Title: Simulation Study on Service Supply and Demand under System Integrating Health Care and Long-term Care in Shanghai, China Using System Dynamics

*Yang Song, Man Jiang , Xinghui Li , Ying Wang**
Yang Song, Man Jiang , Xinghui Li, Master Degree, School of public Health, Fudan university, China,
Ying Wang, Associate Professor, School of public Health, , Fudan university, China

Abstract: (300 word limit)

Statement of the Problem: Shanghai is facing with highest level of aging in China and the separation of health care and long-term care (LTC) services in Shanghai has made it difficult for elderly to meet their integration demand of healthcare and long-term care. Methodology & Theoretical Orientation: A cross-sectional survey was used to investigate the situation on supply and demand of health care and LTC services. System Dynamics was conducted to simulate the evolution of contradiction between supply and demand and the desired effect of policy intervention. Findings: The average hospital stay will reach 177.49 days in 2025 under the current situation of separation of health and long-term care. The shortage of care beds will reach over 5,400 in 2025 and the demand for caregiver will reach more than 900,000. After the establishment of integrated service model, more than 10,000 beds are available with the average hospital stay decreasing. If the policy adjustment period is 5/10 years after the service model is established, the total number of beds in the medical care institutions will be adjusted to meet the supply and demand balance of medical care beds under the framework of the integrated system of medical care with a change of annual net growth rate of about 2.86% and 3.27%. When the policy adjustment period is 5 years and 10 years respectively, the number of old-age beds in 2025 will improve by 43.1% and 30.5%; the capacity of community care institutions will improve by 16.5% and 11.7%. When the policy adjustment period is 5 years and 10 years respectively, the bed growth rate of the old-age institutions is 5.83% and 5.06%, respectively. When the growth rate of the community support institutions is 10.19% and 9.74% respectively, the supply and demand can be reached balance in 2025.

Biography: ***(150 word limit):***

Yang Song has her expertise in evaluation and passion in improving the health and wellbeing. Her System Dynamics model based on the demand and utilization of health care and long-term care among the elderly's improve the allocation of resources and achieve the goal of healthy aging.

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Speaker Mobile Number*: +86 17621709936*

Email Id: fdusongyang@163.com