

QINGGUANG ZHENG

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EDUCATION

2023.9-2026.7	Beijing Normal University	Beijing, China
	M.Ed., Developmental Psychology; GPA: 3.7/4.0	
	Top 1 Psychology Program in China	
	Thesis: <i>The Impact of Spousal Interaction Themes and Patterns on Marital Quality: A Semantic Analysis</i>	
	Advisor: Dr. Xiaoyi Fang (Professor)	
2019.9-2023.7	Beijing Normal University	Beijing, China
	B.Sc., Psychology; GPA: 3.8/4.0	
	Minor in Pedagogy; GPA: 3.7/4.0	
	Top 1 Psychology Program in China	
	Thesis: <i>Emotional Semantic Features in Marriage Interview Text and Their Prediction of Marital Quality</i>	
	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: <i>Fine-tuned BERT for Therapist-Client Interaction Encoding and Analysis</i>), 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., Li, Q., Feng, T., & Fang, X. (under review by *Journal of Affective Disorders*). Hidden Burdens: Emotional and Behavioral Problems Among Chinese Adolescents and the Interplay of Family and Regional Socioeconomic Status.

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. Ma, S., **Zheng, Q.**, Li, Q., & Fang, X. (in prep). Neural Coupling in Newlyweds: Divergent Synchronization Patterns When Discussing Marital vs. Family-of-Origin Issues.
4. Li, K., **Zheng, Q.**, Shen, J., & Fang, X. (in prep). In Which Conditions Parental Burnout Occur? Examining the BR² 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 presentation]. 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 presentation]. 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 presentation]. 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.

Submitted

4. Li, K., **Zheng, Q.**, Shen, J., Liu, C., Deater-Deckard, K. (Submitted). *High Maternal Sensory Processing Sensitivity and Mindful Parenting: For Better or For Worse?* SRA 2026 Biennial Meeting, Toronto, Canada.

RESEARCH EXPERIENCE

Research Interests:

Marital and Family Dynamics | Relationship Science | Social Computation | Emotion |
Language and Social Interaction | Semantic Space | Natural Language Processing |
Mental Well-being | Digital Mental Health Interventions | LLMs Application |

Research Projects

2022.10-Present **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.
- Engineered a few-shot prompting strategy for state-of-the-art LLMs (Gemini, Deepseek) to automate the thematic coding of spousal interactions, boosting coding consistency from a 67% zero-shot baseline to 79%, achieving performance comparable to human annotators.

- 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.
- 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.
- 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 CReport, and exported significant clusters as ROI masks.

2022.10-Present

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: Primary 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 (> 7,000 lines of code) that automates data cleaning, analyzing, modeling, visualizing, scale revising, and report generating.
- Annually led a 4-member graduate student team to produce a suite of evidence-based reports, informing national status of mental health. Key deliverables included a scale validation and revision study, a data brief on emerging trends, and an advisory report on critical mental health issues.
- 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 China.

2020.1-Present

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 5-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 LLMs (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–Present	Group Supervision The Center for Marriage and Family Research and Therapy, Beijing Normal University	Beijing, China
	<ul style="list-style-type: none"> ● Supervisor: Dr. Xiaoyi Fang ● 8 times per semester; over 160 hours in total 	
2023.9–2023.11	Mental Health Teaching Internship Beijing No. 35 Middle School	Beijing, China
	<ul style="list-style-type: none"> ● 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 Modeling (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)