

Jiaying (Mai) Xu

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Education

Brandeis University, Waltham, MA Master of Arts in Experimental Psychology GPA: 3.8/4.0, Cum Laude Thesis: <i>Alcohol as a Predictor of Sexual Aggression Recidivism</i> Chair: Raymond A. Knight, Ph.D. Reader: Ellen J. Wright, Ph.D.	June 2023 – May 2025
Brandeis University, Waltham, MA Bachelor of Arts in Philosophy and Psychology (Double Major) GPA: 3.7/4.0, Dean's List, Cum Laude	August 2020 – May 2023

Honors and Awards

CAS President's International Fellowship (PIFI) — Research Intern	2025
Psi Chi International Honor Society in Psychology (Member)	2024
Outstanding Teaching Fellow (Psychology)	2024
Graduate Student Professional Development Fund (GSAS) — Travel Award	2024
Merit Scholarship, Brandeis University	2023–2024
Graduate School of Arts and Sciences Grant, Brandeis University	2023–2024

Skills & Test Scores

Analytic: Structural Equation Modeling (SEM), Latent Class / Profile Analysis (LCA/LPA), Quantile Regression, Regularized (LASSO/Ridge/Elastic-Net) Logistic Regression, Multilevel Modeling (MLM), Mediation/Moderation, Bayesian Estimation, Machine Learning (Random Forests, Causal Forests [grf]), Meta-analytic modeling; R (tidyverse, lavaan, lme4, glmnet, brms, grf, metafor), Python (pandas/numpy), SPSS, JASP, jamovi, Mplus
Neuro: EEG preprocessing (artifact removal, QC, filtering); fMRI QC and segmentation with FSL and FreeSurfer (aseg, hippocampal subfields)
Meta-analysis: Systematic screening (Covidence), effect-size computation/modeling (metafor), PRISMA documentation, IRR calibration
Data/Infra: GitHub, Colab, REDCap, Qualtrics, L^AT_EX; reproducible R pipelines
Languages: Mandarin (native), English (bilingual), Spanish/Japanese (intermediate)
GRE: 166 Verbal, 165 Quantitative (97th percentile; June 2021)
TOEFL: 114/120 (99th percentile; June 2016)

Publications & Preprints

- Xu, J., & Xu, H. (in preparation). Modifiable lifestyle and psychosocial factors that buffer the long-term impact of adverse childhood experiences on adult cognitive ability: Evidence from the UK Biobank.
- Xu, J., Zhao, C., Qin, H., & Xu, H. (submitted). Comparing DSM-5 and ICD-11 PTSD diagnoses and complex PTSD in adolescents: Associations with adverse childhood experiences.
- Qin, H., Xu, J., Wang, J., Wang, W., & Xu, H. (2025). *Brain structural underpinnings of the differential effects of threat and deprivation on executive function: A UK Biobank study*. medRxiv. <https://doi.org/10.1101/2025.09.03.25333003>
- Xu, J., & Knight, R.A. (2025). *Alcohol as a Predictor of Sexual Aggression Recidivism* (Master's thesis, Brandeis University). Open access: <https://doi.org/10.48617/etd.1387>

Posters

- Xu, J., & Knight, R.A. (September 2025). *Alcohol as a Predictor of Sexual Aggression Recidivism*. Poster presented at the Association for the Treatment & Prevention of Sexual Abuse (ATSA) Annual Research & Treatment Conference; Orlando, Florida.
- Xu, J., & Xu, H. (December 2025). *Causal forest estimation of protective lifestyle and psychosocial factors buffering adverse childhood experiences in adult cognition: Evidence from the UK Biobank*. Poster accepted for presentation at the Annual Academic Conference of the Institute of Psychology, Chinese Academy of Sciences; Beijing, China.

Research Experience

Research Fellow & Lab Manager—Developmental and Psychopathology Studies

Jun 2025 – Present

State Key Laboratory of Cognitive Science & Mental Health, Institute of Psychology, Chinese Academy of Sciences (PI: Hang Xu, Ph.D.; PI: Weiwen Wang, Ph.D.)

Adversity, resilience, and intervention mechanisms across developmental and adult samples.

- **UK Biobank causal inference study** Designed and implemented a causal-forest (grf) workflow (orthogonalization, cross-fitting) to estimate CATEs of ACEs on adult executive function; built reproducible R pipelines integrating modifiable lifestyle/psychosocial traits, cognitive outcomes, and inflammatory biomarkers; tested C-reactive protein as a potential mediator and moderator in the ACE–cognition pathway.
- **Threat vs. deprivation neuroimaging study** Conducted analyses of brain subregion volumes (hippocampal, striatal, thalamic) in R; contributed to manuscript preparation and interpretation of differential effects of deprivation and threat on executive functions.
- **Adolescent PTSD/CPTSD diagnostic study** First-author project comparing DSM-5 vs. ICD-11 diagnoses among clinical adolescents and healthy university controls; conducted data collection, applied LASSO regression and ROC analysis to identify ACE predictors and diagnostic distinctions; manuscript submitted for publication.
- **Juvenile intervention RCT** Supported grant-funded project planning for a trauma-informed intervention with juvenile offenders; contributed to protocol design including baseline and post-intervention EEG/MRI assessments, mental health and ACE measures, and study workflow preparation prior to data collection.
- **Trauma-Informed Organizational Assessment (TIOA)** Collaborated on the UCLA-developed TIOA program to translate, culturally adapt, and implement it in China; co-led clinician training; created facilitator guides, fidelity metrics, and implementation checklists for national rollout.
- **Survey design and data collection (Graduate Health Psychology course)** Designed, distributed, and cleaned 12 surveys assessing constructs including PHQ-9, GAD-7, TAS-20, and related psychological measures; compiled and organized datasets for classroom-based research analyses.
- **Lab management** Trained and supervised junior RAs; maintained IRB compliance and databases; managed ordering of laboratory materials (e.g., proteins, viral vectors, pipette tips); coordinated meeting room and operation room reservations.

Research Assistant — Emotion Regulation Meta-Analysis

Feb 2025 – Present

Harvard University/Yale University (PI: Mark Shuquan Chen, Ph.D.)

Cross-cultural update of a prior Nature Human Behavior meta-analysis on emotion regulation and mental health.

- Participated in screening over 15,000 records against inclusion and exclusion criteria.
- Took part in coder training and reliability checks to ensure consistency across raters.
- Coded study characteristics (e.g., demographics, cultural indices, emotion regulation measures, outcome variables) and entered data in Excel extraction sheets.
- Contributed to weekly meetings and documentation of coding decisions for transparency and reproducibility.

Research Fellow — SMILE & Big4 META Projects

Oct 2024 – Present

Lab for Youth Mental Health, Harvard University (PI: John Weisz, Ph.D.)

Meta-analyses of school-based interventions (SMILE)

- Screened >3,000 studies and documented PRISMA flow diagrams.
- Extracted psychotherapy, outcome, and related data on Covidence.
- Participated in coder training and audits to calibrate interrater reliability (Cohen's κ).
- Contributed to weekly consensus meetings to resolve coding discrepancies and refine inclusion criteria.
- Assisted with quality control and codebook updates to ensure consistency across coders.

Research Intern — Pediatric Behavioral Health Integration Project

Aug 2023 – Jun 2024

Boston Children's Hospital, Pediatric Physicians' Organization at Children's (PPOC)

(Supervisors: Maria Jesus Arrojo, LMFT/LMHC; Jonas Bromberg, Psy.D.)

Clinical research supporting digital and systems-level strategies for youth behavioral health integration.

- Conducted needs assessment of >80 digital mental health tools; identified gaps in evidence base, usability, and implementation feasibility.
- Designed and deployed clinician surveys (SurveyMonkey / Qualtrics) to evaluate digital integration readiness across outpatient clinics.
- Analyzed survey data and synthesized recommendations for platform design and IT development roadmap.
- Prepared reports and internal presentations to inform program expansion across pediatric practices.
- **Clinical shadowing:** Observed diagnostic interviews, family therapy sessions, and outpatient consultations across Boston Children's Hospital clinics in Waltham, Newton, and Cambridge.

Graduate Researcher — Master's Thesis (Alcohol & Recidivism)**Jun 2023 – May 2025**

Knight Lab, Brandeis University (PI: Raymond A. Knight, Ph.D.)

Examined alcohol use as a predictor of sexual aggression recidivism using archival offender datasets.

- Integrated four official recidivism data sources (Massachusetts Board of Probation, Parole Board, Treatment Center Authorized Absence Program, and FBI records) from the Massachusetts Treatment Center and National Institute of Justice to construct comprehensive longitudinal datasets spanning 1–15 years post-release.
- Developed a preregistered plan (IRB-approved); extracted and coded files using the MTC Coding Dictionary.
- Derived a 28-item alcohol-use index via EFA with strong reliability (Cronbach's α).
- Modeled differential effects of alcohol use on general, violent, and sexual recidivism outcomes using logistic and Cox regression analyses.
- Presented findings at the ATSA annual conference; thesis available open access via Brandeis University.

Undergraduate Research Assistant — Psychopathy & Sexual Aggression**Jun 2022 – May 2023**

Knight Lab, Brandeis University (PI: Raymond A. Knight, Ph.D.; Supervisor: Sonja Krstic, Ph.D.)

Contributed to theoretical model refinement on developmental and personality predictors of sexual aggression.

- Conducted systematic searches of longitudinal and forensic studies via PsycINFO and PubMed to identify developmental antecedents of psychopathy and aggression.
- Critically appraised empirical findings and theoretical models (e.g., MTC, dual-pathway, and trait-based frameworks) to clarify construct boundaries.
- Composed integrative literature syntheses and summary briefs informing grant proposals and manuscript revisions.

Undergraduate Summer Research Assistant — Socioeconomic & Wellbeing Studies**May 2021 – Sep 2021**

Institute of Psychology, Chinese Academy of Sciences (PI: Xuefeng Chen, Ph.D.)

Studied socioeconomic and family factors in parenting, wellbeing, and income–happiness links.

- Synthesized literature on poverty, parenting, and wellbeing to align cross-project theory.
- Cleaned, merged, and analyzed large-scale survey data (SPSS/Excel); built codebooks, mappings, and summary tables for consistent analyses.
- Authored internal research briefs and contributed analyses/text to a senior-authored manuscript (acknowledged contributor).

Extracurricular Activities**Co-Founder, Muhe Mood Psychology (Brandeis Chapter)****Dec 2022 – Jan 2024**

Brandeis University, Waltham, MA

- Built a community of ~114 international students; established mission, bylaws, and a rotating leadership team.
- Designed and delivered psychoeducation workshops and peer-support circles in partnership with the Counseling Center and ISSO.
- Launched a multilingual outreach pipeline (email, WeChat, Instagram); produced ~100 campaigns and an anonymous letter-exchange initiative.
- Created facilitator guidelines (boundaries, risk flags, referral pathways) and a quick-reference “help map” for campus resources.
- Ran program feedback loops (attendance logs, quick pulse checks) to iteratively improve topics and accessibility.

Teaching Experience**Graduate Course Assistant (CA), Brandeis University****2024–2025**

- PSYC — *Developmental Psychology* (Fall 2024; Instructor: Hannah Snyder)
- PSYC — *Statistics in R* (Fall 2024; Instructor: Paul DiZio)
- PSYC — *Introduction to Psychology* (Spring 2025; Instructor: Ryan Lundell-Creagh)
- PSYC — *Statistics in R* (Spring 2025; Instructor: Ryan Lundell-Creagh)

Duties across courses: weekly office hours and review sessions; in-class Q&A and R lab support; grading of homework, R Markdown projects, and exams; written feedback and grade management; led child observation sessions at the Lemberg Children's Center; created review guides and sample R code/templates; proctored exams and coordinated make-ups; maintained LMS gradebook and handled student Q&A; managed regrade requests and academic-integrity logistics.