

Supplementary Table S1. Variables and calculation methods of the Frailty Index

Frailty index	Parameters
ADL	
1. Feeding	Yes = 0, With difficulty = 0.5, Need help = 1
2. Getting dressed	Yes = 0, With difficulty = 0.5, Need help = 1
3. Using the toilet	Yes = 0, With difficulty = 0.5, Need help = 1
4. Getting in and out of bed	Yes = 0, With difficulty = 0.5, Need help = 1
5. Walking indoors	Yes = 0, With difficulty = 0.5, Need help = 1
6. Bathing	Yes = 0, With difficulty = 0.5, Need help = 1
Chronic diseases	
7. Glaucoma/cataracts	Yes = 1, No = 0
8. Hypertension	Yes = 1, No = 0
9. Diabetes	Yes = 1, No = 0
10. Cardiovascular and cerebrovascular diseases	Yes = 1, No = 0
11. Gastric diseases	Yes = 1, No = 0
12. Osteoarthritis	Yes = 1, No = 0
13. Chronic lung disease	Yes = 1, No = 0
14. Asthma	Yes = 1, No = 0
15. Cancer	Yes = 1, No = 0
16. Reproductive system disorders	Yes = 1, No = 0
17. Other diseases	Yes = 1, No = 0
Geriatric symptoms	
18. Urinary incontinence	Yes = 1, No = 0
19. Fecal incontinence	Yes = 1, No = 0
20. Fall history	Yes = 1, No = 0
21. Visual impairment	Normal = 0, Mildly impaired = 0.25, Moderately impaired = 0.5, Severely impaired = 0.75, Almost blind = 1
22. Hearing impairment	Normal = 0, Mildly impaired = 0.5, Severely impaired = 1
Health status and emotion	
23. How do you feel about your health status?	Excellent = 0, Good = 0.25, Fair = 0.5, Not good = 0.75, Poor = 1

Frailty index	Parameters
24. Do you currently need someone to take care of you in your daily life?	Yes = 1, No = 0
25. Do you feel lonely?	Often = 1, Sometimes = 0.5, Never = 0
26. How happy do you feel?	Very happy = 0, Happy = 0.25, Moderately happy = 0.5, Unhappy = 0.75, Very unhappy = 1
Use of assistive devices	
27. Hearing aids	Yes = 1, No = 0
28. Dentures	Yes = 1, No = 0
29. Crutches	Yes = 1, No = 0
30. Wheelchair	Yes = 1, No = 0
31. Adult diapers/pads	Yes = 1, No = 0

Note. ADL: Activities of daily living.

Supplementary Table S2. Variables and calculation methods of the Protection Index

Protection index	Cut-off
1. Education	\leq Junior high school = 0, \geq Senior high school = 1
2. Marital status	Other ^a = 0, Married = 1
3. Living alone	Yes = 0, No = 1
4. Exercise/week	\leq 2 times = 0, \geq 3 times = 1
5. Annual medical checkups	Yes = 1, No = 0
6. 2-week illness history	Yes = 0, No = 1
7. Hospitalizations (past year)	0 = 1, 1 time = 0.5, \geq 2 times = 0
8. Medicare coverage	Yes = 1, No = 0
9. Medical reimbursement	Convenient = 1, Fair = 0.5, Inconvenient = 0
10. Support during illness	Yes = 1, No = 0
11. Receiving paid employment	Yes = 1, No = 0
12. Receiving pension	Yes = 1, No = 0
13. Home ownership	Yes = 1, No = 0
14. Financial status	Good = 1, Adequate = 0.5, Poor = 0
15. Participation in public welfare subsidies	Yes = 1, No = 0
16. Participation in associations for older adults	Yes = 1, No = 0
17. Helping seniors in need	Yes = 1, No = 0

Protection index	Cut-off
18. Recreational activity	Yes = 1, No = 0
19. Regular internet access	Yes = 1, No = 0
20. Participation in online education	Yes = 1, No = 0

Note. ^aOther marital status includes widowed, divorced or never married.