# Tyson S. Barrett, PhD

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| Citations: | 231 |
| H Index: | 9 |

## EDUCATION

**Ph.D. Quantitative Psychology**

*Feb 2018*
*Utah State University*
*Dissertation: Marginal Mediation Analysis: A New Framework for Interpretable Mediated Effects*

**B.S. Economics**

*May 2014*
*Utah State University*
*Cum Laude*

**B.S. Psychology**

*May 2014*
*Utah State University*
*Cum Laude*

## RESEARCH AREAS

Primary: Methodology in Complex Human Data, Accessible Methodology Using R Programming

Secondary: Applied Methodology in Communication Disorders, Model Interpretability

## RESEARCH APPOINTMENTS

**Research Assistant Professor**, Department of Psychology, Utah State University     2018-Present
     *Principle Investigator of the Social Data Lab*
     *Managing Director of the Data Science & Discovery Unit*

**Research Assistant**, Prevention Science Lab, Utah State University     2016-2018
     *Advisor: Ginger Lockhart, PhD*

**Statistical and Data Science Consultant**, Utah State University     2016-2018
     *Supervisors: Sarah Schwartz, PhD and Jamison Fargo, PhD*

**WOC Research Assistant**, Veteran Affairs SLC     2016-2018
     *Advisors: Vanessa Stevens, PhD and Richard Nelson, PhD*

## PROFESSIONAL AFFILIATIONS

**Center for Open Science**   Ambassador     2019-Present

**Rdatatable**   Contributor     2019-Present

# EXTERNAL FUNDING

*Opioid-Impacted Family Support Program*        September 1, 2020 - August 30, 2024

Voss, M. (PI) & **Barrett, T.S. (Co-I)**. Sponsored by HRSA, 1 T26HP39463-01-00. Current Status: Funded. $2,296,000.

*This project enhances Utah's peer workforce by addressing the clinical priorities of: 1) incorporating family-focused curriculum enhancements and 2) emphasizing and funding hands-on learning in mentored inter-professional field placements. It will increase training by more than 50%, with basic and advanced (family-focused) certification and work experience. The evaluation of the program will be ongoing throughout the program's implementation.*

*Perceptual training for improved intelligibility of dysarthric speech*     July 1, 2020 - June 30, 2022

Borrie, S.A. (PI), Lansford, K. (PI), & **Barrett, T.S. (Co-I)**. Sponsored by NIH/NIDCD 1R21DC018867-01. Current Status: Funded. $420,000.

*The major goal of this project is the systematic analysis and identification of speaker and listener parameters, and their interactions, that allow perceptual training paradigms to be optimized for intelligibility outcomes in dysarthria rehabilitation.*

*Application of Ideal Binary Masking to Disordered Speech*      April 1, 2020 - March 31, 2023

Leopold, S. (PI), Borrie, S.A. (Co-I), & **Barrett, T.S. (Co-I)**. Sponsored by NIH/NIDCD, 1R21DC018641-01. Current Status: Funded. $430,000.

*The major goal of this project is to utilizes an established signal processing technique to investigate its potential application to overcome speech-in-noise difficulties for listeners understanding dysarthric speech.*

*Video- and App-Based Naturalistic Language Instruction*      July 1, 2020 - June 30, 2024
*(VALI) for Spanish-Speaking Caregivers to Support*
*Bilingual Language Development in Children*
*With or At Risk for Language Delays*

Larson, A. (PI), Snyder, P. (Mentor) Domenech Rodriguez, M. (Mentor), & **Barrett, T.S. (Consultant)**. Sponsored by IES/NCSER, R324B200009. Current Status: Funded. $499,927.

*The purpose of the research plan is to adapt an existing app, Háblame Bebé, that provides information to Spanish-speaking families about the importance of frequent and responsive verbal interactions with children in the home language but does not provide information on how to embed NLIS within everyday activities and routines to support DLLs with language delay.*

# INTERNAL FUNDING

*Equine Human Interaction with Veterans*        May 1, 2019 - December 31, 2019

Hoopes, K. (PI), Smith, J. (Co-PI), Sulzer, S. (Co-PI), Israelsen, C. E. (Co-PI), Blais, R. (Co-Principal), Bressel, E. (Co-PI), Mason, J. (Co- PI), **Barrett, T.S. (Co-PI)**. Sponsored by USU Extension Grants Program, Utah State University. Current Status: Ended. $11,640.

*Funds used to pilot the equine-human interaction program at Utah State University.*

# PEER-REVIEWED PUBLISHED WORKS

* Denotes that I was the methodologist or data scientist on the project

*Darcy-Mahoney, A., White, R.D.,Velasquez, A., **Barrett, T.S.**, Clark R.H., & Ahmad, K.A. (in

press). Impact of Restrictions on Parental Presence in Neonatal Intensive Care Units Related to COVID-19. *Journal of Perinatology.*
— medRxiv Pre-Print

*Crapo, J.S., **Barrett, T.S.**, Bradford, K., Miller, J.A., & Higginbotham, B.J. (in press). Couple relationship education outcomes predicted by family life stage and traditionality. *Contemporary Family Therapy.*

Lansford, K., Borrie, S.A., **Barrett, T.S.**, & Flechaus, C. (in press). When additional training isn't enough: Further evidence that unpredictable speech inhibits adaptation. *Journal of Speech, Language, and Hearing Research.*

*Larson, A.L., **Barrett, T.S.** & McConnell, S.R. (in press). Exploring Early Childhood Language Environments: A Comparison of Language Use and Exposure in the Home and Childcare Settings. *Language, Speech, and Hearing Services in Schools.*

Borrie, S.A., Wynn, C.J., Berisha, V., Lubold, N., Willi, M.M., Coelho, C.A., & **Barrett, T.S.** (2020). Conversational coordination of articulation responds to context: A clinical test case with traumatic brain injury. *Journal of Speech, Language, and Hearing Research.* doi: 10.1044/2020_JSLHR-20-00104.

*Nelson, L.H., Anderson, K., Whicker, J., **Barrett, T.S.**, Muñoz, K. & White, K. (2020, online). Classroom Listening Experiences of Students who are Deaf or Hard of Hearing using the Listening Inventory for Education-Revised (LIFE-R). *Language, Speech, and Hearing Services in Schools.*

*Vázquez, A.L., Domenech Rodríguez, M.M., Schwartz, S.E., Amador Buenabad, N.G., Bustos, M., Gutierrez, M., Villatoro Velázquez, J.A., & **Barrett, T.S.** (2020, online). Innovative Identification of Substance Use Predictors: Machine Learning in National Sample of Mexican Children. *Prevention Science.*

*Downs, J., Mohr, K.A.J., & **Barrett, T.S.** (2020). Determining the Academic and Affective Outcomes of Dyad Reading Among Third Graders. *Journal of Educational Research, 113*(2), 120-132. doi: 10.1080/00220671.2020.1755615.

Borrie, S.A., **Barrett, T.S.**, Liss, J., & Berisha, V. (2019). Characterizing conversational entrainment in dysarthria using a multidimensional, clinically meaningful approach. *Journal of Acoustical Society of America.* doi: 10.1044/2019_JSLHR-19-00194.

Lansford, K., Borrie, S.A., & **Barrett, T.S.** (2019). Regularity matters: Unpredictable speech degradation inhibits adaptation to dysarthric speech. *Journal of Speech, Language, and Hearing Research.* doi: 10.1044/2019_JSLHR-19-00055.

*Smith, B.M., Ong, C.W., **Barrett, T.S.**, Bluett, E.J., Slocum, T.A., & Twohig, M.P. (2019). Longitudinal effects of a 2-year meditation and Buddhism program on well-being, quality of life, and valued living. *Mindfulness, 10*(10), 2095-2109. doi: 10.1007/s12671-019-01165-z.

*Ong, C.W., Barney, J.L., **Barrett, T.S.**, Lee, E.B., Levin, M.E., & Twohig, M.P. (2019). The role of psychological inflexibility and self-compassion in acceptance and commitment therapy for clinical perfectionism. *Journal of Contextual Behavioral Science, 13.* doi: 10.1016/j.jcbs.2019.06.005.

*Ong, C.W., Lee, E. B., Krafft, J., Terry, C.L., **Barrett, T.S.**, Levin, M.E., & Twohig, M.P. (2019). A randomized controlled trial of acceptance and commitment therapy for clinical perfectionism. *Journal of Obsessive-Compulsive and Related Disorders, 22.* doi: 10.1016/j.jocrd.2019.100444.

**Barrett, T.S.** & Lockhart, G. (2019). Efficient Exploration of Many Variables and Interactions Using Regularized Regression. *Prevention Science, 20*(4), 575-584. doi: 10.1007/s11121-

018-0963-9.

*Long, E., **Barrett, T.S.**, & Lockhart, G. (2019). Chronic health conditions and adolescent friend-ships: Perspectives for social network analysis. *International Journal of Adolescent Medicine and Health.* doi: 10.1515/ijamh-2018-0293.

Borrie, S.A., **Barrett, T.S.**, Yoho, S.E. (2019). Autoscore: An open-source automated tool for scoring listener perception of speech. *Journal of Acoustical Society of America, 145*(1), 392-399.

Yoho, S.E., Borrie, S.A., **Barrett, T.S.**, & Whittaker, D.B. (2019). Are there sex effects for speech intelligibility in American English? Examining the influence of talker, listener, and methodology. *Attention, Perception, and Psychophysics, 81*(2), 558-570.

Borrie, S.A., **Barrett, T.S.**, Willi, M., & Berisha, V. (2019). Syncing up for a good conversation: A clinically-meaningful methodology for capturing conversational entrainment in the speech domain. *Journal of Speech, Language, and Hearing Research*, 1-14.

**Barrett, T.S.**, Wylie, A., Vogel, B., Sanghavi, K., Raspa, M., Aveni, K.P., Tullis, K., Caggana, M, White, K.R., & Bodurtha, J. (2018). Where Do We Go From Here? The Need for Genetic Referrals in Patients who are Deaf or Hard of Hearing: Findings from a Regional Survey. *Journal of Early Hearing Detection and Intervention, 3*(1), 36-53.

*Yoho, S.E., Healy, E. W., Youngdahl, C., **Barrett, T.S.**, & Apoux, F. (2018). Speech-material and talker effects in speech band importance. *Journal of the Acoustical Society of America, 143*(3). doi: 10.1121/1.5026787.

Borrie, S.A., Lansford, K.L., & **Barrett, T.S.** (2018). Understanding dysrhythmic speech: When rhythm doesn't matter and learning doesn't happen. *Journal of the Acoustical Society of American Express Letters, 143*(5). doi: 10.1121/1.5037620.

**Barrett, T.S.** & Brignone, E. (2017). Furniture for Quantitative Scientists. *R Journal, 9*(2), 142-146.

Borrie, S.A., Lansford, K.L., & **Barrett, T.S.** (2017). Generalized Adaptation to Dysarthric Speech. *Journal of Speech, Language, and Hearing Research, 60*, 3110-3117. doi: 10.1044/2017_JSLHR-S-17-0127.

**Barrett, T.S.** & White, K.R. (2017). Trends in Hearing Loss Among Adolescents. *Pediatrics, 140*(6), e20170619. doi: 10.1542/peds.2017-0619.

Fargo, J.D., Brignone, E., Metraux, S., Peterson, R., Carter, M.E., **Barrett, T.**, Palmer, M., Redd, A., Samore, M.H., & Gundlapalli, A.V. (2017). Homelessness Following Disability-Related Discharges from Active Duty Military Service in Afghanistan and Iraq. *Disability and Health Journal, 10*, 592-599. doi: 10.1016/j.dhjo.2017.03.003.

*Brown, L.T., Mohr, K.A.J., Wilcox, B.R., & **Barrett, T.S.** (2017). The effects of dyad reading and text difficulty on third-graders' reading achievement. *Journal of Educational Research.* doi: 10.1080/00220671.2017.1310711

Brignone, E., Gundlapalli, A.V., Blais, R.K., Kimerling, R., **Barrett, T.S.**, Nelson, R.E., Carter, M.E., Samore, M.A., & Fargo, J.D. (2017). Increased Health Care Utilization and Costs among Veterans with a Positive Screen for Military Sexual Trauma. *Medical Care, 55*, S70-S77. doi: 10.1097/MLR.0000000000000767

*Long, E., **Barrett, T.S.**, & Lockhart, G. (2017). Network-behavior dynamics of adolescent friendships, alcohol use, and physical activity. *Health Psychology, 36*(6), 577-586. doi: 10.1037/hea0000483

Borrie, S.A., Lansford, K.L., & **Barrett, T.S.** (2017). Rhythm perception and its role in perception and learning of dysrhythmic speech. *Journal of Speech, Language, and Hearing Research,*

*60*(3), 1-10. doi: 10.1044/2016_JSLHR-S-16-0094

Behl, D., White, K., **Barrett, T.**, Blaiser, K., Callow-Heusser, C., & Croshaw, T. (2017). A Multisite Study Evaluating the Benefits of Early Intervention via Telepractice. *Infant and Young Children, 30*(2), 147-161.

**Barrett, T.S.** & White, K. R. (2016). Prevalence and Trends of Childhood Hearing Loss Based on Federally-funded National Surveys: 1994–2013. *Journal of Early Hearing Detection and Intervention, 1*(2), 8-16.

Doutré, S. M., **Barrett, T.S.**, Greenlee, J. & White, K. R. (2016). Losing Ground: Awareness of Congenital Cytomegalovirus in the United States. *Journal of Early Hearing Detection and Intervention, 1*(2), 39-48.

*Muñoz, K., Rusk, S.E.P., Nelson, L., Preston, E., White, K.R., **Barrett, T.S.** & Twohig, M.P. (2016). Pediatric Hearing Aid Management: Parent Reported Needs for Learning Support. *Ear and Hearing Journal. 37*(6), 703-709.

Borgogna, N., Lockhart, G., Grenard, J, **Barrett, T.**, Shiffman, S. & Reynolds, K. (2015). Ecological Momentary Assessment of Urban Adolescents' Technology Use and Cravings for Unhealthy Snacks and Drinks: Differences by Ethnicity and Sex. *Journal of the Academy of Nutrition and Dietetics, 115*(5), 759-766.

## Under Review/In Revision

Vázquez, A.L., Garcia, B.H., Navarro, C., **Barrett, T.S.**, & Domenech Rodríguez, M.M. (under review). Predictors of adolescent e-cigarette use: A machine learning approach to understanding a health epidemic. *Journal of Youth and Adolescence.*

*Ong, C.W., Hancock, A.S., **Barrett, T.S.**, Lee, E.B., Wan, N., Gillam, R.B., Levin, M.E., & Twohig, M.P. (under review). Effect of Acceptance and Commitment Therapy on Neurological Functioning in Clinical Perfectionism. *Behavior Therapy.*

**Barrett, T.S.** (under review). List-columns in `data.table`: Nesting and unnesting data tables and vectors. *R Journal.* 🏠 🏠

Vázquez, A. L., Garcia, B. H., Navarro, C., **Barrett, T.S.**, Domenech Rodríguez, M. M. (under review). An ecological examination of adolescent e-cigarette use: A machine learning approach to understanding a health epidemic. *Journal of Adolescent Health.*

Vázquez, A.L., Domenech Rodríguez, M.M., **Barrett, T.S.**, Amador Buenabad, N.G., Gutiérrez López, M. de L., Bustos Gamiño, M.N., & Villatoro Velázquez, J.A. (under review). Perceived parent characteristics and practices classify lifetime substance use among Mexican children. *Substance Use & Misuse.*

Buntrock, M., Gurries, M. **Barrett, T.S.**, Barker, B. (under review). The effect of talker familiarity on sentence recognition accuracy in complex noise. *Language and Speech.* 🏠 🏠

Vázquez, A.L., Chou, T., Navarro Flores, C.M., **Barrett, T.S.**, Villodas, M.T., & Domenech Rodríguez, M.M. (under review). Understanding caregiver perceived need for and utilization of adolescent counseling services through machine learning. *PLOS ONE.*

# PUBLISHED PRE-PRINTS

Pre-prints not otherwise published in a peer-reviewed journal

**Barrett, T.S.** (2019, Oct 3). List-columns in `data.table`: Nesting and unnesting data tables and

vectors. *PsyArXiv.* https://doi.org/10.31234/osf.io/u8ekc

**Barrett, T.S.** (2019, August 15). Six Reasons to Consider Using R in Psychological Research. *PsyArXiv.* https://doi.org/10.31234/osf.io/8mb6d

**Barrett, T.S.**, Cruz, R.A., & Lockhart, G. (2019, June 18). Marginal Mediation Analysis: A Practical Statistical Framework for Interpretable Mediated Effects. *PsyArXiv.* https://doi.org/10.31234/osf.io/fgm8t

**Barrett, T.S.**, Borrie, S.A., & Yoho, S.E. (2019, June 14). Automating with Autoscore: Introducing an R package for automating the scoring of orthographic transcripts. *PsyArXiv.* https://doi.org/10.31234/osf.io/d8au4

# PEER-REVIEWED CONFERENCE PROCEEDINGS

Lubold, N. Borrie, S.A., **Barrett, T.S.**, Willi, M., & Berisha, V. (2019). Do Conversational Partners Entrain on Articulatory Precision? *Proceedings of INTERSPEECH 2019.* Paper number 1786, 1–5. (three reviewers, 50% acceptance rate). doi: 10.21437/Interspeech.2019-1786

Willi, M., Borrie, S.A., **Barrett, T.S.**, Tu, M. & Berisha, V. (2018). A discriminative acoustic-prosodic approach for measuring local entrainment. *Proceedings of INTERSPEECH 2018.* Paper number 1419, 1–5. (four reviewers, 50% acceptance rate).
— ArXiv Pre-Print: 1804.08663

# OTHER PUBLISHED WORKS

## Books

**Barrett, T.S.** (in development). *R for Researchers: An Introduction.* Online access: tysonbarrett.com/Rstats/.

## R Packages

**Barrett, T.S.** (2019). `dissertateUSU`. URL: github.com/tysonstanley/dissertateUSU. R package version 0.2.1. doi: 10.5281/zenodo.3240640.

**Barrett, T.S.** (2019). `tidyfast`. URL: github.com/tysonstanley/tidyfast. R package version 0.2.1.

**Barrett, T.S.** (2019). `connectivity`. URL: github.com/tysonstanley/connectivity. R package version 0.1.6.

**Barrett, T.S.** (2019). `rjasa`. URL: github.com/tysonstanley/rjasa. R package version 0.1.1.

**Barrett, T.S.**, Borrie, S.A., & Yoho, S.E. (2019). `autoscore`. URL: github.com/autoscore/autoscore. R package version 0.3.7.

**Barrett, T.S.** (2018). `MarginalMediation`: Marginal Mediation Analysis. URL: tysonbarrett.com/MarginalMediation. R package version 0.7.0.

**Barrett, T.S.**, Brignone., E. & Laxman, D. (2018) `furniture`: Furniture for Quantitative Researchers. URL: tysonbarrett.com/furniture. R package version 1.9.7.

## Dissertation

**Barrett, T.S.** (2018). Marginal Mediation Analysis: A New Framework for Interpretable Mediated

Effects. Doctoral dissertation.

## CITATION COUNT HISTORY



Note: Data for citations in 2020 until August
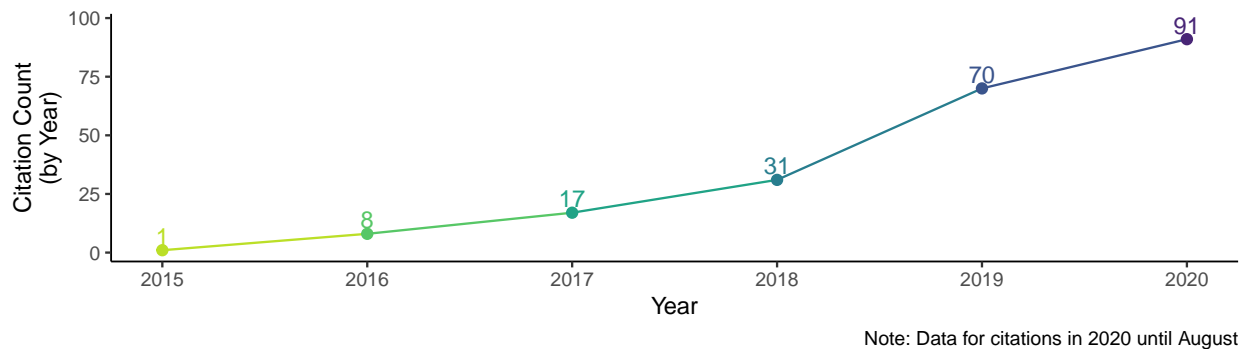
## SELECTED PRESENTATIONS

Smith, B. M., Barney, J.L., Ong, C.W., **Barrett, T.S.**, Levin, M.E., & Twohig, M.P. (2020, July). Physiological, behavioral, and self-report outcomes of acceptance and regulation approaches to exposures for intrusive thoughts. In S. Mpoulkoura (Chair), Third-wave approaches to anxiety disorders treatment: Outcomes and processes of change. Paper presented at the annual meeting of the Association for Contextual Behavioral Science, online.

Hancock, A.S., Orellana, C., Alphonsa, S., **Barrett, T.S.**, Logan, K., Gillam, S.L., & Gillam, R.B. (2020, May). An fNIRS Investigation During Stuttered and Fluent Speech. Poster presentation at Cognitive Neuroscience Society, Boston, Massachusetts.

**Barrett, T.S.** (2020, January). Working with list-columns in `data.table`. Talk presented at the RStudio Conference 2020, San Francisco, CA.

Vázquez, A.L., Chou, T., Navarro, C., **Barrett, T.S.**, Villodas, M.T., & Domenech Rodríguez, M.M. (2019, November). Understanding caregiver perceived need for and utilization of adolescent counseling services through machine learning. In M. D. Hetzel-Riggin (Chair). Addressing violence, abuse, and trauma throughout the socioecological model. Symposium accepted for presentation at the Association for Behavioral and Cognitive Therapies, Atlanta, GA.

Budge, S., Borrie, S.A., **Barrett, T.S.**, Yoho, S.E., Vargas, R., & Lansford, K. (2019, November). Gamified Perceptual Learning of Dysarthric Speech. Poster presented at the 2019 ASHA Convention, Orlando, FL.

Hirsch, M., Lansford, K., Borrie, S.A., & **Barrett, T.S.**. (2019, November). Familiarization of Dysarthric Speech: Generalization Between Speakers of Different Sex. Poster presented at the 2019 ASHA Convention, Orlando, FL.

Ong, C.W., Lee, E.B., Krafft, J., Terry, C.L., **Barrett, T.S.**, Levin, M.E., & Twohig, M.P. (2019, November). A randomized controlled trial of acceptance and commitment therapy for clinical perfectionism. In C. W. Ong (Chair), Using acceptance and commitment therapy for different clinical presentations: Evidence-based adaptations. Symposium conducted at the 53rd annual convention of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.

Vázquez, A.L., **Barrett, T.S.**, Domenech Rodríguez, M.M., Bustos, M., Gutierrez, M., Amador Buenabad, N.G., & Villatoro Velazquez, J.A. (2019, March). The influence of perceived

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parenting on substance initiation among Latinx children. Poster presented at the Society for Research in Child Development, Baltimore, MD.

Vázquez, A.L., Chou, T., Navarro, C., **Barrett, T.S.**, & Domenech Rodríguez, M.M. (2019, March). Examining caregiver perceived need for and utilization of adolescent counseling services through machine learning. Poster presented at the Society for Research in Child Development, Baltimore, MD.

Vázquez, A. L., Domenech Rodríguez, M. M., **Barrett, T.S.**, Amador Buenabad, N., & Villatoro Velazquez, J. A. (2018, September) Factores de crianza que tienen alto impacto sobre el consumo de drogas por parte niños. In M. M. Domenech Rodríguez (Chair). Crianza positiva y consumo de drogas: hallazgos, modelos y retos para la implementación. Symposium presented at the 2o Congreso Mundial de Prevención de Adicciones en Niños y Adolescentes, Tijuana, BCS, MX.

**Barrett, T.S.**, & Lockhart, G. (2017). Enhancing the Exploration and Communication of Big Data in Prevention Science. Poster presented at the Annual Meeting of the Society of Prevention Research, Washington, DC. *Received "Distinguished Poster Award" and "Abstract of Distinction."*

**Barrett, T.S.**, & Lockhart, G. (2017). Exploring the Predictors of Marijuana Use Among Adolescents with Asthma. Oral presentation at the Utah State University Research Symposium, Logan, UT.

Sanghavi, K., White, K., **Barrett, T.S.**, Wylie, A., Raspa, M., Cashman, D., Vogel, B. Caggana, M. & Bodurtha, J. (2017). Poster presented at the Early Hearing Detection and Intervention Conference, Atlanta, GA. *Received "Outstanding Poster Award."*

Brignone, E., Gundlapalli, A.V., **Barrett, T.S.**, Blais, R.K., Nelson, R.E., Carter, M.E., Kimerling, R., Samore, M.H., Fargo, J.D. (2016). Cost of Care among Male and Female Veterans with a Positive Screen for Military Sexual Trauma. Poster presented at the 2016 Annual Meeting of the International Conference of Psychology, Yokohama, Japan.

**Barrett, T.S.**, Munoz, K. & White, K. (2016). How well do parent report hearing loss in their children? Poster presented at the Early Hearing Detection and Intervention Conference, San Diego, CA.

**Barrett, T.S.**, Munoz, K. & White, K. (2016). Accounting for Temporary Loss in National Studies on Hearing Loss. Poster presented at the Early Hearing Detection and Intervention Conference, San Diego, CA.

**Barrett, T.S.**, Munoz, K. & White, K. (2016). An Evaluation of Early Intervention delivered via Video Conferencing. Poster presented at the Early Hearing Detection and Intervention Conference, San Diego, CA.

Stevens, V., **Barrett, T.S.** & Nelson, R. (2016). Distribution and Daily Cost of Care in a Pediatric Hospital. Oral presentation to the Pediatric Guidance Council of Intermountain Healthcare, Salt Lake City, UT.

**Barrett, T.S.**, Munoz, K. & White, K. (2015). Refinements to estimating prevalence of hearing loss in children. Poster presented at the Utah State University Research Symposium, Logan, UT.

**Barrett, T.S.**, Prante, M., Peterson, R., Fargo, J.D., Pyle, N. (2014). Predictors of employability among homeless youth. Poster presented at the Psi-Chi Undergraduate Research Conference at Idaho State University, Pocatello, ID. *Best Undergraduate Poster Presentation Award.*

**Barrett, T.S.**, Holland, D. (2014). Nascent Entrepreneurship, Impulsivity, and Self- Efficacy. Poster presented at the Research on Capitol Hill, Salt Lake City, UT.

Holland, D., **Barrett, T.S.** (2013). Impulsivity in young entrepreneurs. Round table discussion at

the Babson Business Conference, Paris, France.

## Professional Development Activities Attended

RStudio Conference sponsored by RStudio. Training on advanced features of R and RStudio, including training on data wrangling, reproducible analyses, and database access. January 2019.

RStudio Conference sponsored by RStudio. Special training on using the Shiny developer interface for creating interactive, responsive websites using R. January 2020.

# TEACHING INTERESTS

## Primary Interest: Quantitative Methods

- Undergraduate and Graduate Statistics (ANOVA and Regression [OLS, GLM])
- Multilevel Modeling (Hierarchical Linear Modeling, GEE, Mixed Effects)
- Mediation Analysis (Marginal Mediation, Moderated Mediation)
- Reproducible Research (Research Methods, Open Science Framework)
- R for the Social Sciences (Undergraduate and Graduate Level)
- Exploratory Data Analysis
- Structural Equation Modeling (Psychometrics and Measurement Models, Mixture Modeling)
- Research Methods (Undergraduate and Graduate Level)

## Secondary Interest: Public Health

- Research in Public Health
- Disabilities (Hearing Loss, Developmental Disabilities)

# TEACHING EXPERIENCE

- **Applied Statistical Analysis** (EDUC 6050)
  - Graduate-level applied statistics course for non-research degrees
- **Research Design & Analysis I** (EDUC 6600)
  - Graduate-level applied statistics course for PhD students
- **Research Design & Analysis II** (EDUC 7610)
  - Graduate-level linear regression course for PhD students
- **R for the Health, Behavioral, Educational, and Social Sciences I and II** (EDUC 6560)
  - Created, Developed, and Taught
  - Graduate Level
- **Research Methods** (PSY 3500)
  - Undergraduate-level psychological research methods
    * Online
    * In-person

***MOST RECENT TEACHING EVALUATIONS (Summer/Fall 2018)***

| Course | Much Lower | Lower | Similar | Higher | Much Higher |
|---|---|---|---|---|---|
| Research Methods (PSY 3500) | | | | X | |
| Applied Statistical Analysis (EDUC 6050) | | | | X | |
| R Course I & II (Continuing Ed Credit) | | | | X | |
| Research Design & Analysis I (EDUC 6600) | | | | | X |
| Research Design & Analysis II (EDUC 7610) | | | | X | |

# METHODOLOGICAL TRAINING

- Regression, Generalized Linear Models
- Mixed Effects, Generalized Linear Models
- Machine Learning
  - CART
  - Random Forest
  - Regularized Regression
  - Boosting/Bagging
  - Cross-Validation
- Social Network Analysis
- Data Visualization
  - Static and Dynamic Visuals

# SOFTWARE AND PROGRAMMING EXPERIENCE

1. **R and RMarkdown: Expert (6 years of daily use)**
   - Database Queries, Creation, and Management
   - Data Analytics
   - Website Creation
   - Program Development and Deployment
2. **REDCap: Moderate Experience (3 year of weekly use)**
   - Database Creation
   - Data Entry and Survey Creation and Deployment
   - Data Management via REDCap API
3. **SQL: Some Experience (5 years of occasional use)**
   - Database Queries and Database Management
   - Data Analytics
4. **Python: Minor Experience (1 year of occasional use)**
   - Data Analytics
   - MTurk customization

# AWARDS

- Abstract of Distinction (Annual Meeting of the Society of Prevention Research)
- Distinguished Poster Award (Annual Meeting of the Society of Prevention Research)
- Outstanding Poster Award (Annual Meeting of EHDI)
- Dean's Scholarship (full tuition for two years)
- Best Poster Presentation (Psi-Chi Undergraduate Conference)