

CURRICULUM VITAE

Contact Information

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Professional Profile

Data-driven researcher utilizing large-scale cohorts to investigate the etiology of chronic diseases, with a specific focus on cardiovascular health. Possesses robust methodological expertise in analyzing complex longitudinal data using survival analysis, multistate models, and causal inference frameworks. Experienced in synthesizing genetic, behavior, and high-dimension biomarker data to dissect disease mechanisms. Also trained in health behavior intervention research, with experience developing and evaluating behavior change interventions informed by established behavioral theories, particularly in digital health.

Education and Employment

2021-present Assistant Research Fellow
Cardiovascular Key Laboratory of Zhejiang Province, The Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China
2015-2020 PhD in Preventive Medicine and Health Education
School of Public Health, Fudan University, Shanghai, China
2018-2019 Visiting PhD Student
Melbourne Centre for Behavior Change, School of Psychological Sciences, University of Melbourne, Melbourne, Australia
2010-2015 Bachelor of Medicine (Preventive Medicine)
School of Public Health, Shanxi Medical University, Taiyuan, China

Major Research Experience

Non-Genetic Risk Exposures, Genetic Predisposition, and Cardiovascular Diseases

Lead Researcher, UK Biobank (Application No. 86898), 2022-present

- **Research Management:** Managed the full lifecycle of research databases, handling data extraction, cleaning, and quality control for 500,000+ participants using cloud-

based platforms (e.g., Research Analysis Platform, RAP). Developed efficient pipelines in R and Python to process complex longitudinal phenotypes, electronic health record (EHR) data, and large-scale genotypic databases.

- **Study Execution & Publication:** Independently led multiple projects from conception to first-author publications, focusing on:
Lifestyle and socioeconomic factors in valvular heart disease progression.
Cardiovascular health and life expectancy in Type 2 Diabetes.
Association of genetic inhibition of HMGCR, NPC1L1, and PCSK9 with the initiation and progression of aortic stenosis: a Mendelian randomization study (ongoing).
Identifying sex- and genetic-specific modifiable factors for aortic stenosis in elderly adults from UK Biobank (ongoing).

Theory-Driven mHealth Intervention for Smoking Cessation

Investigator, National Natural Science Foundation of China (Grant No. 7057030169), 2016-2019

- **Intervention Development:** Used behavior change theories and behavior change techniques (BCT) to develop the research protocol and intervention framework. Identified design features for mHealth engagement through thematic analysis. Collaborated with engineers to develop a smoking cessation mobile application.
- **Mixed-Methods Evaluation:** Employed Structural Equation Modeling (SEM) and Latent Class Analysis (LCA) to validate the application of the Theory of Planned Behavior (TPB) in smokers' intentions to quit. Evaluated the effectiveness and user experience of the mobile app using mixed qualitative and quantitative methods.

Advocacy and Evaluation of Comprehensive Smoking-Free Legislation in Shanghai

Investigator, Bloomberg Initiative Grant (China 21-13 & RI16-02), 2015-2019

- **Study Design & Data Collection:** Designed investigation plans and coordinated city-wide surveys to monitor indoor air quality (PM2.5, nicotine) and assess public opinion on smoke-free legislation.
- **Data Analysis:** Used Generalized Linear Mixed Models (GLMM) to assess changes in observed smoking behavior and indoor secondhand smoke concentrations across three time points before and after policy implementation.

First-Author Publications

1. **Wei Y**, Sun D, Ng S, et al. Cardiovascular Health and Life Expectancy Free of Atherosclerotic Cardiovascular Disease among Patients with Type 2 Diabetes: a Cohort Study. *Eur J Prev Cardiol.* 2025. (IF: 7.5, Q1)
2. **Wei Y**, Sun D, Jaiswal S, et al. Association of Lifestyle with Valvular Heart Disease Progression and Life Expectancy Among Elderly People From Different Socioeconomic Backgrounds. *BMC Med.* 2024;22(1):367. (IF: 8.3, Q1)
3. **Wei Y**, Zheng P, Deng H, et al. Design Features for Improving Mobile Health Intervention User Engagement: Systematic Review and Thematic Analysis. *J Med Internet Res.* 2020;22(12):e21687. (IF: 6.0, Q2; Citations: 246)
4. **Wei Y**, Borland R, Zheng P, et al. Evaluation of the Effectiveness of Comprehensive Smoke-Free Legislation in Indoor Public Places in Shanghai, China. *Int J Environ Res*

Public Health. 2019;16(20).

5. **Wei Y**, Zheng P. Research Progress of Smoking Cessation Intervention Through Smartphone Applications. *J Shanghai Jiaotong Univ (Med Sci)*, 2017; 2:161-165. (Chinese Core Journal)
6. Liu Q*, **Wei Y***, Fan J, et al. Associations of Serum Testosterone and Sex Hormone-binding Globulin with the Risk of Degenerative Valvular Heart Diseases in Men and Women. (Submitted. Co-first author)

Conferences

1. **Wei Y**, Liu X, Wang J. Abstract 4121568: The Influence of Cardiovascular Health on Atherosclerotic Cardiovascular Disease Progression and Life Expectancy Among Individuals with Type 2 Diabetes. *Circulation*. 2024. (Abstract)
2. **Wei Y**, Borland R, Zheng P. An Empirical Examination of an Integrated Model for Individual Smoking Cessation among Chinese Adults. Accepted by the SRNT 26th Annual Meeting. 2019.
3. **Wei Y**, Zheng P. Impact of Tobacco Advertising on College Students' Smoking in Shanghai. Oral Presentation at the 18th National Conference on Tobacco Control. China, 2017.
4. **Wei Y**, Zheng P. Measurement of Secondhand Smoke in the Smoking Room and Passengers' Opinion in Public Transport Sites, Shanghai. Oral Presentation at the 11th Asia Pacific Conference on Tobacco or Health. China, 2016.

Teaching Experience

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| 2021-present | Developed and delivered training programs for cardiology clinical staff, including nurses and physicians, on medical statistics and randomized controlled trial design. |
| 2017 | Served as a Teaching Assistant for the "Preventive Medicine" course for international undergraduate medical students at Fudan University. |

Honors and Awards

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| 2018 | China Scholarship Council (CSC) Scholarship |
| 2017 | Academic Scholarship, Fudan University |

Skills

- **Software:** R (advanced), Python (intermediate), SAS (basic), NVivo (advanced)
- **Research Methodologies:** randomized controlled trials, multistate modeling, Mendelian randomization, systematic reviews and meta-analyses, survival analysis, structural equation modeling, generalized linear mixed models, propensity score matching, exposure-wide association studies
- **Languages:** Chinese (native), English (fluent)