

Xiao Ma

STATEMENT OF RESEARCH INTEREST

My research interests focus on how construal levels affect perceived control and self-control processes, and how this research can be applied to interpersonal settings to facilitate growth and bridge performance gaps in minority students.

EDUCATION

NYU Graduate School of Art and Science, **PhD student in Social Psychology**, Fall 2021-present
Carleton College, **B.A. Psychology & B.A. Statistics**, March 2019

PUBLICATIONS

Ma X., Pushkarskaya H., Megli A., Russell C., Pittenger, C. (2021) OCD Influences Evidence Accumulation During Decision Making in Males but Not Females During Perceptual and Value-Driven Choice. *Frontiers in Psychiatry*

Ma X., Heckler A., Roth K., Forte J., Pittenger C., Pushkarskaya, H., Adams, T. (In review). Harm Avoidance, Incompleteness, and Quality of Life in Obsessive-Compulsive Disorder (OCD)

Luo J., Xiao J., **Ma X.** (In prep). Would family factors modify the effects of neighborhood disadvantages on child mental health? A US population-based study

CONFERENCE PROCEEDINGS

Ma X., Pittenger C., Pushkarskaya H. (2020 May). *Males but not Females with OCD Accumulate more Evidence during Decisions across Contexts*, **Society of Biological Psychiatry**

POSTERS AND PRESENTATIONS

Ma X., Lu C., Yang J., Trope Y. (2023 February). *Perceived Control, Motivation, and Construal Levels*, **SPSP Annual Convention Motivation Preconference**

Ma X., Chen S., Sun X., Guo K. (2022 February). *The Role of Social Support for Chinese International Students in the U.S. Amidst Deportation Worries*, **SPSP Annual Convention Health and Well-being Preconference**

Lutsky N., McMillan D., Chan J., Sandeno E., **Ma M.**, White L., Nguyen N., Gasior M., Harris Z., Liu C., Brog J., Magid S. (2019 July). *Positively Reframing Tasks as Opportunities*, **World Congress on Positive Psychology**

Ma X. (2019 April). *Do App-Based Mindfulness Programs Reduce Stress and Increase Well-Being*, **Minnesota Undergraduate Psychology Conference**

Sandeno E., White L., **Ma M.**, Chan J. (2018 October). "Do I Have To?" *Motivation by Opportunity Versus Necessity*, **Carleton Student Research Symposium**

Min S., Bokor S., Eppard K., Kwon C., **Ma M.**, Reith I., Sharer A., Neiworth J. (2017 October) *Age-Related Neural Degeneration in Memory Structures in An Animal Model of Alzheimer's Disease: Cotton Top Tamarins*, **Midbrains Conference – Midwest Regional Neuroscience Conference**

RESEARCH EXPERIENCE

NYU Trope Lab, NYU GSAS Social Psychology Program,
PhD Student, 2021 - present

Effects of Control over Different Construal Levels of Tasks

Project Supervisor: Dr. Yaacov Trope, New York University

- Reviewed literatures on the effect of perceived control and construal level on motivation
- Design questionnaires about students' perceived control, motivation, and meaning of the task
- Completed IRB training and acquired IRB approval for the study
- Collected data over NYU SONA and conducted ANOVA and factor analysis
- Supervised one master student and three undergrad students in research training

Yale OCD Research Clinic, Yale University School of Medicine,
Post-Graduate Research Associate (paid position), 2019 - 2021

Research Responsibilities (50% of duty)

Principal Investigators: Dr. Helen Pushkarskaya and Dr. Christopher Pittenger

Project 1: Perceptual- and Value-based Decision Making (PVDM)

- Independently collected behavioral, eye-tracking, and neural imaging data from 30+ subjects
- Cleaned, transformed, and prepared behavioral, imaging, and self-report data for HDDM analysis
- Wrote scripts in R, Python, and MATLAB to automate behavioral data processing and run analysis
- Wrote scripts to process fMRI imaging data in Human Connectome pipeline
- Applied computational analysis to examine decision making in participants with obsessive-compulsive disorder using the hierarchical drift-diffusion model (HDDM)
- Findings revealed that males had a higher decision threshold and collected more evidence than females across contexts for the first round of analysis; more analysis planned and pending
- First authored a conference proceeding and assisted principal investigator in manuscript preparation
- Supervised two undergrad students in conducting behavioral protocols of PVDM tasks

Project 2: Harm Avoidance, Incompleteness, and Quality of Life in OCD

- Initiated supervised self-study on quality of life in OCD subjects
- Exported protected health information from REDCap and managed it in a HIPAA-compliant storage system
- Used custom R scripts to conduct data quality control, data pre-processing, and exploratory analysis and linear modeling on quality of life, symptom severity, and motivational traits
- Findings suggested that two motivational traits of OCD, incompleteness and harm avoidance, strongly predict quality of life impairments
- Presented preliminary results in the Yale OCD Research Clinic lab meeting and contributed to lab discussions on improving REDCap data capture structure
- Authored methods and results sections of the manuscript

Clinical Responsibilities (50% of duty)

Clinical Supervisors: Dr. Brian Zaboloski and Dr. Benjamin Kelmendi

- Performed structured 20-30 min phone screens for psychopathology symptoms, medication and treatment history, drug and alcohol use, etc.
- Presented clinical information of individuals with obsessive-compulsive disorder symptoms and healthy control participants in clinical rounds
- Independently managed 100+ participant records in REDCap database
- Created and maintained study documents (protocols, consent forms, guidelines for research staff, etc.) locally and in HIPAA-compliant Yale systems
- Coordinated with clinical staff on healthy control intake and general population recruitment
- Coordinated weekly clinical meeting on subject recruitment, case discussion, and project updates

BeenThere, *Chinese Students Mental Health during COVID* White Paper Project

Research Assistant (Volunteer position), summer 2020

Project 1: Questionnaires Development

Project Supervisor: Shuquan Chen, Ph.D. candidate in Clinical Psychology, Columbia University

- Reviewed questionnaires related to the mental health of Chinese students abroad
- Designed questionnaire composition to include mental health conditions (e.g. stress, depression, life satisfaction) and latent factors that affect mental health (e.g. emotion-regulation, self-efficacy)
- Inspected translated version of inventories for accuracy and independently developed consent forms

Project 2: Data Analysis

Project Supervisor: Xiaoning Sun, Ph.D. in Clinical Psychology, University of Oregon

- Used custom R scripts to pre-process data and prepare the codebook (1222 subjects & 315 variables)
- Conducted exploratory analysis on resilience by examining the environment and interpersonal factors such as social support and perceived COVID-related stress
- Found average scores of depression and anxiety doubled compared to pre-COVID data and significant difference in perceived social support students across different suicidal ideation levels
- Generated visualizations that demonstrate factors correlated with better mental well and more frequent usage of mental health resources

Social Psychology Research Lab, Carleton College

Research Assistant (paid position), 2018 - 2019

Principal Investigator: Dr. Neil Lutsky

General Duties and Responsibilities

- Used R script to automate data cleaning and preliminary assumption checks
- Attended weekly lab meetings for project discussion and literature review

Project 1: Have-to vs Get-to Mindset

- Investigated how positively reframing tasks as opportunities affect task experience
- Designed research procedures and online questionnaires
- Developed diary prompts to collect subjective experiences about the study task
- Found “get-to” mindset is associated with less burdened feeling and procrastination
- Presented findings in Carleton Student Research Symposium

Project 2: Meaning in Time

- Explored how perspectives in time would impact a sense of meaning across different events
- Factor-analyzed data to explore and confirm constructs of inventories used (e.g. Multidimensional Existential Meaning Scale)

- Presented factor analysis findings at Statistics senior thesis

Psychology Senior Thesis: *Mindfulness Effects on Stress and Well-Being*, Carleton College

Advisor: Dr. Neil Lutsky, 2018 - 2019

- Conducted a literature review on the effect of app-based mindfulness practice and investigated the replication issues in four studies cited by a mindfulness app (*Headspace*)
- Examined research design, significance level, effect size of these studies and assessed the effects of app-based mindfulness programs on reducing stress and increasing well-being
- Authored a review paper on my investigation on the methodologies and findings on the effect of a app-based mindfulness intervention on attenuating stress while increasing psychological well-being

Statistics Senior Thesis: *Factor Analysis and R Application*, Carleton College

Independent Studies, winter 2019

- Self-learned concepts, assumptions, and models of exploratory factor analysis and implementation in R
- Confirmed the validity of scales (e.g. MEMS) used in a social psychology study via factor analysis

Cognitive Science Research Lab, Carleton College

Research Assistant (volunteer position), 2017 - 2019

Principal Investigator: Dr. Kathleen Galotti

- Developed questionnaires, collected informed consent, and interviewed participants
- Performed data analysis on assigned projects regarding decision-making and cognitive performance
- Explored course- and major-selection process and levels of rationality of high school and college students
- Investigated different knowledge representation and structures of expert versus novice children completing generation, memory and sorting tasks

Primate Research Lab, Carleton College

Research Assistant (paid position), 2017 - 2018

Principal Investigator: Dr. Julie Neiworth

- Shaped behaviors of cotton-top tamarins and collected data using iPad or data sheet on projects examining memory, social awareness, social learning, sharing, and altruism
- Sliced and stained brain tissues of monkeys and investigated the process of Alzheimer's disease formulation in primates with microscopes, specifically by measuring the density of glial cells and beta-amyloid plaques

HONORS AND AWARDS

SPSP Diversity Graduate Travel Award for the 2023 Annual Convention of Society of Personality and Social Psychology

Recipient of John K. Bare Prize for outstanding achievement in the study of psychology at Carleton College 2019 (awarded to one or two students per year)

Member/Secretary of the Mortar Board 2019 (a national honor society that recognizes college seniors for their achievements in scholarship, leadership, and service)

Honorable Mention in MCM/ICM Contest 2017 (#71557)

Honorable Mention in Moody's Mega Math Challenge 2015 (\$1,000 award)

MENTORED GRANTS

Dean's Undergraduate Research Fund (Yang, J.) \$1,000, New York University, 2023 Spring

Wasserman Center Internship Grant (Chen, S.) \$1,200, New York University, 2023 Spring

Wasserman Center Internship Grant (Yang, J.) \$1,200, New York University, 2022 Fall

PROFESSIONAL & VOLUNTEER EXPERIENCE

Cohort Representative (volunteer), Social Psychology, New York University, 2022-2023

Lead Writing Consultant (paid), Academic Support Center, Carleton College, 2017 - 2019

Student Departmental Advisor (volunteer), Psychology Department, Carleton College, 2018 - 2019

Happy Hour Program Facilitator (paid), Office of Health Promotion & Office of International and Intercultural Life, Carleton College, 2018 - 2019

Department Curriculum Committee (volunteer), Psychology Department, Carleton College, 2018 - 2019

Founder and Facilitator (volunteer), Recipe of Positivity, 2018 - 2019

Psychology Office Assistant (paid), Psychology Department, Carleton College, 2017

Mental Health Intern (volunteer), Zhiyuan Mental Health Service Office, 2013 - 2016

RELATED SKILLS

Programming Tools:

- **R** (ggplot2, dplyr, tidyr, stringr, arsenal), (200hr+)
- **Python** (HDDM, NumPy, Matplotlib), (75h+), **SPSS** (50h), **Matlab** (50h), **Java** (50h)
- Human Connectome pipelines via **Quantitative Neuroimaging Environment & ToolboX** (QUNEX) on high-performance computing node (25h)

Laboratory: fMRI, eye-tracking calibration

Clinical Phone Screen (50hr+)

Office: REDcap Data Management (100hr+), Microsoft Office Suite

Additional: Mental Health First Aid, E-Mindfulness Based Stress Reduction Certified (e-MBSR)