Stanford



Daniel L. Bowling, PhD

Assistant Professor (Research) of Psychiatry and Behavioral Sciences (Interdisciplinary Brain Sciences)

Psychiatry and Behavioral Sciences - Interdisciplinary Brain Sciences

Curriculum Vitae available Online

Bio

BIO

Dr. Bowling is Director of the Music, Brain & Health Lab at Stanford School of Medicine. His translational research harnesses the neural effects of music to develop personalized music-based treatments for health and wellness, with a particular focus on anxiety and depression in young adults. His approach integrates expertise in neuroscience, bioacoustics, music therapy, and psychiatry to apply insights from music's underlying biology to medicine.

Dr. Bowling earned his PhD in Neurobiology from Duke University School of Medicine and holds graduate certificates in Cognitive Neuroscience and Translational Medicine. He has authored over 40 peer-reviewed publications in leading journals including Science, PNAS, and Molecular Psychiatry. His research program has been supported by federal and private foundations including the National Institutes of Health, NeuroArts Blueprint, and the American Foundation for Suicide Prevention.

ACADEMIC APPOINTMENTS

- Assistant Professor-Research, Psychiatry and Behavioral Sciences - Interdisciplinary Brain Sciences
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

LINKS

- Ocrid page: https://orcid.org/0000-0002-5303-5472

Teaching

STANFORD ADVISEES

Victoria Cuellar

Postdoctoral Faculty Sponsor

Juan Gomez Canon

Postdoctoral Research Mentor

Juan Gomez Canon

Publications

PUBLICATIONS

- **A dysfunctional hub model of voice-reward integration in autism.** *Trends in cognitive sciences*

Abrams, D. A., Leipold, S., Bowling, D. L.
2026

- **Work together, move together-Cooperation and rapport promote interpersonal synchrony** *PLOS ONE*
  Scheer, C., Bowling, D. L., Hungerlander, N. A., Fitch, W., Horn, L.
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- **The Test of Auditory-Vocal Affect (TAVA) dataset.** *IEEE Workshop on Applications of Signal Processing to Audio and Acoustics : [proceedings]. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics*
  Gómez-Cañón, J. S., Noufi, C., Berger, J., Parker, K. J., Bowling, D. L.
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- **Beating stress: music with monaural beats reduces anxiety and improves mood in a non-clinical population.** *Frontiers in psychology*
  Venkatesan, T., Demetriou, A., Koops, H. V., Bowling, D. L.
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- **Effects of music advertised to support focus on mood and processing speed.** *PloS one*
  Orpella, J., Bowling, D. L., Tomaino, C., Ripollés, P.
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- **Biological principles for music and mental health.** *Translational psychiatry*
  Bowling, D. L.
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- **ACOUSTICALLY-DRIVEN PHONEME REMOVAL THAT PRESERVES VOCAL AFFECT CUES.** *Proceedings of the ... IEEE International Conference on Acoustics, Speech, and Signal Processing. ICASSP (Conference)*
  Noufi, C., Berger, J., Frank, M., Parker, K., Bowling, D. L.
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- **Vocal similarity theory and the biology of musical tonality.** *Physics of life reviews*
  Bowling, D. L.
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- **Oxytocin and the social facilitation of placebo effects.** *Molecular psychiatry*
  Itskovich, E., Bowling, D. L., Garner, J. P., Parker, K. J.
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- **Endogenous oxytocin, cortisol, and testosterone in response to group singing.** *Hormones and behavior*
  Bowling, D. L., Gahr, J., Ancochea, P. G., Hoeschele, M., Canoine, V., Fusani, L., Fitch, W. T.
  1800; 139: 105105
- **Progress without exclusion in the search for an evolutionary basis of music.** *The Behavioral and brain sciences*
  Bowling, D. L., Hoeschele, M., Dunn, J. C.
  2021; 44: e97
- **Harmonicity and Roughness in the Biology of Tonal Aesthetics.** *Music perception*
  Bowling, D. L.
  2021; 38 (3): 331-334
- **Selection on vocal output affects laryngeal morphology in rats.** *Journal of anatomy*
  Lesch, R., Schwaha, T., Orozco, A., Shilling, M., Brunelli, S., Hofer, M., Bowling, D. L., Zimmerberg, B., Fitch, W. T.
  2021
- **Is consonance attractive to budgerigars? No evidence from a place preference study.** *Animal cognition*
  Wagner, B., Bowling, D. L., Hoeschele, M.
  2020
- **Claims of categorical primacy for musical affect are confounded by using language as a measure.** *Proceedings of the National Academy of Sciences of the United States of America*
  Bowling, D. L.
  2020

- **Rapid evolution of the primate larynx?** *PLoS biology*
  Bowling, D. L., Dunn, J. C., Smaers, J. B., Garcia, M. n., Sato, A. n., Hantke, G. n., Handschuh, S. n., Dengg, S. n., Kerney, M. n., Kitchener, A. C., Gumpenberger, M. n., Fitch, W. T.
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- **Pupillometry of Groove: Evidence for Noradrenergic Arousal in the Link Between Music and Movement** *FRONTIERS IN NEUROSCIENCE*
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- **Temporal modulation in speech, music, and animal vocal communication: evidence of conserved function.** *Annals of the New York Academy of Sciences*
  Filippi, P. n., Hoeschele, M. n., Spierings, M. n., Bowling, D. L.
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- **Humans recognize emotional arousal in vocalizations across all classes of terrestrial vertebrates: evidence for acoustic universals** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*
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- **Comparing Chalk With Cheese-The EGG Contact Quotient Is Only a Limited Surrogate of the Closed Quotient** *JOURNAL OF VOICE*
  Herbst, C. T., Schutte, H. K., Bowling, D. L., Svec, J. G.
  2017; 31 (4): 401–9
- **Social Origins of Rhythm? Synchrony and Temporal Regularity in Human Vocalization** *PLOS ONE*
  Bowling, D. L., Herbst, C. T., Fitch, W.
  2013; 8 (11): e80402
- **Expression of Emotion in Eastern and Western Music Mirrors Vocalization** *PLOS ONE*
  Bowling, D., Sundararajan, J., Han, S., Purves, D.
  2012; 7 (3): e31942
- **Co-Variation of Tonality in the Music and Speech of Different Cultures** *PLOS ONE*
  Han, S., Sundararajan, J., Bowling, D., Lake, J., Purves, D.
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