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Influencing Factors on the Health-Related Quality of Life of Elderly People in Ethnic Minority Areas of China: An Analysis Based on a Survey in Guangxi Province

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INTRODUCTION

China's population is aging rapidly, and improving the health-related quality of life (HRQoL) of older adults has become a pressing public health issue. While digital technologies offer new possibilities for healthcare and social support, they also create challenges, especially in ethnic minority regions where access to health services and digital resources is limited. Existing studies have examined HRQoL in the general elderly population, but research focusing on minority areas remains scarce.

OBJECTIVE

This study applies the EQ-5D instrument to assess the HRQoL of elderly residents in an urban community of Nanning, Guangxi Province. It further identifies key influencing factors, aiming to provide evidence for strategies that promote healthy aging in minority regions.

METHOD

Using a cluster sampling method, a total of 1531 residents aged 55 and above were recruited. EQ-5D visual analogue scale (EQ VAS)and EQ-5D health utility values were used to evaluate quality of life.Independent sample t-test and multiple linear regression were used to identify the influencing factors of health-related quality of life.

RESULTS

- The average EQ-5D visual analogue scale (EQ VAS) was 76.4 ± 14.9. The average utility value of EQ-5D was 0.981 ± 0.059.
- The EQ5D utility value of the Han ethnic group was lower than that of other ethnic groups (p<0.01). People without digital products had lower EQ-5D utility values than those with digital products (p<0.001).
- The positive correlation factors of EQ-5D utility included: weekly digital product usage duration (p<0.01); Social participation (p<0.01); Electronic health literacy (p<0.01); Having a spouse (p<0.001).Negative correlation factors include age (p<0.001), chronic disease (p<0.001), and acceptance of digital technology (p<0.001).

Table 1： General characteristics of the sample(N=1531)

Characteristics	N(%)
Mean±SD Age in years	67.9 ±9.3
Gender	
Male	722(47.2)
Female	809(52.8)
Ethnicity	
Han ethnic group	957(62.5)
Minority	574(37.5)
Mean±SD Years of education	10.2 ±3.5
Have chronic diseases	
No	782(51.1)
Yes	749(48.9)
Marital status	
Mateless	197(12.9)
With spouse	1334(87.1)
Whether living alone	
Yes	1438(93.9)
No	93(6.1)
Number of children	
1	206(13.5)
2	1325(86.5)
Mean±SD Weekly digital product use(hr)	9.61 ±3.71
Mean±SD EQ-5D visual analogue scale	76.4 ±14.9

Table 2： Multiple Linear Regression: Factors Influencing HRQoL(EQ-5D health utility values)

Variable	β	p
Weekly digital product use(hr)	0.056	0.041*
Social participation	0.104	0.001**
Digital participation	0.063	0.065
eHealth literacy	0.101	0.006**
Digital technology cognition	0.061	0.054
Technology acceptance	-0.086	0.027*
Gender	0.002	0.931
Age	-0.122	0.0***
Years of education	0.04	0.145
Ethnicity(minority=1)	0.083	0.001**
Chronic diseases(yes=1)	-0.16	0.0***
Marital status(with spouse =1)	0.11	0.0***
Living alone((yes=1)	0.04	0.173
Number of children	-0.011	0.676

**Significant at p<0.05*

CONCLUSIONS

- The health status of the elderly in this community is good, the health utility value of ethnic minorities is higher than that of the Han ethnic group.
- People who own and use digital products, have high electronic health literacy, high social participation, and have spouses have better health utility values.
- These findings highlight the importance of promoting digital inclusion, enhancing social participation, and strengthening health literacy to improve health-related quality of life among urban older adults in ethnic minority regions.

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