QINGGUANG ZHENG

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EDUCATION

2023.9-2026.7   **Beijing Normal University**   **Beijing, China**

M.Ed., Developmental Psychology; GPA: 3.66/4.00

Top 1 Psychology Program in China

Thesis: *The Impact of Spousal Interaction Themes and Patterns on Marital Quality: A Semantic Analysis*

Advisor: Dr. Xiaoyi Fang (Professor)

2019.9-2023.7   **Beijing Normal University**   **Beijing, China**

B.Sc., Psychology; GPA: 3.83/4.00

Minor in Pedagogy; GPA: 3.72/4.00

Top 1 Psychology Program in China

Thesis: *Emotional Semantic Features in Marriage Interview Text and Their Prediction of Marital Quality*

Advisor: Dr. Xiaoyi Fang (Professor)

HONORS AND AWARDS

Graduate

2024   First-Class Graduate Scholarship, Beijing Normal University (Top 15%; CNY 12,000)

2024   School-Level Excellent Teaching Assistant, Beijing Normal University (Top 10%; CNY 1,000)

2024   Second Prize (Project Title: *Fine-tuned BERT for Therapist-Client Interaction Encoding and Analysis*), MindSpore Innovation Competition (Top 20%)

2023   First-Class Graduate Freshman Scholarship, Beijing Normal University (Top 15%; CNY 12,000)

Undergraduate

2023   School-Level Outstanding Graduate, Beijing Normal University (Top 5%)

2023   Outstanding Undergraduate Thesis, Beijing Normal University (Top 5%)

2023   Merit Student, Beijing Normal University (Top 5%; CNY 1,000)

2022   Second-Class Undergraduate Scholarship, Beijing Normal University (Top 30%; CNY 3,000)

2022   Excellent Project Completion, National-Level Undergraduate Innovation and Entrepreneurship Research Project (Top 1%)

2022	Social Service Award, Beijing Normal University (5%; CNY 1,000)
2021	Second-Class Undergraduate Scholarship, Beijing Normal University (Top 30%; CNY 3,000)
2021	Excellent Project Completion, School-Level Undergraduate Innovation and Entrepreneurship Research Project (Top 5%)
2020	First-Class Undergraduate Scholarship, Beijing Normal University (Top 15%; CNY 5,000)
2019	Second-Class Graduate Freshman Scholarship, Beijing Normal University (Top 30%; CNY 3,000)

PUBLICATION AND MANUSCRIPT

Under Review

* indicates equal contribution

1. **Zheng, Q.**, Zhang J., Li, Q., Li, K., Ma, S., & Fang, X. (under review by *Journal of Marriage and Family*). We-Talk Boosts Marital Quality across Contexts: Roles of Perceived Understanding and Dyadic Congruence.

2. Tong, W.*, **Zheng, Q.***, Li, K., Feng, Tao., Zhao, M., & Fang, X. (under review by *Journal of Affective Disorders*). Emerging Mental Health Challenges Among Chinese Adolescents: An Urgent Call for National Epidemiological Data.

In Preparation

1. **Zheng, Q.** (in prep, *Master's Thesis*). The Impact of Spousal Interaction Themes and Patterns on Marital Quality: A Semantic Analysis.

2. Wang, X.*, **Zheng, Q.***, & Fang, X. (in prep). Fertility Decline: Need Fulfillment and Marital Quality as Predictors of Fertility Intentions Among Newlyweds.

3. Li, K., **Zheng. Q.**, Shen. J., & Fang, X. (in prep). In Which Conditions Parental Burnout Occur? Examining the BR^2 Model using the Cubic Surface Response Analysis.

CONFERENCE

1. **Zheng, Q.**, & Fang, X. (October 2023). Emotional Semantic Features in Marriage Interview Text and Their Prediction of Marital Quality, **poster** presented at the 25th National Academic Conference of Psychology, Chengdu, China.

2. **Zheng, Q.**, & Fang, X. (November 2023). Video-Based Machine-Learning Model for Couple Interaction Pattern Analysis, **poster** presented at the 2nd Academic Conference of the Marriage and Family Psychology and Counseling Professional Committee of the Chinese Psychological Society and the 6th International Symposium on Marriage and Family, Guangzhou, China.

3. Li, K., **Zheng, Q.**, & Fang, X. (November 2023). Prevalence of Mental Health Problems, Levels, and Comorbidity among Chinese Children and Adolescents: A Population- based Nationwide Study, **poster** presented at the 2nd Academic Conference of the Marriage and Family Psychology and Counseling Professional Committee of the Chinese Psychological Society and the 6th International Symposium on Marriage and Family, Guangzhou, China.

RESEARCH EXPERIENCE

Research Interests: Language Use | Spousal and Family Interactions | Relationship Science | Mental Health | Emotion | Natural-Language Processing | Semantic Space Representation | Digital Mental Health Interventions

Research Projects

2022.10-2025.6   **The Effect of Marital Interaction on Marital Relationship: Behavior and Cognitive Neurosis Mechanism**
Institute of Developmental Psychology, Beijing Normal University
A General Program from the National Natural Science Foundation of China, CNY 1,256,520 (USD 174,873)
PI: Dr. Xiaoyi Fang
Role: Primary Student Researcher

- Applied Natural Language Processing Methods, including Linguistic Inquiry and Word Count (LIWC), Latent Dirichlet Allocation (LDA) topic modeling, and Large Language Models (LLMs), to analyze 720 spousal interaction texts.
- Curated and managed database of over 1,200 spousal interaction video recordings (over 600 hours in length and over 1TB in storage), performing quality control, comprehensive metadata tagging and batch transcoding.
- Applied OpenFace, k-Nearest-Neighbors (k-NN), Whisper, and LLMs to perform multi-modal analyses (e.g., facial AU tracking, sentiment calculation, expression recognition, sound-to-text) for spousal interaction video recordings.
- Developed a semi-automatic pipeline with R (Shiny package) and Mplus to batch-process datasets via Structural Equation Modeling, extract model estimates, and visualize path diagrams.
- Implemented MATLAB REST Toolkit to perform preliminary analyses with fMRI data from 34 couples (over 100 SPM T-statistic images), applied FWE-corrected thresholds, logged cluster size and peak MNI coordinates

via CIreport, and exported significant clusters as ROI masks.

2022.10-2025.6	**Analyses of Chinese College Students' Mental Health Status and Revisions of College Students Mental Health Screening Scale (CSMHSS)**

Institute of Developmental Psychology, Beijing Normal University

Projects from Department of Moral Education, Ministry of Education of the People's Republic of China, CNY 800,000 (USD 111,312)

PI: Dr. Xiaoyi Fang

Role: Lead Student Researcher

- Annually analyzed the reliability and validity of CSMHSS and its norms in R with samples of over 250,000 people and revised the scale according to psychometric properties.
- Annually analyzed and visualized the nation-wide mental health conditions (e.g., prevalence, regional distributions, and trends of mental health problems) in R with samples of over 5,000,000 Chinese college students.
- Developed a fully reproducible R and Python pipeline (> 6,000 lines of code) that automates data cleaning, analyzing, modelling, visualizing, scale revising and report generating.
- Annually led graduate students provide a scale validation report, a data brief, and a policy consultation report for the Ministry of Education of the People's Republic of China.
- Awarded an appreciation letter for contribution to mental health assessment data analysis and thematic report from the Department of Moral Education, Ministry of Education of the People's Republic of China.

2020.1-2025.6	**The Dynamic Association between Marital Interaction and Marital Relationship Among Newly Couple: The Mediating Role of Marital Emotion and Affection**

Institute of Developmental Psychology, Beijing Normal University

A General Program from the National Natural Science Foundation of China, CNY 946,000 (USD 131,665)

PI: Dr. Xiaoyi Fang

Role: Primary Student Researcher

- Compiled a stimulus set of over 100 spousal-interaction video clips, led a five-member coding team in preliminary emotional valence annotation, and then recruited external participants who contributed over 26 000 valence ratings for subsequent analyses.
- Conducted fNIRS hyperscanning experiments with over 50 couples on a

NIRScout system (over 150 hours).

- Developed an end-to-end video-analysis pipeline in Python (TensorFlow), C++, and DeepSeek that pre-processes spousal-interaction footage (i.e., formatting, transcoding, trimming) and performs facial-expression recognition, speech-to-text transcription, interaction-pattern coding, and topic modeling.
- Developed an automatic pipeline with R, Python, HTML, and JavaScript to analyze self-reported questionnaire data, design, and produce customized feedback reports for over 400 participated couples.
- Negotiated and executed service contracts for large-scale speech-to-text transcription, cloud-computing resources, and two high-spec workstations, managing all vendor relations and compliance checks.

2021.6-2022.6	**Emotional Semantic Space: Individual Differences and Prediction of Emotional Well-Being**

State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University

A National Undergraduate Innovation and Entrepreneurship Training Program (a highly competitive nation-wide program that grants funding to the top 4% of projects) from the Department of Higher Education, Ministry of Education of the People's Republic of China, CNY 12,000 (USD 1,670)

PI: Dr. Yanchao Bi

Role: Core Team Member

- Programmed and ran the Multi-Arrangement Task (MAT) in MATLAB for 43 participants to assess the individual lexical-semantic spaces.
- Programmed stroop, go/nogo, n-back, word-association and mental-arithmetic paradigms in PsychoPy and deployed them as online experiments on the Naodao platform (www.naodao.com).
- Applied hierarchical clustering and relevance vector regression (RVR) to predict depression and anxiety scores from semantic-space metrics in a sample of 275 participants.

2020.6-2021.6 **Associations Between Individual Lexical-Semantic Spaces and Emotional Patterns, Social Values and Moral Tendencies**
State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University

A School-Level Undergraduate Innovation and Entrepreneurship Training Program from the State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, CNY 7,000 (USD 974)

PI: Dr. Yanchao Bi

Role: Core Team Member

- Compiled a stimulus set of 24 emotion words, 30 moral words, 30 social words, 42 facial expression images and 27 moral-dilemma vignettes.
- Programmed and ran paired-similarity ratings and triplet odd-one-out tasks in MATLAB to assess participants' lexical-semantic structures.
- Implemented MouseTracker-based facial-emotion recognition tasks to capture fine-grained emotional-response patterns of participants.
- Applied support-vector machine analysis (SVM) and representational similarity analysis (RSA) to link lexical-semantic structures with behavioral indices (mouse-trajectory curvature, social-value-orientation, and moral-judgment tendency).

TEACHING ASSISTANTSHIP

2025 Spring	**Family Therapy**	**Beijing, China**
	Faculty of Psychology, Beijing Normal University	

- Professor: Dr. Xiaoyi Fang
- Graduate-level optional course; taught in Chinese

2023 Fall	**Family Psychology**	**Beijing, China**
	Faculty of Psychology, Beijing Normal University	

- Professor: Dr. Xiaoyi Fang
- Undergraduate-level optional course; taught in Chinese
- Awarded the School-Level Excellent Teaching Assistant at Beijing Normal University in 2024.

CONSULTATION AND PRACTICAL EXPERIENCE

2021.9–	**Group Supervision**	**Beijing, China**
	The Center for Marriage and Family Research and Therapy, Beijing Normal University	

- Supervisor: Dr. Xiaoyi Fang
- 8 times a semester; over 160 hours in total

2023.9–2023.11	**Mental Health Teaching Internship**	**Beijing, China**
	Beijing No. 35 Middle School	

- Lectured psychology lessons and organized after-school activities for the psychology club.
- Assisted homeroom teacher's duties, e.g., taking attendance, monitoring

student behavior, and providing academic and emotional support.

- Awarded a commendation letter from Beijing No. 35 Middle School.

PROFESSIONAL MEMBERSHIP

Chinese Psychological Society (CPS)

CERTIFICATIONS

Certified High-School Mental-Health Education Teacher, China

PROFICIENCY

Programming: Python, R, Mplus, MATLAB, SPSS, SQL, JavaScript, C, C++, Pascal, C# (novice)

Methods:

- **Natural Language Processing (NLP):** Linguistic Inquiry and Word Count (LIWC), Latent Dirichlet Allocation (LDA) topic modeling, and BERT (and other LLMs) fine-tuning
- **Machine-Learning Algorithms:** Support Vector Machine (SVM), Random Forest, k-Nearest-Neighbors (k-NN), k-Means, Hierarchical Clustering
- **Deep-Learning Frameworks:** Mindespore, Tensorflow, PyTorch (novice)
- **Behavior Experimental Paradigm:** PsychoPy, jsPsych, Psychtoolbox | designing, coding & operating
- **Longitudinal Data Modeling:** Data management & cleaning, Structural Equation Modelling (SEM), and Generalized Linear & Mixed-Effects Models (GLM/HLM)
- **Neuroimaging Studies:** fNIRS (NIRScout data acquisition), and fMRI (MATLAB/REST viewer analysis)
- **Multimodal Data Processing:** OpenFace (facial AU tracking), and Whisper (speech-to-text)
- **Questionnaire Studies:** Wenjuanxing (a Chinese questionnaire platform same as Qualtrics), and Credamo (same as Amazon MTurk) | designing & sampling

Languages: Mandarin Chinese (native), English (TOEFL 106; R28, L30, S24, W24)