presented at the Association of Behavioral and Cognitive Therapies in November 2015 at Chicago, IL.
- 2. Novel Analytic Methods to Clinical Psychology. (2014, November) Symposium presented at to Association of Behavioral and Cognitive Therapies in November 2014 at Philadelphia, PA.
- 1. Anxiety and Depression: Specificity, Overlap, and Interrelatedness. (2014, March). Symposium presented at Anxiety and Depression Association of America, Chicago, IL.

#### TEACHING EXPERIENCE

3/20-6/20 Quantitative Biomedical Sciences Journal Club (QBS 270)

Dartmouth College Role: Instructor

Co-Instructor: Dr. Alfredo Tirado-Ramos

- Taught one sections of approximately 12 graduate students.
- Designed the course to enhance critical analysis and communication of esearch in both written and oral formats.
- Focused on review and discussion of recent papers in digital medicine and biomedical informatics papers

### 4/20 Guest Lecturer

Dartmouth College

Role: Guest Lecturer

• Lectured for three courses for Dr. Andrew Campbell teaching CS 69/169: Applications of Data Science.

## 3/20 Guest Lecturer

Dartmouth College

Role: Guest Lecturer

• Lectured for three courses for Dr. Jiang Gui teaching QBS 177: Algorithms in Biomedical Data Science.

# 8/17-5/18 Introduction to Clinical Psychology (PSYCH 481)

The Pennsylvania State University

Role: Instructor

- Taught two sections of approximately 65 undergraduate students.
- Designed course to enable students to: (1) obtain a broad understanding of the research and implementation of clinical psychology; (2) acquire an understanding of the educational and training models available for those in clinical practice; (3) learn foundations of assessment, case formulation, and treatment planning; (4) understand the major theoretical frameworks of therapy and empirically supported treatments of psychopathology; and (5) practice critical thinking in digesting research and theory applied to clinical psychology.
- Instructed students on how to conduct intake interviews, resulting in students conducting semi-structured diagnostic interviews on imaginary clients and writing an intake report and an evidence-based treatment plan based on the client's presentation.

## 8/16-5/17 Introduction to Personality Psychology (PSYCH 238)

The Pennsylvania State University

Role: Instructor

- Taught two sections, each with approximately 100 undergraduate students.
- Designed course to: (1) introduce students to how personality is conceptualized and measured and (2) help students apply personality theories to their own lives, such that they possess a greater understanding of what makes them unique and provide them with information to lead to self-discovery and self-improvement.
- Utilized self-assessments within the domain of students' personality, values, strengths, weaknesses, mood, and relationships with respect to the past, present, and future to capitalize on the unique ability to connect personality theories and research to students' daily lives.
- Required students to integrate course material into a final project describing their personality, what theories helped them to organize their self-view, and whether they saw themselves changing in the future.

## 5/16-8/16 Basic Research Methods in Psychology (PSYCH 301W)

The Pennsylvania State University

Role: Instructor

- Taught one online section of this course.
- Instructed students on basic research methods including research designs, data collection, and statistical analysis.
- Led weekly labs in which students were required to apply course material with a focus on active learning in statistical methods and interpretation.
- Required students to propose a manuscript-style research proposal including a literature review, design, and planned analysis as their final project.

## 8/13-5/14 Basic Research Methods in Psychology (PSYCH 301W)

The Pennsylvania State University

Role: Lab Instructor

• Taught a lab section once per week on the application of research methods and statistical analysis of psychological data.

## 10/15 Guest Lecturer

Penn State Altoona Role: Guest Lecturer

• Lectured for three courses for Dr. Michael Roche teaching PSYCH 270 Intro to Abnormal Psychology and PSYCH 470 Advanced Abnormal Psychology.

# 8/12-5/16 **Teaching Assistant**

The Pennsylvania State University

Role: Teaching Assistant

 Served as a teaching assistant for PSYCH 105 Psychology as a Science and Profession, PSYCH 238 Introduction to Personality Psychology, PSYCH 423 Social Psychology of Interpersonal/Intergroup Relationships, PSYCH 477 Mental Health Practicum with Children.

# 12/08-12/10 **Teaching Assistant**

Truman State University Role: Teaching Assistant

• Assisted in teaching four classes of PSYC 499 Hypnosis (12/08, 12/09, 12/10) and PSYC 499 Psychology of Mass Media (05/09) 12/08-12/10.

#### **CLINICAL EXPERIENCE**

# 7/18-present Cognitive-Behavioral Therapy, Adult Outpatient Psychotherapy

Massachusetts General Hospital

Supervisors: Drs. Angela Fang, Ann Chosak, Jessica Rasmussen, Jeanne Fama, Susan Sprich, Sabine Wilhelm

- Conducted clinical intakes with a range of presenting problems
- Treated clients with a range of presenting problems including anxiety, depression, eating, and obsessive-compulsive disorders using cognitive-behavioral therapy.

## 1/19-present *Dialectical Behavior Therapy Group*

Massachusetts General Hospital

Supervisors: Drs. Michelle Jacobo, Jonah Cohen

- Reviewed patient progress in team rounds.
- Lead mindfulness exercises and co-lead skills modules and homework review.

# 7/18-12/18 Inpatient Psychiatry Service

Massachusetts General Hospital Supervisor: Dr. Michelle B. Stein

- Attended and participated in team-rounds on a weekly basis, contributing to the assessment, case conceptualization, and treatment planning of inpatient clients.
- Conducted brief individual psychotherapy and co-led brief skills-based psychotherapy with inpatient clients on a weekly basis.

# 5/17-6/18 Individual Clinical Supervision, Cognitive-Behavioral Therapy

The Pennsylvania State University Psychological Clinic

Supervisor: Dr. Sandy Testa

• Supervised three therapists individually seeing clients with principal diagnoses of anxiety and depressive disorders.

• Reviewed video-tapes of psychotherapy video tapes, aiding in the case conceptualization and clinical intervention of clients.

## 8/15-5/17 Clinical Supervision, Cognitive-Behavioral Therapy

The Pennsylvania State University Psychological Clinic

Supervisor: Dr. Michelle G. Newman

- Co-supervised six therapists who treated a total of fifteen-clients per week on average during weekly three-hour group supervision and bi-weekly one-hour supervision meetings.
- Led group discussions of empirical literature related to cognitive-behavioral therapy, provided feedback on supervisees' cases, and instructed therapists on the use of manualized cognitive-behavioral therapy.
- Reviewed supervisees' therapy tapes bi-weekly and provided feedback on supervisees' strengths and weaknesses.
- Supervised cases with principal mood, anxiety, posttraumatic stress, eating, and personality disorders.

# 8/11-7/18 *Anxiety Clinic*

The Pennsylvania State University Psychological Clinic

Supervisor: Drs. Michelle G. Newman, Kristen Smith-Simon, Sandy Testa, Brian Rabian

- Attended weekly case and research presentations on the role of anxiety, obsessive-compulsive, and posttraumatic stress disorders in adults and children.
- Participated in clinical presentations on differential diagnosis, hierarchy construction, medication use, sleep paralysis, and many other specialized topics.
- Conducted clinical interviews for pre and post assessments.
- Periodically conducted therapy treating primary anxiety disorders.

# 7/14-7/16 Two-Year Clinical Assistantship

The Pennsylvania State University Psychological Clinic

Supervisor: Drs. Alissa Yamasaki and Sandy Testa

- Participated in weekly two-hour group supervision of cases and didactics on targeted clinical issues (suicidality, homicidal ideation, complex trauma, ethics) and one-hour weekly supervision.
- Visited community resources that interfaced with the community mental health clinic, including an inpatient unit and occupational and rehabilitative community resources.
- Treated clients utilizing an integrative framework with a primary emphasis on behavioral and interpersonal psychotherapy approaches.
- Conducted monthly diagnostic assessments for one year.
- Maintained a six-client caseload of moderately to severely impaired clients with principal psychosis, posttraumatic stress disorder, personality disorders, and mood disorders.

# 5/14-5/15 Neuropsychological Assessment Practicum

The Pennsylvania State University Psychological Clinic

Supervisor: Drs. Peter Arnett, Michael Kiel, and Michael Shapiro

- Participated in three-hour weekly meetings to discuss case conceptualization of recent neuropsychological assessments and received individual supervision as needed.
- Received didactics in test administration, test scoring, battery selection, and report writing.

• Prepared integrated reports interpreting neuropsychological tests, interviews, symptom-assessments, and personality assessments to examine differential diagnoses and academic accommodation status (e.g. attention-deficit hyperactivity disorder, dyslexia, and traumatic brain injuries).

## 8/13-5/14 Cognitive-Behavioral Therapy Practicum

The Pennsylvania State University Psychological Clinic

Supervisor: Dr. Michelle G. Newman

- Participated in three-hour weekly meetings and one-hour individual supervision, which focused on cognitive-behavioral assessment and psychotherapy techniques, including: self-monitoring, hierarchy construction, progressive muscle relaxation, self-control desensitization, interoceptive exposure, prolonged exposure, behavioral activation, activity planning, cognitive restructuring, and culturally adapted psychotherapy.
- Conducted monthly case presentations regarding ongoing clients within group supervision.
- Conducted monthly diagnostic assessments.
- Maintained a three-client caseload of clients meeting diagnostic criteria for a range of mood, anxiety, posttraumatic stress, and personality disorders.

# 5/13-8/13 *Integrative Psychotherapy Practicum*

The Pennsylvania State University Psychological Clinic

Supervisor: Dr. Jeff Hayes

- Participated in three-hour weekly meetings and one-hour individual supervision, which focused on integrative psychotherapy spanning feminist, interpersonal, cognitive-behavioral, and psychodynamic frameworks.
- Conducted monthly diagnostic assessments.
- Maintained a three-client caseload of clients meeting diagnostic criteria for a range of personality disorders, and mood disorders.

## 8/12-5/13 Contemporary Psychodynamic Psychotherapy Practicum

The Pennsylvania State University Psychological Clinic

Supervisor: Dr. Aaron Pincus

- Participated in three-hour weekly meetings and one-hour individual supervision, which focused on contemporary psychodynamic diagnosis, case formulation, and psychotherapy within object-relations (Transference-Focused Psychotherapy) and interpersonal frameworks.
- Conducted a case presentation of a client with narcissistic personality disorder.
- Conducted monthly diagnostic assessments.
- Maintained a three-client caseload of clients meeting diagnostic criteria for a range of personality disorders and other comorbid conditions.

## 5/12-8/12 **Beginning Clinical Methods**

The Pennsylvania State University Psychological Clinic

Supervisor: Dr. Michael Wolff

- Participated in two-hour weekly meetings and one-hour individual supervision, which stressed humanistic treatment techniques, utilizing empathic responses, and motivational interviewing.
- Conducted monthly diagnostic assessments.
- Maintained a two-client caseload of mood and personality disorders.

# 8/11-5/12 *Introduction to Clinical Methods*

The Pennsylvania State University Psychological Clinic

Supervisor: Drs. Stephen J. Wilson and Kenneth N. Levy

- Participated in three-hour weekly meetings that focused on developing basic clinical skills.
- Received didactic training in administration of diagnostic measures and differential diagnosis.
- Conducted bi-monthly diagnostic assessments starting in January 2012.

## 05/09-1/10 Activity Specialist, Dementia Treatment Facility

Parc Provence, Creve Coeur, MO

Supervisors: Multiple supervisors, depending on day

- Worked exclusively with residents affected by dementia.
- Initiated treatment through the social philosophy of dementia treatment.
- Led activities for dementia residents.

# 05/09-09/09 Clinical Intern, Assessing and Triaging Crisis Services and Intakes

Alternatives to Living in Violent Environments (ALIVE), St. Louis, MO

Supervisors: Jennifer Gadsky, M.S.W., LCSW; Katie Robinson, M.S.E.

- Conducted clinical intakes assessing abuse and interpartner violence, wrote intake reports, and referred to counselor.
- Conducted crisis interviews over phone and in-person, assessing and providing services for those actively and recently experiencing interpartner violence.
- Served as court advocate by attending orders of protection hearings with clients.
- Coordinated getting clients into shelters, removing clients from actively abusive situations, following up with clients, and bringing clients food/clothing as the Nights of Safety coordinator.

## 06/09 Counselor for Childhood Bereavement

Camp Erin by Annie's Hope the Bereavement Center for Kids, St. Louis, MO Supervisors: Multiple supervisors, depending on day

- Counseled teens suffering from recent losses.
- Utilized behavioral activation including exercise and activity scheduling.
- Conducted group therapy focused on processing loss.

## **SERVICE**

#### **LEADERSHIP EXPERIENCES**

12/13-11/16 President, Clinical Research Methods and Statistics Special Interest Group (SIG) for the Association for Behavioral and Cognitive Therapy (ABCT)

- Organized symposia and round table submissions to the conference.
- Established meeting curriculum and obtained a speaker for meetings.
- Evaluated poster submissions for the SIG's poster session.

## 08/09-5/11 *President, Psi Chi*

- Established curriculum for meetings.
- Created and organized a graduate school fair.

## 10/08-5/10 Vice President, Psychology Club

• Established curriculum for meetings.

#### **GRANT REVIEW**

2019 University of Michigan, Precision Health Program

#### **COMMITTEES**

2019-2020 Masters' Admissions Committee, Quantitative Biomedical Sciences, Dartmouth College

## **DISSERTATION COMMITTEE MEMBER**

daSilva, A. Dartmouth College, Psychology and Brain Sciences. (August 16, 2019 – Present). Petersen, C. Dartmouth College, The Dartmouth Institute. (December 16, 2019 – Present).

### QUALIFICATIONS EXAMS COMMITTEE MEMBER

Xie, T. Dartmouth College, Quantitative Biomedical Sciences. (December 13, 2019 – Present).

#### **SERVICES TO THE COMMUNITY**

# 6/17-12/17 American Psychological Association Using Technology in Clinical Practice (TCP) Webinars

American Psychological Association

 Presented at two American Psychological Association online continuing education workshops instructing psychologists how to integrate mobile technology into their clinical practice.

## 12/08-12/10 Presentations on Progressive Muscle Relaxation and Hypnosis

Truman State University; A.T. Still University

Mentor: Salvatore Costa

• Conducted approximately ten presentations at Truman State University and A.T. Still University.

### **COMPUTER COMPETENCE**

- Fluent in writing statistical syntax in R, Python, MPlus, SAS, LISREL, WinBUGS, and SPSS when performing data manipulation and analyses (machine learning, dynamical systems modeling, idiographic modeling, structural equation modeling, multilevel modeling, linear and nonlinear relationships, frequentist and Bayesian).
- Fluent in Microsoft Excel (data imputation, formulas, manipulation, and macros).
- Fluent in programming in E-Prime for multiple experimental paradigms.
- Some knowledge of programming in Java and HTML.

## **PROFESSIONAL MEMBERSHIPS**

American Psychological Association (APA)

Anxiety Disorders Special Interest Group (Anx SIG)

Anxiety Depression Association of America (ADAA)

Association for Behavioral and Cognitive Therapies (ABCT)

Association for the Psychological Science (APS)

Psi Chi, Internal Honor Society for Psychology

Society for Psychotherapy Research (SPR)

### PEER REVIEW RECORD

Detailed record of peer review available: <a href="https://publons.com/researcher/1516519/nicholas-c-jacobson/peer-review/">https://publons.com/researcher/1516519/nicholas-c-jacobson/peer-review/</a>

#### **GUEST EDITOR**

Frontiers in Psychology, Lead Guest Editor, Organized Topic: "Computational Modeling of Passively Collected Data to Predict Psychopathology"

SAGE Open

## **AD HOC REVIEWER**

Aging and Mental Health

Assessment

Behaviour Research and Therapy

**BMC** Medicine

British Journal of Psychiatry (PJPsych) Open

British Journal of Clinical Psychology

Clinical Psychological Science

Clinical Psychologist

Clinical Psychology and Psychotherapy

Clinical Psychology Reviewu

Depression and Anxiety

Explore: The Journal of Science and Healing

Frontiers in Psychology

Health Psychology

JAMA Psychiatry

Journal of Affective Disorders

Journal of Anxiety Disorders

Journal of Autism and Developmental Disorders

Journal of Consulting and Clinical Psychology

Journal of Dual Disorders

Journal of Medical Internet Research (JMIR)

Journal of Medical Internet Research (JMIR) Mental Health

Journal of Nervous and Mental Disease

Journal of Social and Clinical Psychology

Journal of Technology in the Behavioral Sciences

Journal of Well-Being Assessment

Motivation and Emotion

Nature Partner Journal (npj) Digital Medicine

New England Journal of Medicine

Personalized Medicine

Perspectives on Psychological Science

Plos One

Psychological Medicine

Psychotherapy Research

SAGE Open

Sensors

Science Advances

Stress and Health

The Lancet Psychiatry

## **MEDIA ATTENTION**

Metro News, The link between depression and anxiety <a href="https://metro.co.uk/2017/10/04/the-link-between-depression-and-anxiety-6942401/">https://metro.co.uk/2017/10/04/the-link-between-depression-and-anxiety-6942401/</a>

PsyPost, College students faced upsurge in anxiety, stress, and poor sleep the day after the 2016 election

 $\underline{\text{https://www.psypost.org/}2018/05/\text{college-students-faced-upsurge-anxiety-stress-poor-sleep-day-}}{2016\text{-election-}51145}$