

Health-Related Quality of Life and Associated Factors Among Patients with Chronic Diseases in Hainan Province, China



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BACKGROUND & OBJECTIVES

- Chronic diseases are the leading cause to premature mortality and disability-adjusted life years in China, posing significant challenges to public health and socio-economic sustainability.
- This study aimed to assess the health-related quality of life (HRQoL) of patients with chronic diseases in Hainan Province and to identify factors associated with HRQoL, providing insights to inform strategies for improving patient outcomes.

METHODS

- This cross-sectional study employed data from the 7th National Health Services Survey conducted in Hainan Province, China, during September and October 2023.
- The survey encompassed 18,677 participants. Participants with complete chronic disease records and relevant variable data were included in the analysis.
- HRQoL was assessed using the EuroQol-5D-5L (EQ-5D-5L) instrument, which includes the self-rated health questionnaire and the visual analogue scale (EQ-VAS).
- Factors influencing HRQoL were analyzed using univariate analysis of variance and Tobit regression models.

Table. Baseline characteristics of the studied subjects.

Factors	B(SE)	Model 1* t	P	B(SE)	Model 2 t	P
Age (ref=<45)						
45~60	-0.025(0.014)	-1.87	0.062	—	—	—
≥60	-0.053(0.014)	-3.91	<0.001	—	—	—
Ethnicity(ref=Han)						
Li	-0.025(0.008)	-3.06	0.002	-0.023(0.012)	-1.93	0.054
Other	0.047(0.017)	2.78	0.005	0.073(0.026)	2.84	0.005
Marital status(ref=Unmarried/Other)						
Married	0.037(0.009)	4.11	<0.001	0.025(0.014)	1.81	0.070
Educational level(ref=Not educated)						
Elementary school degree	0.033(0.012)	2.73	0.006	0.02(0.015)	1.31	0.192
Junior high school degree	0.042(0.013)	3.22	0.001	0.028(0.017)	1.68	0.094
High school degree	0.047(0.015)	3.15	0.002	0.046(0.019)	2.44	0.015
College degree or higher	0.038(0.022)	1.71	0.087	0.038(0.034)	1.13	0.260
Household income(ref=Q1)						
Q2	0.025(0.01)	2.63	0.009	0.011(0.013)	0.82	0.413
Q3	0.031(0.01)	3.04	0.002	0.016(0.014)	1.1	0.272
Q4	0.032(0.011)	2.98	0.003	0.035(0.015)	2.37	0.018
Multimorbidity(ref=Yes)						
No	0.069(0.009)	7.57	<0.001	0.062(0.012)	5.23	<0.001
Drinking(ref=Yes)						
No	-0.056(0.009)	-6.32	<0.001	-0.053(0.013)	-3.95	<0.001
Exercise Habit(ref=Yes)						
No	-0.062(0.008)	-8.13	<0.001	-0.072(0.011)	-6.71	<0.001
Medical check-up(ref=Yes)						
No	-0.039(0.007)	-5.23	<0.001	-0.037(0.011)	-3.43	0.001
One-year hospitalization(ref=Yes)						
No	0.042(0.012)	3.6	<0.001	0.035(0.015)	2.32	0.021
Unmet health needs(ref=Yes)						
No	0.080(0.018)	4.44	<0.001	0.078(0.027)	2.94	0.003
Social activities(ref=Yes)						
No	—	—	—	-0.105(0.011)	-9.9	<0.001
Caregiver(ref=Spouse)						
Children	—	—	—	0.013(0.012)	1.05	0.296
Other	—	—	—	-0.076(0.036)	-2.11	0.035
None	—	—	—	0.100(0.026)	3.89	<0.001

*Model 1 analyzes the entire chronic disease population(N= 2928). Model 2 analyzes the older chronic disease population, age 60 and older(N= 1735).

RESULTS

- Among 2,928 patients with chronic diseases, 555 (18.95%) had multimorbidity.
- The average health utility score was 0.898 ± 0.205 , with the EQ-VAS score at 70.653 ± 17.305 . This is lower than the health utility value of 0.96 reported for the general population in China and the value of 0.939 ± 0.105 observed in chronic disease patients across urban and rural regions in previous studies.
- The most frequently reported moderate-to-severe impairment was in the pain/discomfort dimension (8.03%, n=235). Patients with multimorbidity had significantly lower utility scores (0.832 ± 0.258) and EQ-VAS scores (65.681 ± 17.766) than those without multimorbidity ($P < 0.001$).
- Factors significantly associated with reduced HRQoL included older age, lower educational attainment, a history of hospitalization, a greater number of chronic conditions, unmet healthcare needs, smoking, and excessive alcohol consumption ($P < 0.05$).

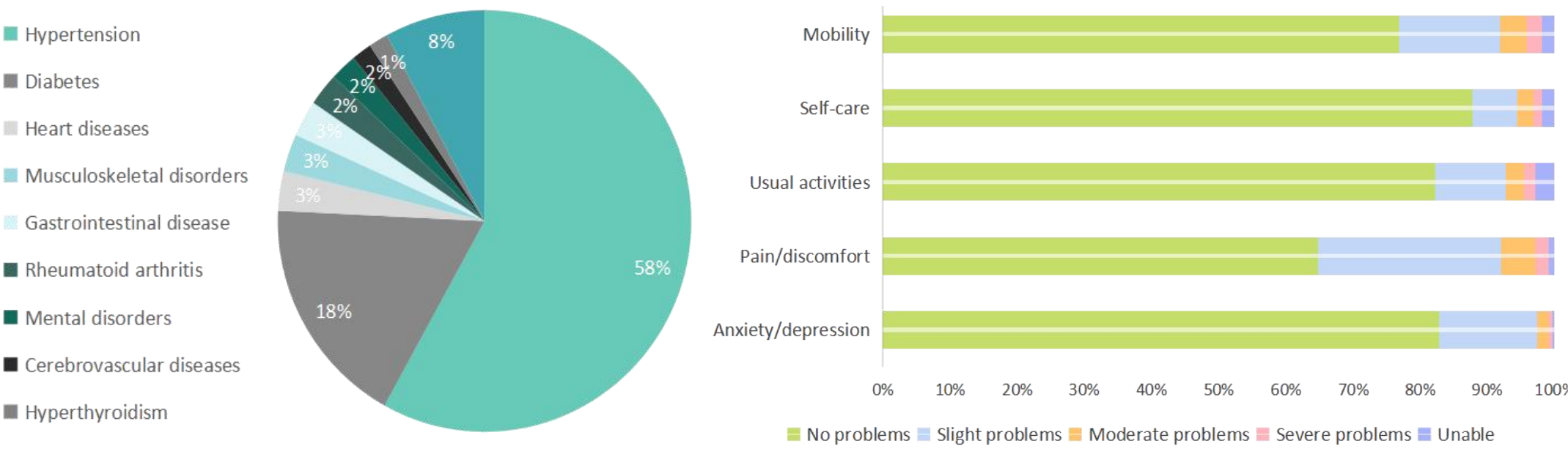


Figure1. Chronic Disease Prevalence in Hainan Province. (N=2928)

Figure2. EQ-5D-5L different distribution levels for each dimension.

DISCUSSION & CONCLUSIONS

- The HRQoL of patients with chronic diseases in Hainan Province is suboptimal, particularly among older adults and individuals with multimorbidity.
- Interventions aimed at promoting healthy behaviors and addressing unmet healthcare needs are essential to improve HRQoL and overall health in this population.

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