SUPPLEMENTARY DATA

Disability Transitions and Health Expectancies among Elderly People Aged 65 Years and Over in China: A Nationwide Longitudinal Study

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Supplementary Table 1. Total life expectancy and life expectancy free from and with disability, and proportion of remaining life without or with disability at age 65-95, by gender and region, based on initial disability state.

Age		Initial state-Urban male			Initial state-Urban female			Initial state-Rural male			Initial state-Rural female		
		No	Mild	Severe	No	Mild	Severe	No	Mild	Severe	No	Mild	Severe
65													
	TLE	15.07 (14.66,15.46)	14.58 (14.21,14.95)	12.63 (11.78,13.40)	17.08 (16.72,17.51)	16.55 (16.18,16.99)	14.75 (13.96,15.73)	14.72 (14.35,15.08)	14.22 (13.87,14.57)	12.09 (11.44,12.68)	16.55 (16.19,16.89)	16.02 (15.64,16.38)	14.10 (13.42,14.75)
	ND	11.14 (10.79,11.5)	9.66 (9.16,10.15)	6.88 (5.74,7.97)	10.72 (10.41,11.04)	8.95 (8.5,9.43)	6.78 (5.66,8.21)	10.9 (10.58,11.17)	9.5 (9.12,9.85)	6.66 (5.97,7.23)	10.15 (9.87,10.44)	8.53 (8.16,8.92)	6.29 (5.62,7.05)
	PND	73.95 (72.64,75.18)	66.25 (63.79,68.59)	54.5 (48.21,59.89)	62.77 (61.47,64.01)	54.08 (51.77,56.45)	45.96 (39.90,52.60)	74.06 (73.03,75.06)	66.81 (64.85,68.44)	55.07 (51.14,57.99)	61.36 (60.14,62.53)	53.21 (51.44,54.96)	44.60 (41.31,48.43)
	MD	2.50 (2.35,2.67)	3.37 (3.1,3.65)	2.33 (2.11,2.59)	4.42 (4.21,4.66)	5.48 (5.12,5.86)	4.01 (3.71,4.38)	2.88 (2.73,3.02)	3.68 (3.44,3.92)	2.83 (2.59,3.1)	5.02 (4.8,5.24)	6.00 (5.72,6.27)	4.77 (4.42,5.21)
	PMD	16.56 (15.63,17.50)	23.10 (21.25,25.16)	18.44 (17.1,20.4)	25.89 (24.83,27.14)	33.1 (31.00,35.24)	27.17 (25.57,29.78)	19.53 (18.69,20.36)	25.88 (24.36,27.55)	23.40 (21.7,25.32)	30.36 (29.37,31.49)	37.43 (35.76,39.04)	33.85 (31.74,36.13)
	SD	1.43 (1.26,1.59)	1.55 (1.38,1.72)	3.42 (2.84,3.98)	1.94 (1.78,2.10)	2.12 (1.94,2.28)	3.96 (3.21,4.60)	0.94 (0.85,1.04)	1.04 (0.95,1.14)	2.6 (2.31,2.97)	1.37 (1.28,1.48)	1.50 (1.38,1.63)	3.04 (2.65,3.43)
	PSD	9.48 (8.32,10.57)	10.65 (9.48,11.80)	27.06 (21.87,32.73)	11.34 (10.42,12.25)	12.82 (11.63,13.82)	26.87 (20.66,32.23)	6.41 (5.79,7.10)	7.30 (6.68,8.04)	21.53 (18.71,25.23)	8.27 (7.73,8.99)	9.35 (8.64,10.14)	21.56 (18.38,24.86)
75													
	TLE	9.04 (8.82,9.28)	8.19 (7.96,8.43)	6.47 (6.1,6.86)	10.46 (10.23,10.74)	9.61 (9.35,9.88)	7.89 (7.51,8.33)	8.70 (8.51,8.91)	7.85 (7.64,8.08)	6.06 (5.73,6.37)	9.99 (9.77,10.21)	9.19 (8.96,9.43)	7.44 (7.07,7.76)
	ND	5.72 (5.53,5.93)	3.60 (3.35,3.85)	1.87 (1.52,2.2)	5.19 (5.02,5.37)	3.03 (2.83,3.24)	1.77 (1.43,2.09)	5.44 (5.28,5.61)	3.48 (3.29,3.66)	1.82 (1.6,2.02)	4.74 (4.59,4.89)	2.83 (2.68,2.99)	1.63 (1.43,1.8)
	PND	63.26 (61.70,64.71)	43.92 (41.32,46.33)	28.82 (24.40,32.93)	49.57 (48.08,50.88)	31.60 (29.73,33.47)	22.47 (18.68,25.69)	62.58 (61.41,63.75)	44.40 (42.42,46.22)	30.01 (27.19,32.75)	47.44 (46.21,48.72)	30.84 (29.49,32.10)	21.91 (19.75,23.77)
	MD	2.15 (2.04,2.30)	3.18 (2.99,3.37)	1.51 (1.36,1.69)	3.59 (3.43,3.77)	4.58 (4.36,4.81)	2.43 (2.21,2.7)	2.46 (2.36,2.59)	3.40 (3.25,3.55)	1.94 (1.75,2.14)	4.05 (3.90,4.20)	4.95 (4.78,5.13)	3.06 (2.80,3.36)
	PMD	23.80 (22.65,25.16)	38.88 (36.78,41.02)	23.38 (21.45,25.61)	34.28 (33.03,35.65)	47.65 (45.72,49.59)	30.76 (28.46,33.66)	28.31 (27.26,29.43)	43.36 (41.73,45.09)	31.99 (29.61,34.50)	40.50 (39.32,41.69)	53.88 (52.55,55.28)	41.10 (38.50,43.87)
	SD	1.17 (1.05,1.28)	1.41 (1.28,1.52)	3.09 (2.84,3.36)	1.69 (1.57,1.81)	1.99 (1.85,2.14)	3.69 (3.42,3.98)	0.79 (0.73,0.86)	0.96 (0.88,1.05)	2.30 (2.11,2.52)	1.20 (1.13,1.29)	1.40 (1.30,1.51)	2.75 (2.56,3.00)
	PSD	12.94 (11.64,14.13)	17.20 (15.64,18.69)	47.79 (43.45,52.38)	16.14 (15.14,17.22)	20.76 (19.18,22.22)	46.77 (43.1,50.45)	9.11 (8.42,9.77)	12.24 (11.27,13.29)	38.00 (34.8,41.58)	12.06 (11.38,12.85)	15.28 (14.34,16.34)	36.99 (33.91,40.42)
85													
	TLE	4.95 (4.81,5.11)	4.15 (3.99,4.29)	3.16 (2.97,3.38)	5.89 (5.72,6.06)	5.14 (4.97,5.33)	4.01 (3.8,4.21)	4.66 (4.54,4.80)	3.88 (3.76,4.00)	2.83 (2.67,2.98)	5.52 (5.39,5.66)	4.84 (4.72,4.97)	3.65 (3.48,3.79)
	ND	2.60 (2.49,2.73)	0.88 (0.8,0.96)	0.32 (0.24,0.43)	2.22 (2.1,2.34)	0.69 (0.63,0.75)	0.31 (0.23,0.36)	2.37 (2.27,2.47)	0.83 (0.76,0.89)	0.30 (0.26,0.38)	1.94 (1.84,2.05)	0.63 (0.58,0.68)	0.27 (0.23,0.30)
		52.56	21.11	10.22	37.7	13.48	7.63	50.93	21.31	10.74	35.1	13.06	7.40

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	PND	(50.69,54.34)	(19.44,23.02)	(7.84,13.26)	(35.87,39.34)	(12.40,14.62)	(5.86,9.04)	(49.27,52.52)	(19.79,22.9)	(9.26,13.46)	(33.44,36.79)	(12.09,14.01)	(6.29,8.29)
	MD	1.54 (1.45,1.64)	2.24 (2.12,2.36)	0.67 (0.58,0.77)	2.44 (2.30,2.56)	2.97 (2.82,3.13)	1.04 (0.92,1.17)	1.72 (1.64,1.82)	2.34 (2.24,2.43)	0.90 (0.78,1.01)	2.69 (2.59,2.80)	3.16 (3.05,3.26)	1.38 (1.25,1.49)
	PMD	31.14 (29.25,33.31)	54.04 (51.79,56.02)	21.10 (18.61,23.82)	41.38 (39.6,43.15)	57.65 (55.92,59.35)	25.85 (23.41,28.68)	37.03 (35.62,38.70)	60.26 (58.52,61.83)	31.75 (28.08,35.40)	48.83 (47.28,50.40)	65.26 (63.98,66.54)	37.93 (35.16,40.19)
	SD	0.81 (0.73,0.89)	1.03 (0.94,1.12)	2.17 (2.02,2.33)	1.23 (1.15,1.32)	1.48 (1.40,1.59)	2.67 (2.51,2.84)	0.56 (0.52,0.60)	0.71 (0.65,0.77)	1.63 (1.50,1.76)	0.89 (0.83,0.95)	1.05 (0.98,1.11)	2.00 (1.89,2.13)
	PSD	16.30 (14.91,17.82)	24.85 (22.99,26.79)	68.68 (65.23,71.60)	20.92 (19.65,22.34)	28.86 (27.22,30.58)	66.52 (63.84,69.45)	12.04 (11.16,12.95)	18.43 (17.13,19.77)	57.51 (53.53,61.01)	16.07 (15.12,17.05)	21.68 (20.52,22.86)	54.67 (52.37,57.81)
95	TLE	2.50 (2.39,2.63)	2.01 (1.90,2.12)	1.53 (1.40,1.67)	3.09 (2.96,3.23)	2.64 (2.51,2.79)	2.00 (1.87,2.15)	2.31 (2.20,2.42)	1.83 (1.73,1.91)	1.30 (1.19,1.40)	2.84 (2.73,2.96)	2.43 (2.32,2.54)	1.73 (1.62,1.84)
	ND	1.10 (1.00,1.19)	0.16 (0.14,0.18)	0.04 (0.03,0.08)	0.89 (0.8,0.98)	0.12 (0.11,0.14)	0.04 (0.03,0.06)	0.96 (0.87,1.05)	0.14 (0.13,0.16)	0.04 (0.03,0.07)	0.74 (0.65,0.83)	0.11 (0.10,0.12)	0.03 (0.02,0.04)
	PND	43.97 (40.91,46.72)	7.74 (6.93,8.81)	2.70 (1.79,5.16)	28.76 (26.05,31.39)	4.58 (4.06,5.22)	2.02 (1.34,2.78)	41.65 (38.72,44.68)	7.77 (6.86,8.80)	2.74 (2.14,5.24)	25.98 (23.41,28.89)	4.42 (3.91,5.00)	1.89 (1.46,2.35)
	MD	0.94 (0.86,1.01)	1.25 (1.16,1.34)	0.22 (0.18,0.28)	1.45 (1.34,1.56)	1.62 (1.51,1.74)	0.35 (0.29,0.40)	1.02 (0.94,1.09)	1.26 (1.18,1.33)	0.31 (0.25,0.38)	1.56 (1.47,1.65)	1.69 (1.60,1.79)	0.49 (0.42,0.54)
	PMD	37.42 (34.77,40.24)	62.14 (59.03,64.93)	14.46 (11.95,17.96)	46.92 (44.19,49.62)	61.44 (58.79,63.92)	17.46 (15.09,20.14)	44.09 (41.48,47)	69.16 (66.79,71.15)	23.72 (19.28,28.53)	54.86 (52.23,57.43)	69.42 (67.49,71.49)	28.07 (24.84,30.90)
	SD	0.47 (0.41,0.53)	0.60 (0.54,0.68)	1.27 (1.14,1.39)	0.75 (0.68,0.83)	0.90 (0.82,0.99)	1.61 (1.49,1.76)	0.33 (0.29,0.37)	0.42 (0.38,0.47)	0.95 (0.85,1.05)	0.54 (0.49,0.69)	0.64 (0.58,0.69)	1.21 (1.12,1.31)
	PSD	18.61 (16.76,20.9)	30.12 (27.26,33.48)	82.83 (79.67,85.17)	24.32 (22.06,26.80)	33.98 (31.52,36.72)	80.52 (77.93,82.98)	14.26 (12.80,15.81)	23.07 (20.81,25.37)	73.54 (68.39,77.49)	19.16 (17.33,20.88)	26.16 (23.97,28.22)	70.04 (67.18,73.30)

Note: Data come from the Chinese Longitudinal Healthy Longevity Survey (CLHLS).
Data are n (95%CI). TLE=total life expectancy; ND=years with no disability; MD=years with mild disability; SD=years with severe disability; AD=years with any disability (MD+SD); PND=proportion of life with no disability; PMD=proportion of life with mild disability; PSD=proportion of life with severe disability; PAD=proportion of life with any disability (PMD+PSD). None=no disability; Mild=mild disability; Severe=severe disability.

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Supplementary Table 2. Demographic characteristics and health status of participants and comparison between genders, urban-rural residences.
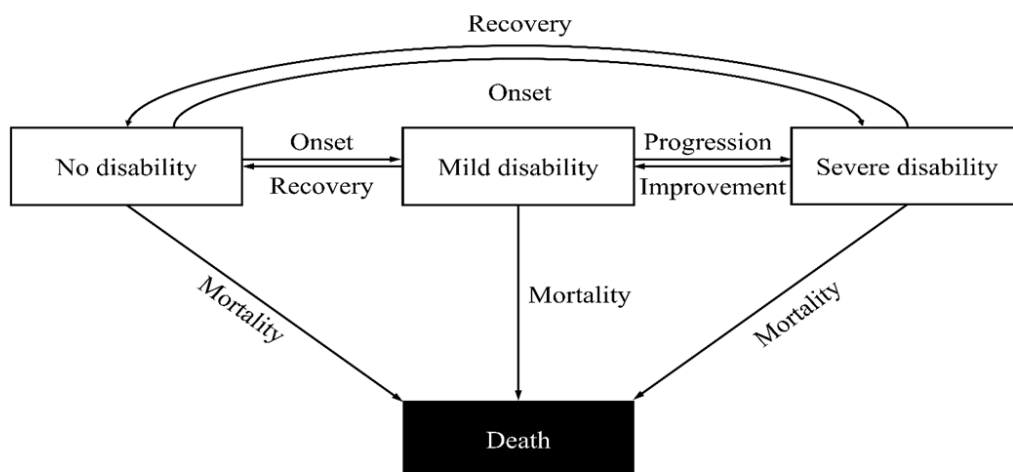
Variables	Men (N=9704)	Women (N=9915)	χ^2	P	Urban (N=7756)	Rural (N=11863)	χ^2	P
Educational attainment, N (%)			3917.82	<0.001			761.01	<0.001
0 year	3401 (30.3)	7820 (69.7)			3743 (33.4)	7478 (66.6)		
1-6 years	4592 (73.7)	1635 (26.3)			2647 (42.5)	3580 (57.5)		
7-9 years	837 (79.2)	220 (20.8)			588 (55.6)	469 (44.4)		
9 + years	849 (81.6)	192 (18.4)			744 (71.5)	297 (28.5)		
Currently married, N (%)	5074 (67.4)	2450 (32.6)	1578.55	<0.001	3088 (41.0)	4436 (59.0)	11.56	0.001
Currently smoking, N (%)	3611 (82.9)	743 (17.1)	2508.03	<0.001	1585 (36.4)	2769 (63.6)	22.90	<0.001
Currently drinking, N (%)	3270 (77.5)	952 (22.5)	1684.49	<0.001	1524 (36.1)	2698 (63.9)	26.55	<0.001
Enough living expenses, N (%)	7807 (50.5)	7649 (49.5)	31.78	<0.001	6386 (41.3)	9070 (58.7)	96.75	<0.001
Adequate medical service, N (%)	8875 (50.0)	8874 (50.0)	21.41	<0.001	7231 (40.7)	10518 (59.3)	113.18	<0.001
Physical exercise, N (%)	3628 (58.1)	2614 (41.9)	274.59	<0.001	3518 (56.4)	2724 (43.6)	1083.13	<0.001
Diabetes, N (%)	228 (46.7)	260 (53.3)	1.50	0.221	314 (64.3)	174 (35.7)	128.74	<0.001
Stroke, N (%)	603 (54.0)	513 (46.0)	9.90	0.002	558 (50.0)	558 (50.0)	54.12	<0.001
Cardiovascular disease, N (%)	764 (44.5)	954 (55.5)	18.73	<0.001	1016 (59.1)	702 (40.9)	302.49	<0.001
Disability at entry, N (%)			516.21	<0.001			152.08	<0.001
No impaired	5314 (58.1)	3834 (41.9)			3719 (40.7)	5429 (59.3)		
Mild impaired	3106 (42.7)	4166 (57.3)			2528 (34.8)	4744 (65.2)		
Severe impaired	1284 (40.1)	1915 (59.9)			1509 (47.2)	1690 (52.8)		

Note: Data come from the Chinese Longitudinal Healthy Longevity Survey (CLHLS).
Numbers calculated as a percentage of the nonmissing values.
The number of participants with missing values at entry was 73 for education, 2 for marital status, 14 for currently smoking, 14 for currently drinking, 4 for living expense, and 4 for medical service, 30 for physical activity, 6 for diabetes, 4 for cardiovascular disease, 5 for stroke.

Supplementary Figure 1. Structure of the multi-state model of disability transitions.