

APRYL E. POOLEY, PH.D.

Phone: (217) 549-2805
pooleyap@msu.edu
www.aprylpooley.com

Michigan State University
Psychology Department
East Lansing, MI 48824

SUMMARY OF QUALIFICATIONS

10 years of experimental and applied research experience

Quantitative data analysis	<i>(ANOVA, regression, SEM, LCA)</i>
Qualitative data analysis	<i>(life/health history, trauma exposure/symptom surveys)</i>
Biological trauma/stress responses	<i>(cortisol, EEG, gene/protein expression, epigenetics)</i>
Grant management	<i>(progress updates, deliverables, budget, report/present findings)</i>
Lab management	<i>(legal/ethical compliance, training/supervision, budget/ordering)</i>
Measurement development	
Federal and private grant writing	
Data visualization and technical, public, and academic reporting	

5 years of sexual/relationship violence prevention/intervention programming experience

Neurobiology of trauma	Mandatory reporting	Rape culture
Supporting survivor needs	Perpetrator tactics	Prevention

Content expertise

Neurobiology of trauma/PTSD	Sex differences in trauma response
Sexual and domestic violence	LGBTQ issues and trauma
Crime victim behavior	Crime victim services
Trauma-informed service delivery	Intersectionality and trauma
Trauma effects on child development	Trauma-informed yoga therapy
Gender roles and trauma	Child sexual abuse
Campus sexual assault	Institutional betrayal

Computer/software skills

Advanced: Excel, Word, Powerpoint, SPSS, Qualtrics
Intermediate: Photoshop, video editing
Beginner: Website development, HTML programming, SAS

CURRENT PROFESSIONAL POSITIONS

Aug 2018-pres	Director of Training and Technical Assistance , MI Victim Advocacy Network Michigan State University, Psychology Department
Jan 2018-pres	Core faculty , MSU Research Consortium on Gender-Based Violence
Dec 2018-pres	Core faculty , MSU Center for Gender in Global Context

EDUCATION

- 2011-2017 **PhD in Neuroscience**, Michigan State University
Dissertation: "Traumatic stress responses in rats reveal fundamental sex differences that mirror PTSD in men and women"
- 2009-2011 **MS in Biological Sciences**, Eastern Illinois University
Thesis: "Estrogen Promotes Neurite Outgrowth in Olfactory Epithelial Explant Cultures Through the Estrogen Receptor"
- 2004-2008 **BS in Biological Sciences**, Eastern Illinois University
Graduated with University Honors
Area of concentration: pre-medicine

SERVICE POSITIONS

Boards/councils

- Jan 2018-pres **Board of Directors**, The Firecracker Foundation, Lansing, MI
Nonprofit providing services and advocacy to children and families affected by child sexual abuse. Coordinate yoga, individual therapy, caretaker support groups, medical advocacy teams, and community education and training to support the mission of the organization. Served as President of the Board from Jan-Dec 2019.
- Jun 2015-2016 **Executive Board**, Council of Graduate Students Sexual Assault Committee Michigan State University, East Lansing, MI
Held educational events, recommended training for responding to sexual trauma survivors, created campus-wide syllabus language to communicate instructor mandatory reporting responsibilities and reporting options
- Mar 2015-2016 **Neuroscience Graduate Student Council**, Graduate Employee Union Steward Michigan State University, East Lansing, MI
Attend bi-weekly Graduate Employee Union meetings, keep Neuroscience Program student employees updated on union and contract issues, serve on contract bargaining team negotiator

Journal reviewer

- April 2018-pres **Ad-hoc reviewer**, *Nutritional Neuroscience*
- Aug 2018-pres **Ad-hoc reviewer**, *Endocrine Connections*
- Aug 2018-pres **Ad-hoc reviewer**, *Journal of Interpersonal Violence*
- April 2019-pres **Ad-hoc reviewer**, *PLOS ONE*

CONTINUING EDUCATION AND TRAINING

- June 2019 **National Institute for SART leaders**
 A 2½ day Sexual Violence Justice Institute program designed for coordinators, team leaders, and state and territorial level leaders who coordinate or support local teams responding to sexual violence.
- Sep 2018 **Addressing the Housing Needs of Sexual Violence Survivors**
 Two-day Michigan Victim Advocacy Network training to recognize the unique housing and voluntary services needs and barriers of all sexual violence survivors and to respond to those needs with empower trauma-informed, actively anti-oppressive and survivor-centered services
- Nov 2017 **US Bureau of Justice Assistance Sexual Assault Kit Initiative**
 “The Neurobiology of Trauma” workshop by Dr. Rebecca Campbell on how the brain and body react to major traumas, emphasizing understanding victim behavior and memory formation during trauma and in the immediate aftermath, with implications for cold case investigations and victim notifications.
- Oct 2017 **Michigan Coalition to End Domestic and Sexual Violence**
 Trained as an expert witness to provide criminal and civil testimony in sexual and domestic violence court hearings

EXPERIMENTAL RESEARCH PROJECTS

- Aug 2017-2018 **Research Associate**, Michigan State University Neuroscience Program
 Project: Determine how sex hormones (e.g. testosterone, estrogen) influence the traumatic stress response and how early-life developmental processes set the stage for differences in how males and females respond to trauma
 Funding agency: Cohen Veterans Bioscience
- 2011-2017 **Doctoral research**, Michigan State University
 Project: Characterized how sex/gender influences traumatic stress responses at behavioral, physiological, cellular, and genetic/epigenetic levels
 Advisors: Dr. Cynthia Jordan and Dr. Marc Breedlove
 Skills: Single prolonged stress and predator exposure rat models of PTSD, acoustic startle test, dexamethasone suppression test, cFos and glucocorticoid receptor immunohistochemistry, stereology, Western blot, assessments of depressive- and anxiety-like behaviors in rats, gonadal hormone manipulation and replacement, male and female rat gonadectomy

2009-2011 **Master’s research**, Eastern Illinois University
 Project: Determine how sex hormones (e.g. testosterone, estrogen) influence the repair and regeneration of damaged neurons
 Advisor: Dr. Britto Nathan
 Skills: Post-natal and adult rat brain tissue dissection, neuronal cell culture, immunocytochemical staining, fluorescent microscopy, polymerase chain reaction

APPLIED RESEARCH AND EVALUATION PROJECTS

Aug-Dec 2018 **Evaluation Contractor**, Michigan Public Health Institute (MPHI)
 Role: Review existing measures related to sexual violence prevention topics, draft rape prevention education survey protocol for statewide data collection, convene stakeholders to provide feedback on survey protocol, work with survey contractors to determine appropriate survey sample and data collection strategies/timeline, conceptualize analysis of survey items to answer research questions, draft MPHI IRB protocol for statewide survey process. The results of this research were presented at the 2019 National Sexual Assault Conference.

Apr-Dec 2018 **Co-investigator/Data analyst**, “Exploring the Use of Neurofeedback in Mitigating Symptoms of TBI in Survivors of Intimate Partner Violence”
 Co-Investigators: Dessie Clark, M.Ed, Michigan State University, E. Lansing, MI
 Joshua Brown, LCSW, BCN, Fort Bend Women’s Center, Houston, TX
 Role: Analyze and interpret EEG data, co-author reports, advise on developing relevant outcome measures. The results of this project were published in the *Journal of Aggression, Maltreatment, and Trauma*.

Jan 2018-pres **Co-investigator/Data analyst**, “Therapeutic Efficacy of Yoga in Individuals with Varied Traumatic Stress Histories”
 Service provider/co-investigator: Kintla Striker, Kintla Yoga LLC, East Lansing
 Role: Analyze and interpret self-report surveys on trauma, life, and health histories, co-author reports, advise on developing relevant outcome measures, advise on study design standards (e.g. ethics, consent). The results of this project were published in the journal *Brain, Body, and Cognition*.

2016-2018 **Co-investigator/Data analyst**, “Agape Group Intervention for At-Risk Teens”
 Service Providers/co-investigators: Justin Charping, MA, LPC
 Ty Warczinsky, MRE, CPS, Gratiot County Michigan Child Advocacy Association
 Role: Advise on relevant measures for evaluating the effectiveness of the group therapy intervention, analyze student/parent/teacher survey data, co-author reports, advise on study design standards (e.g. ethics, consent)

SEXUAL ASSAULT AND RELATIONSHIP VIOLENCE EDUCATION/OUTREACH

- Nov 2019 **Speaker**, Michigan State University “We Can Begin Again: Moving Through Trauma” exhibition, East Lansing, MI. Presented “Healing the Brain, Body, and Community”
- Oct 2019 **Workshop presenter**, The Firecracker Foundation and Michigan State Univ Museum public training, East Lansing, MI. Presented “Building Safe and Resilient Communities in Response to Child Sexual Abuse”
- Mar 2019 **Workshop presenter**, The Firecracker Foundation volunteer training, Holt, MI Presented “Understanding Child Sexual Trauma and Grooming”
- Feb 2019 **Workshop presenter**, Kintla Yoga Therapy training workshop, Lansing, MI Presented on the neurobiology of trauma in a foundations for mental health practitioners workshop
- Jan 2019 **Expert Panelist**, Finding Our Voice: Sister Survivors Speak, MSU Museum Speaker Series. Public discussion: “Understanding Trauma: Scientific, Clinical, and Interpretive Perspectives on Sexual Violence”
- Oct 2018 **Speaker**, Diversity in STEM Series, MSU College of Natural Science Presented on researching the neurobiology of trauma: does personal experience, politics, and identity inform or bias the science?
- Oct 2018 **Speaker**, Diversity in STEM Series, MSU College of Natural Science Presented on the reciprocal relationship between STEM research and advocacy in the work to end sexual violence
- Apr 2018 **Speaker**, Survivor Empowerment Day, Michigan Capitol, Lansing, MI Spoke on using legislative efforts to aid in sexual assault prevention/response
- Feb-Dec 2018 **Presenter/program developer**, MSU Sexual Assault Program workshops MI State Univ., E. Lansing, MI. Developed 5 workshops with team of service providers to offer MSU community upon request (topics: rape culture myths and facts, neurobiology of trauma, perpetrator tactics, supporting survivors)
- Aug 2016 **Workshop presenter**, Kintla Yoga Therapy teacher training, Lansing, MI Presented on the neurobiology of trauma at a certification class to provide yoga therapy to trauma survivors
- Apr 2016 **Speaker/workshop facilitator**, Graduate Student Sexual Assault Committee “Critical Conversations Series,” MI State Univ., E. Lansing, MI “Fireside Stories: Talking About Resilience and Recovery”

- Apr 2016 **Speaker/workshop facilitator**, Graduate Student Sexual Assault Committee
 “Critical Conversations Series,” MI State Univ., E. Lansing, MI
 “Joining the Journey: Partners with a History of Relationship Violence”
- Mar 2016 **Speaker/workshop facilitator**, Graduate Advocacy Conference
 MI State Univ., E. Lansing, MI
 “Combatting Rape Culture in Academic Settings”
- Feb 2016 **Speaker/workshop facilitator**, Graduate Student Sexual Assault Committee
 “Critical Conversations Series,” MI State Univ., E. Lansing, MI
 “Risky Relationships: Lending a Hand When You See One”
 Program: “The Escalation Workshop” by One Love
- Nov 2015 **Expert panelist**, Affirmative Consent Town Hall, MI State Univ., E. Lansing, MI
 Discussion on affirmative consent education in sexual violence prevention
- Apr 2015 **Moderator**, Center for Gender in Global Context Undergraduate Research
 Showcase, MI State Univ., E. Lansing, MI
 “Sexual Assault on College Campuses: Current Initiatives, Future Challenges”
- Apr 2015 **Speaker**, MSU Mental Health Awareness Week
 MI State Univ., E. Lansing, MI
 Addressing the effects of trauma in academic settings
- Mar 2015 **Expert panelist**, “State of Higher Education Town Hall”
 MI State Univ., E. Lansing, MI
 Fielded discussion on campus sexual assault policies
- Mar 2015 **Speaker**, TEDxMSU, MI State Univ. E. Lansing, MI
 “The Human Element in Recovery from Mental Illness and Addiction”
- Feb 2015 **Expert panelist**, “Mandatory Reporting Responsibilities of MSU Employees
 Town Hall,” MI State Univ., E. Lansing, MI
- Feb 2015 **Expert panelist**, “Student Senate Sexual Assault Roundtable”
 MI State Univ., E. Lansing, MI

SCIENCE EDUCATION/OUTREACH

- June 2018 **Panelist**, Optimizing Mentoring Relationships to Promote Diversity and
 Research Excellence, MI State Univ. Graduate School, E. Lansing, MI
- Mar 2017 **Presenter**, Brain Awareness Week demonstration
 Whitehills Elementary School, E. Lansing, MI

- Mar 2017 **Presenter**, Brain Awareness Week demonstration
Marble Elementary School, E. Lansing, MI
- Mar 2016 **Booth developer/leader**, “Brainatarium” at MSU Neuroscience Fair
MI State Univ., E. Lansing, MI
- Mar 2016 **Presenter**, Brain Awareness Week demonstration
Cornel Elementary School, Okemos, MI
- Nov 2015 **Booth developer/leader**, “Brainatarium” at MSU Women in Engineering Girl
Scout STEM Day, MI State Univ., E. Lansing, MI
- Sep 2015 **Speaker**, MSU Lyman Briggs College senior seminar
MI State Univ., E. Lansing, MI
How to extend “diversity in science” initiatives beyond race/gender to include
disability, sexual orientation, gender identity, age, etc
- Mar 2015 **Booth developer/leader**, “Brainatarium” at MSU Neuroscience Fair
MI State Univ., E. Lansing, MI
- Mar 2015 **Presenter**, Brain Awareness Week demonstration
Cornel Elementary School, Okemos, MI
- Mar 2015 **Booth developer/leader**, “Brainatarium” at MSU Graduate Women in Science
Girls Math and Science Day, MI State Univ., E. Lansing, MI
- Mar 2015 **Speaker**, MSU Lyman Briggs College Women in Science Meeting
MI State Univ., E. Lansing, MI
Overcoming challenges in science for minority/marginalized populations
- Jun 2014 **Instructor**, MSU 4H Exploration Days neuroscience class
MI State Univ., E. Lansing, MI
- Mar 2013 **Booth leader**, Neuroscience Fair, Grand Rapids Public Museum, MI
- Nov 2012 **Instructor**, MSU Brain Bee workshop, MI State Univ., E. Lansing, MI
- Mar 2012 **Presenter**, Brain Awareness Week demonstration
MI State Univ., E. Lansing, MI

TEACHING EXPERIENCE

Graduate Teaching Assistant, Michigan State University

Nervous System Development (NEU 416), Fall 2016

Psychology and Biology of Human Sexuality (NEU 310), Summer 2017, Spr. 2016, Summer 2016

Introduction to Neuroscience II (NEU 302), Spring 2017, Spring, 2015, Spring 2014

For all above: Lectured on areas of my expertise (brain control of emotion, addiction, PTSD, stress, sexual abuse/assault, sexual orientation). Held out-of-class review sessions, met one-on-one with students, graded assignments and exams, wrote exam questions. Designed and evaluated a special project for students enrolled to receive honors credit for the course.

Graduate Teaching Assistant, Eastern Illinois University

Animal Physiology (BIO 3520), Spring 2011

Human Physiology (BIO 2091), Spring 2011, Fall 2009

General Biology (BIO 1100), Fall 2010

Endocrinology (BIO 5406), Spring 2010

Genetics (BIO 3200), Spring 2010, Fall 2009

For all above: Organized and supervised the 3-hour laboratory sections of the above courses. Responsibilities included setting up labs, introducing and teaching lab goals and techniques, supervising use of lab equipment, grading lab reports and assignments/exams from the lecture sections of the corresponding course.

Undergraduate Teaching Assistant, Eastern Illinois University

Human Anatomy (BIO 2200), Spring 2008

Organized and supervised the 3-hour laboratory section of the above course. Responsibilities included using models and human cadavers to teach anatomy lessons, developing lab practical exams, and dissecting/preparing cadavers for use

MENTORING EXPERIENCE

Mentor for undergraduate research, Michigan State University

Jan 2016-2018 **Mentee: Susheela Sreedhar**

Mentored in designing and carrying out a project examining the effect of social support on the traumatic stress response

Jan-May 2016 **Mentee: Alla Kedzierski**

One-semester individual introduction to neuroscience research with a primary focus on assessing anxiety and depression behaviors

Jun 2014-2017 **Mentee: Rebecca "Cassie" Benjamin**

Beckman Scholars Program, Dean's Research Scholar

Mentored in designing and carrying out a two-year project examining effects of predator stress in male and female rats

Jan-May 2014 **Mentee: Grace Kamau**
 One-semester individual introduction to neuroscience research

HONORS AND AWARDS

Apr 2017 **MSU Graduate Office Merit Fellowship (\$1320)**
 Jan 2017 **MSU College Nat. Sci. Dissertation Completion Fellowship (\$6000)**
 May 2016 **MSU College Nat. Sci. Dissertation Continuation Fellowship (\$6000)**
 May 2016 **MSU Graduate Office Merit Fellowship (\$1250)**
 May 2015 **MSU College Nat. Sci. Dissertation Continuation Fellowship (\$6000)**
 Apr 2015 **MSU Graduate School Travel Award (\$500)**
 Nov 2014 **MSU Neuroscience Program Travel Award (\$750)**
 May 2014 **MSU College Nat. Sci. Dissertation Continuation Fellowship (\$6000)**
 Apr 2014 **MSU Neuroscience Program Travel Award (\$750)**

PROFESSIONAL MEMBERSHIPS

International Society for Traumatic Stress Studies
 Society for Neuroscience
 Organization for the Study of Sex Differences
 Society for Behavioral Neuroendocrinology
 International Behavioral Neuroscience Society

PUBLICATIONS

Peer-reviewed journal articles

- Pooley AE**, Striker, Sam J., Striker, Kintla (2019) Therapeutic efficacy of yoga in individuals with varied traumatic stress histories. *Brain, Body, Cognition*, 8(1).
- Brown J, Clark DL, **Pooley AE** (2018) Exploring the Use of Neurofeedback Therapy in Mitigating Symptoms of Traumatic Brain Injury in Survivors of Intimate Partner Violence. *Journal of Aggression, Maltreatment, and Trauma*, 28(6).
- Pooley AE**, Benjamin RC, Sreedhar S, Eagle AL, Robison AJ, Mazei-Robison MS, Breedlove SM, Jordan CJ (2018) Sex differences in the traumatic stress response: The role of adult gonadal hormones. *Biology of Sex Differences*, 9(32).
- Pooley AE**, Benjamin RC, Sreedhar S, Eagle AL, Robison AJ, Mazei-Robison MS, Breedlove SM, Jordan CJ (2018) Sex differences in the traumatic stress response: PTSD symptoms in women recapitulated in female rats. *Biology of Sex Differences*, 9(31).

Pooley, AE, Luong M, Hussain A, Nathan BP (2015) Neurite outgrowth promoting effect of 17- β estradiol is mediated through estrogen receptor alpha in an olfactory epithelium culture. *Brain Research*, 1624: 19-27.

Hussain A, Luong M, **Pooley A**, and Nathan BP (2013). Isoform-Specific Effects of ApoE on Neurite Outgrowth in Olfactory Epithelium Culture. *J. of Biomedical Science*, 20(49).

Jia C, Hayoz S, Hutch CR, Iqbal TR, **Pooley AE**, and Hegg C (2013). An IP3R3- and NPY-Expressing Microvillous Cell Mediates Tissue Homeostasis and Regeneration in the Mouse Olfactory Epithelium. *PLoS ONE*, 8(3):e58668

Dissertation/thesis

Pooley, AE (2017). Traumatic stress responses in rats reveal fundamental sex differences that mirror PTSD in men and women. Dissertation. Michigan State University: East Lansing, MI.

Pooley, AE (2011). Estrogen Promotes Neurite Outgrowth in Olfactory Epithelial Explant Cultures Through the Estrogen Receptor. Master's thesis. Eastern Illinois University: Charleston, IL.

Books

Breedlove, S. M. (2017). *Foundations of neural development*. Sunderland, MA: Sinauer Associates. (editor and content development contractor)

Pooley, Apryl E. (2015). *Fortitude: A PTSD Memoir*. Seattle, WA: Gravity, 257pp. ISBN: 978-1-62015-840-1

CONFERENCE PRESENTATIONS

Pooley A.E. Breedlove, S.M., and Jordan, C.L. Sex differences in the traumatic stress response: PTSD symptoms in women recapitulated in female rats. Annual Society for Behavioral Neuroendocrinology Meeting. Toronto, ON. July 2018 (Presented Poster)

Pooley A.E. Breedlove, S.M., and Jordan, C.L. Sex differences in rat traumatic stress responses recapitulate sex differences in men and women with PTSD. Organization for the Study of Sex Differences Annual Meeting. Atlanta, GA. April 2018 (Presented Poster)

Pooley A.E. Robison, A.J., Mazei-Robison, M.S., Eagle, A.L., Breedlove, S.M., and Jordan, C.L. Sex-specific phenotypes in a rat model of post-traumatic stress disorder (PTSD). Annual Society for Neuroscience Conference. San Diego, CA. November 2016 (Presented Poster)

Pooley A.E., Breedlove S.M., and Jordan, C.L. Sex-specific phenotypes in a rat model of post-traumatic stress disorder (PTSD). 4th Annual MSU Conference on Women's Health Research. East Lansing, MI. Nov. 2015. (Presented Poster)

Pooley A.E. Robison, A.J., Mazei-Robison, M.S., Eagle, A.L., Breedlove, S.M., and Jordan, C.L. Sex-Specific Phenotypes in a Rat Model of Post-Traumatic Stress Disorder (PTSD). Annual Society for Behavioral Neuroendocrinology Meeting. Asilomar, CA June 2015 (Presented Poster)

Benjamin, R.C., **Pooley A.E.**, Breedlove, S.M., and Jordan, C.L. Sex-Specific Phenotypes in a Predator Exposure Model of Post-Traumatic Stress Disorder (PTSD). Annual Society for Behavioral Neuroendocrinology Meeting. Asilomar, CA June 2015 (Undergraduate mentee-presented poster)

Pooley A.E. Robison, A.J., Mazei-Robison, M.S., Eagle, A.L., Breedlove, S.M., and Jordan, C.L. The Single Prolonged Stress (SPS) Model of Posttraumatic Stress Disorder (PTSD) Induces a PTSD-like Phenotype in Male Rats but a Depressive-Like Phenotype in Female Rats. Annual Society for Neuroscience Conference. Washington, D.C. November 2014. (Presented Poster)

Pooley A.E., Breedlove S.M., and Jordan, C.L. Sex-specific phenotypes in a rat model of post-traumatic stress disorder (PTSD). 3rd Annual MSU Conference on Women's Health Research. East Lansing, MI. Oct. 2014. (Presented Poster)

Pooley A.E., Breedlove S.M., and Jordan, C.L. Sex Differences in the Single Prolonged Stress Model of Posttraumatic Stress Disorder. Uniformed Services University Center for the Study of Traumatic Stress Annual Amygdala, Stress, and PTSD Conference. Bethesda, MA. April 2014. (Presented Poster)