



SUBJECTIVE LIFE EXPECTANCY (SLE) IN HEALTHY OCTOGENARIANS AND NONAGENARIANS

Pi-Shan Hsu ^{1, 2}, Chung-Liang Lai* ^{3, 4}, Li-Ling Peng ^{5, 6}, Liang-Kung Chen ^{6, 7}

1Department of Family Medicine, Taichung Veterans General Hospital,, 2Graduate Institute of Microbiology and Public Health, College of Veterinary Medicine, National Chung-Hsing University, Taichung, 3Department of Physical Medicine and Rehabilitation, Puzi Hospital, Ministry of Health and Welfare, Puzi, 4Department of Occupational Therapy, Asia University, Taichung, 5Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taipei, 6 Center for Healthy Longevity and Aging Sciences, National Yang Ming Chiao Tung University, Hsinchu, 7Center for Geriatrics and Gerontology, Taipei Municipal Gan-Dau Hospital (Managed by Taipei Veterans General Hospital), Taipei, Taiwan

ABS-2881

INTRODUCTION

Subjective life expectancy (SLE) and death preparation are important issues in older adults. Several studies have demonstrated a strong association between SLE and life expectancy, however, the relationship remained unclear in most aged old people.

AIM

This study aims to investigate the risk factors associated with SLE in healthy Octogenarians and Nonagenarians.

METHOD

- Study data were excerpted from a subsample of the Taiwan Longevity Study for Health Octogenarians (TLSHO) population.
- We divided SLE into two groups, the confident group (CG), who were confident in their life expectancy of more than one year, and the uncertain group (UG).
- Research nurses collected data including demographic and medical details, anthropometric measurements, functional assessments, and laboratory tests. Muscle strength was evaluated by grip strength and five times sit-to-stand, and physical performance was measured by 6-min walk distance.
- Appendicular skeletal muscle mass (ASMI) was detected by Bioelectrical Impedance Analysis (BIA). Depression and Cognitive function were assessed by the Center for Epidemiologic Studies Depression Scale (CES-D) and Montreal Cognitive Assessment (MoCA). Heart function was assessed by echocardiographic global longitudinal strain (GLS)..

CONCLUSIONS

Subjects with lower depression scores and better cognitive function have more confidence to live longer.

Further research is needed to explore the potential mechanism between mental health and SLE in octogenarians and nonagenarians

REFERENCES

- Kim, Y. and C. Kim (2019). Factors affecting subjective life expectancy of the elderly: A comparison three age groups. Korea Gerontol. Soc 39: 699-721.
<https://doi.org/10.31888/JKGS.2019.39.4.699>
- Rappange, D. R., et al. (2016). Rational expectations? An explorative study of subjective survival probabilities and lifestyle across Europe. Health Expectations 19(1): 121-137.
<https://doi.org/10.1111/hex.12335>.

RESULTS

This cross-sectional study comprising 179 healthy older adults aged ≥ 80 years analyzed data from TLSHO by convenient sampling. The participants in CG had higher education and remained married status. Compared to UG, participants in CG had faster gait speed (1.40 ± 0.26 vs 1.24 ± 0.17 sec, $p<0.001$), longer 6-min walking distance(324.67 ± 56.29 vs 352.16 ± 70.30 m, $p<0.010$), better grip strength (26.29 ± 8.38 vs 22.83 ± 7.05 kg, $p=0.007$), lower scores for CES-D (4.31 ± 4.22 vs 8.29 ± 6.24 , $p<0.001$), higher scores for MoCA (25.26 ± 3.89 vs 21.74 ± 5.45 , $p<0.001$), better nutritional status (93.39% vs 79.31%, $p=0.005$), and better GLS (-15.56 ± 3.78 vs -14.66 ± 3.53 , $p=0.007$). After adjusted confounding factors, multivariable logistic regression analysis showed that CES-D (OR 0.86, 95% CI 0.80-0.93) and MoCA (OR 1.16, 95% CI 1.06-1.28) were independent factors for SLE.

Table.1 Descriptive analysis

	Uncertain (n=58)		SLE $\geq$ 1 year (n=121)		p-value
	n	%	n	%	
Gender					0.065
Male	26	44.83	72	59.5	
Female	32	55.17	49	40.5	
Age (Mean/SD)	83.40	4.00	82.36	2.49	0.292
Education					0.006
Below elementary school	24	41.38	30	24.79	
Junior high school	10	17.24	17	14.05	
Senior high schools	15	25.86	24	19.83	
University or above	9	15.52	50	41.32	
Marital status					0.009
Married	26	44.83	79	65.29	
not married	32	55.17	42	34.71	
ASMI (kg/m2)	6.41	1.14	6.49	0.95	0.391
Gait speed (m/s)*	1.25	0.17	1.39	0.26	0.000
Six-minute walking test (m)*	324.67	56.29	352.16	70.30	0.010
Grip strength (kg)	22.83	7.05	26.29	8.38	0.007
Chair stand (5- times, s)	11.24	4.24	11.89	4.27	0.231
Mid-arm circumference (cm)	24.89	3.12	25.10	2.41	0.354
Calf circumference (cm)	32.79	3.06	33.29	3.01	0.172
BMI	24.12	4.02	23.73	3.01	0.892
MNA $\ddagger$					0.005
Well nutritious(>23.5)	46	79.31	113	93.39	
At risk of malnutrition/malnutrition	12	20.69	8	6.61	
CES-D	8.29	6.24	4.31	4.22	<.0001
MoCA	21.74	5.45	25.26	3.89	<.0001
eGFR					0.012
≥ 60	34	58.62	93	76.86	
<60	24	41.38	28	23.14	
Global longitudinal systolic strain (GLS)	-14.66	3.53	-15.56	3.78	0.016

Table. 2 Multiple logistic regression analysis

	Model 1		Model 2		Model 3	
	OR	p-value	OR	p-value	OR	p-value
Gait speed (m/s)	31.62 (5.25, 190.54)	0.000	5.45 (0.63, 46.96)	0.123	8.87 (0.95, 83.11)	0.056
Gender		0.040		0.359		0.170
Male	1.96 (1.03, 3.72)		0.63 (0.24, 1.68)		0.49 (0.17, 1.36)	
Female	REF		REF		REF	
Age	0.9 (0.81, 0.99)	0.037	0.93 (0.81, 1.07)	0.311	0.92 (0.8, 1.07)	0.277
Marital status		0.005		0.052		0.026
Married	REF		REF		REF	
not married	0.4 (0.21, 0.76)		0.42 (0.18, 1.01)		0.36 (0.15, 0.89)	
BMI (kg/m2)	0.97 (0.89, 1.07)	0.553	0.96 (0.85, 1.09)	0.550	0.98 (0.86, 1.12)	0.761
CCI	0.84 (0.69, 1.01)	0.070	0.89 (0.72, 1.11)	0.306	0.9 (0.72, 1.12)	0.325
CES-D	0.86 (0.8, 0.92)	<.0001	0.86 (0.79, 0.93)	0.000	0.86 (0.79, 0.93)	0.000
MOCA	1.18 (1.1, 1.28)	<.0001	1.15 (1.04, 1.27)	0.005	1.15 (1.04, 1.27)	0.006
MNA $\ddagger$		0.006		0.172		0.269
Well nutritious(>23.5)	REF		REF		REF	
At risk of malnutrition/malnutrition	0.26 (0.1, 0.68)		0.41 (0.11, 1.48)		0.48 (0.13, 1.77)	
eGFR		0.016		0.173		0.253
≥ 60	REF		REF		REF	
<60	0.43 (0.22, 0.85)		0.54 (0.23, 1.31)		0.59 (0.24, 1.45)	
Global longitudinal systolic strain (GLS)	0.94 (0.87, 1.03)	0.180			0.97 (0.88, 1.07)	0.558