Health Utility Values Among Middle-Aged And Older Adults Across Seven Major Geographical Regions In China: Evidence From CHARLS 2020

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OBJECTIVES

Health utility values (HUVs) serve as critical tools for evaluating disease burden, capturing societal preferences, and guiding resource allocation. However, recent nationwide data regarding regional variations in China remain scarce. This study aims to report HUVs for middle-aged and older adults across seven major geographical regions in China, providing precise inputs for economic evaluations and informing health equity policies.

METHODS

1. Data Source

2020 China Health and Retirement Longitudinal Study (CHARLS)

Study population:

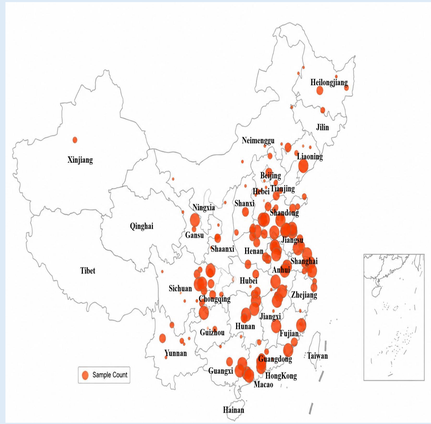
Chinese middle-aged and older adults aged 45 years and above.

Sampling method:

Multi-stage probability proportional to size (PPS) sampling.

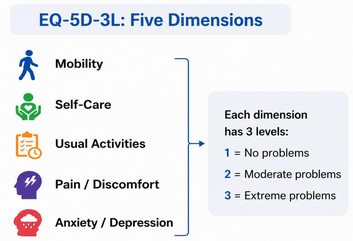
Survey sites:

The survey covered 150 counties across 28 provincial-level administrative units in China.

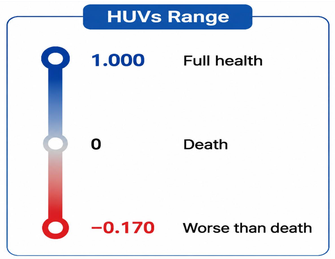


2. Measurement

Based on the EuroQol Group's definitions of the five dimensions of health-related quality of life, we extracted data employing the EQ-5D-3L instrument and calculated HUVs according to the Chinese-specific value set.



3. Valuation



HUVs range from − 0.170 to 1.000, where 1 indicates full health, 0 represents death, and negative values denote states worse than death.

4. Statistical Analysis

Descriptive statistics, with HUVs expressed as mean ± standard deviation (*SD*), were utilized to evaluate the distribution of HUVs among Chinese middle-aged and older adults. Differences between genders were assessed using independent t-tests, while variations across the seven geographic regions were analyzed using one-way ANOVA. Statistical significance was defined as $P < 0.05$.

RESULTS

1. Study Overview

Overall HUV Mean: 0.930 (*SD*=0.087)

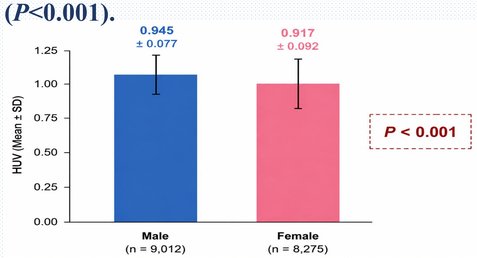
Mean Age: 66.91(*SD* = 9.49) years

Sample Size: 17287

HUV Range: 0.170 to 1.000

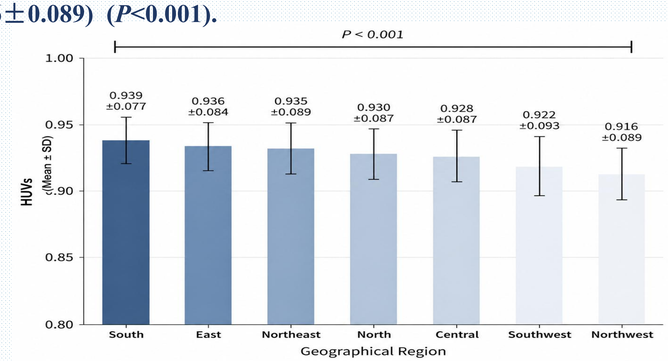
2. Males Reported Higher HUVs Compared to Femalesr

Males reported higher HUVs (0.945 ± 0.077) compared to females (0.917±0.092) (*P*<0.001).



3. HUVs Varied Significantly Across the Seven Geographical Regions

The South region reported the highest HUVs (0.939±0.077), followed by East (0.936 ± 0.084), Northeast (0.935 ± 0.089), North (0.930 ± 0.087), Central (0.928 ± 0.087), and Southwest (0.922 ± 0.093) regions showed intermediate values. The Northwest region reported the lowest HUVs (0.916±0.089) (*P*<0.001).



CONCLUSIONS

This study provides region-specific HUVs for Chinese middle-aged and older adults, revealing a distinct geographic gradient in health-related quality of life. These data serve as a foundation for economic evaluations, guide healthcare resource allocation. The findings suggest that policymakers should prioritize regions with lower HUVs, specifically the Northwest and Southwest, to address disparities and promote health equity.

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