

# Yan Luo

City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong, China

Email: [luo.yan@my.cityu.edu.hk](mailto:luo.yan@my.cityu.edu.hk) | Website: <https://luoyan.netlify.app>

## Education

### City University of Hong Kong

*Doctor of Philosophy in Data Science*

Supervisor: Dr. Qingpeng Zhang

Hong Kong SAR, China

Sep 2022–Present

### Peking University

*Master of Science in Epidemiology and Health Statistics*

Supervisor: Dr. Beibei Xu

Beijing, China

Sep 2020–Jul 2022

Thesis: Current Status of Frailty and its Associations with the Longitudinal Development of Multimorbidity among American Older Adults

### Peking University

*Bachelor of Medicine in Preventive Medicine*

Beijing, China

Sep 2015–Jul 2020

## Publications

\*indicates equal contribution

### Journal articles (Published)

- Luo Y, Huang ZT, Liu H, Xu HW, Su HX, Chen YM, Hu YH, Xu B. Development and validation of a multimorbidity index predicting mortality among older Chinese adults. *Frontiers in Aging Neuroscience*. 2022; 14: 767240. (2021 IF: 5.702; Geriatrics & Gerontology: Ranked 16/54)
- Luo Y\*, Zhang Q\*, Han L, Shen ZC, Wang K, De Fries CM, Huang ZT, Cao GY, Chen ZS, Su HX, Xu HW, Chen YM, Ren ZQ, Hu YH, Xu B. Trends in the prevalence of vision impairment among the oldest-old Chinese population from 1998 to 2018. *Journal of Global Health*. 2022;12:11006. (2021 IF: 7.664; Public, Environmental & Occupational Health: Ranked 26/210)
- Huang ZT, Luo Y, Han L, Wang K, Yao SS, Su HX, Chen S, Cao GY, De Fries CM, Chen ZS, Xu HW, Hu YH, Xu B. Patterns of cardiometabolic multimorbidity and the risk of depressive symptoms in a longitudinal cohort of middle-aged and older Chinese. *Journal of Affective Disorders*. 2022; 301: 1-7. (2021 IF: 6.533; Clinical Neurology: Ranked 29/212)
- Zhou W\*, Liu Y\*, Xu B\*, Wang S\*, Li S, Liu H, Huang ZT, Luo Y, Hu M, Wu W, Zhang Z, Long X, Zou W, Bian Y, Zou X, Elliott M, Yue L, Deng H, Chen H, Gao X, Wu Y, Fang M, Zhang B, Gao Y. Early identification of patients with severe COVID-19 at increased risk of in-hospital death: a multicenter case-control study in Wuhan. *Journal of Thoracic Disease*. 2021, 13(3): 1380-95. (2021 IF: 3.005; Respiratory System: Ranked 45/65)
- Yao SS, Xu HW, Han L, Wang K, Cao GY, Li N, Luo Y, Chen YM, Su HX, Chen ZS, Huang ZT, Hu YH, Xu B. Multimorbidity measures differentially predicted mortality among older Chinese adults. *Journal of Clinical Epidemiology*. 2022, 146: 97-105. (2021 IF: 7.407, Health Care Sciences & Services: Ranked 9/109)
- Cao GY, Wang K, Han L, Zhang Q, Yao SS, Chen ZS; Huang ZT, Luo Y, Hu YH, Xu B. Visual trajectories and risk of physical and cognitive impairment among older Chinese adults. *Journal of the American Geriatrics Society*. 2021, 69(10): 2877-2887. (2021 IF: 7.538; Gerontology: Ranked: 2/37)
- Yao SS, Meng XF, Cao GY, Huang ZT, Chen ZS, Han L, Wang K, Su HX, Luo Y, Hu YH, Xu B. Associations between Multimorbidity and Physical Performance in Older Chinese Adults. *International Journal of Environmental Research and Public Health*. 2020, 17(12): 4546. (2021 IF: 4.614; Public, Environmental & Occupational Health: Ranked 71/210)

### Journal articles (In Process)

- Luo Y, Chen YM, Wang K, De Fries CM, Huang ZT, Xu HW, Yang Z, Hu YH, Xu B. Associations between multimorbidity and frailty transitions among older Americans. Under review in the *Journal of Cachexia, Sarcopenia and Muscle*.
- Luo Y, Huang ZT, Chen YM, Xu HW, Su HX, Yang Z, Hu YH, Xu B. Trajectories of multimorbidity and frailty among older American adults. In Preparation.

## Books

- Li Y, Zhang Y, Xu B, Yu N, Cao GY, Chen ZS, Huang ZT, Luo Y, Su HX, Yao SS. Medical Information Analysis and Clinical Decision Support. Beijing: Peking University Medical Press. 2020. ISBN: 9787565922046.

## Conferences

- Luo Y, Huang ZT, Xu HW, Chen ZS, Su HX, Liu H, Xu B. Development and validation of multimorbidity index predicting mortality among Chinese older adults. Innovation in Aging 2021, 5(S1):S609. *The Gerontological Society of America (GSA) 2021 Annual Scientific Meeting*. Online. November 2021.

- Xu HW, **Luo Y**, Huang ZT, Chen ZS, Su HX, Xu B. Comparisons of different multimorbidity measures to predict physical function among middle-aged and older Chinese. *Innovation in Aging* 2021, 5(S1):S544 ***The Gerontological Society of America (GSA) 2021 Annual Scientific Meeting***. Online. November 2021.

## Awards and Honors

---

- The Second Prize of National Academic Scholarship (2021-2022, 2020-2021)
- Award for Academic Excellence, Peking University (2019-2020)
- The Chugai Scholarship for Excellent Medical Students, Peking University (2018-2019)
- The Second Prize Scholarship for Excellent Medical Students (The Eisai [China] Pharmaceutical Scholarship), Peking University (2017-2018)
- Award for Contribution in Student Organizations, Peking University (2017-2018, 2018-2019)

## Projects

---

### Multimorbidity measures

Medical Informatics Center, Peking University

Graduate Student Researcher

Nov 2020–Feb 2022

- Developed a multimorbidity index incorporating disease combinations identified by the association rule mining to predict mortality using the logistic regression among 11,853 older Chinese adults.
- Explored multimorbidity patterns by data mining methods including the explanatory factor analysis and the group-based trajectory model; compared the performance of different multimorbidity measures in predicting mortality and disability by Cox proportional hazards models.
- Presented research in the conference through a poster presentation as the first author; published two papers in the *Frontiers in Aging Neuroscience* (as the first author) and *Journal of Clinical Epidemiology* (as the co-author); assisted in completing the final research project report.

### Frailty and multimorbidity

Medical Informatics Center, Peking University

Graduate Student Researcher

May 2021–Aug 2022

- Identified multimorbidity patterns using the latent class analysis; examined the association between multimorbidity patterns and dynamic frailty transitions; described the trajectories of frailty status and multimorbidity among older populations.
- Submitted a paper to the *Journal of Cachexia, Sarcopenia and Muscle*.

### Cardiometabolic multimorbidity

Medical Informatics Center, Peking University

Graduate Student Researcher

Aug 2020–Jan 2022

- Examined the associations between cardiometabolic multimorbidity and adverse health outcomes, including depressive symptoms and disability, by generalized estimation equation models among more than 20,000 Chinese adults.
- Described the transitions of cardiometabolic disease, multimorbidity, and mortality utilizing multi-state Markov models among 17,250 older patients with hypertension.
- Investigated the literature related to multimorbidity patterns/clusters and the network analysis in the past five years; gained expertise in the complex network and overlapping community detection.
- Published three papers in the *Journal of Affective Disorders*, *Journal of Jilin University (Medicine Edition)*, and *Chinese Journal of Prevention and Control Non-communicable Diseases* (all as the second author); assisted in completing the interim research project report; cooperated in writing a grant proposal.

### Trends in the prevalence of vision impairment

Medical Informatics Center, Peking University

Graduate Student Researcher

Jun 2020–Jul 2022

- Analyzed a non-linear trend based on repeated panel data from 45,849 older Chinese adults using generalized estimation equation and natural cubic spline models.
- Acquired in-depth knowledge on trend analyses, such as the Cochran-Armitage test, linear regression, and logistic regression for a linear trend, as well as the polynomial regression, Joinpoint regression, and restricted cubic spline regression for a non-linear trend.
- Guided other team members of our research group to analyze the trends in the prevalence of hearing impairment and tooth loss.
- Published a paper in the *Journal of Global Health* as the first author.

### Identification of patients with severe COVID-19

Medical Informatics Center, Peking University

Data analyst

Feb 2020–Jul 2020

- Organized data extracted from the medical records of 93 pairs of patients admitted to three hospitals in Wuhan; conducted a multicenter, age-matched case-control study.
- Explored the risk factors associated with in-hospital mortality by the logistic regression; compared the differences in laboratory variables between admission days 1, 4, 7, and 10; compared temporal trends of laboratory data between survivors and non-survivors using mixed linear models.
- Published a paper in the *Journal of Thoracic Disease* as the co-author.

## Work Experience

---

### **The Center of Health Supervision National Health Commission**

Beijing, China

Intern

Jan 2020–Jan 2022

- Updated data for monthly, semi-annual, and annual reports using the Excel linked table.
- Cooperated to write more than ten statistical reports on National Health Supervision Information; coordinated the team members to complete the reports.
- Proofread English abstracts for the *Chinese Journal of Health Inspection*.

### **Shunyi Center for Disease Prevention and Control**

Beijing, China

Intern

Jul 2019–Sep 2019

- Participated in the sample collection of the Norwalk virus in five restaurants.
- Assisted in completing routine inspections of drinking water quality in two communities.

### **Beijing Shijitan Hospital**

Beijing, China

Intern

Feb 2018–Jan 2019

- Familiar with common cases in eight departments such as the Department of Cardiology and Respiratory Medicine.
- Participated in the inquiry, physical examination, and writing medical records.

## Skills

---

**Software:** R, SAS, SPSS, PASS; Photoshop, Visio, Origin; PowerPoint, Excel, Word.

**Language:** English (TOFEL iBT score 91/120, reading section: 28/30), Japanese (Level N1 of the Japanese-Language Proficiency Test).