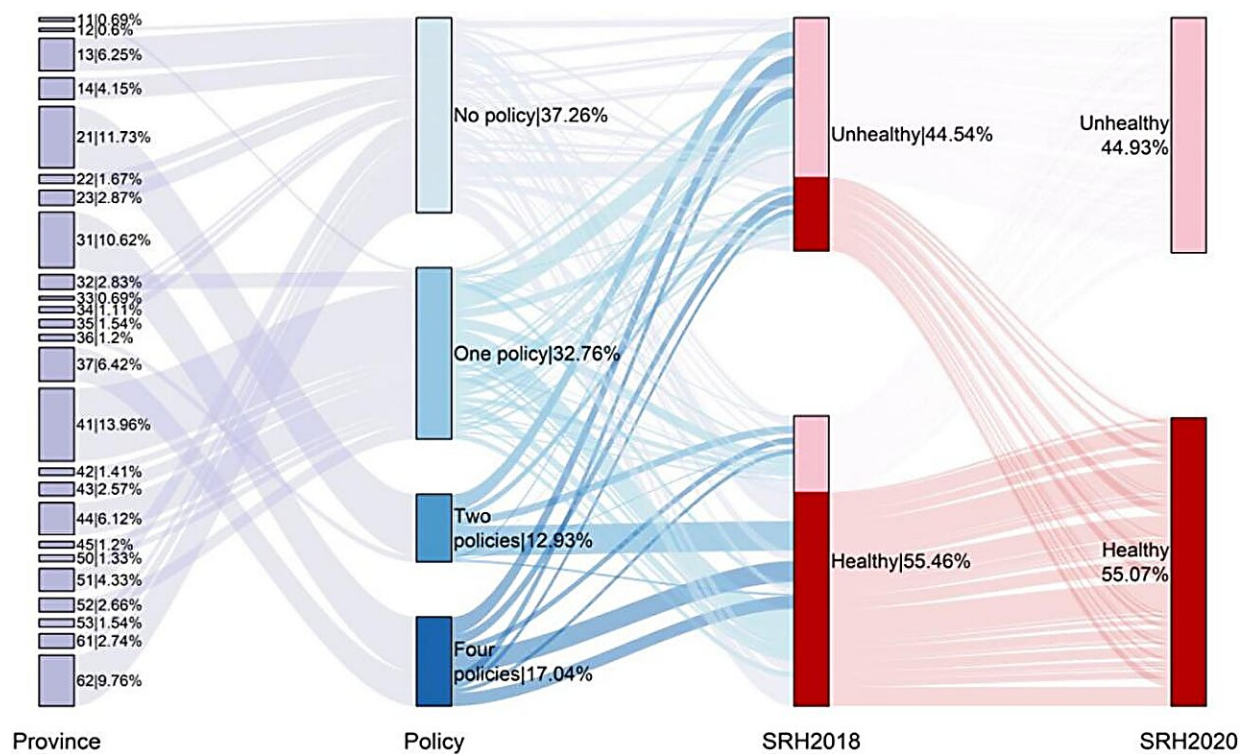


# The development of 5G significantly increased the health of older adults, study finds

September 19 2023, by Huameng Tang, Chao Guo



Alluvial diagram of the self-rated health change among older adults by 5G policy development in different provinces. Note: Province code Beijing 11; Tianjin 12; Hebei 13; Shanxi 14; Liaoning 21; Jilin 22; Heilongjiang 23; Shanghai 31; Jiangsu 32; Zhejiang 33; Anhui 34; Fujian 35; Jiangxi 36; Shandong 37; Henan 41; Hubei 42; Hunan 43; Guangdong 44; Guangxi 45; Chongqing 50; Sichuan 51; Guizhou 52; Yunnan 53; Shanxi 61; Gansu 62. Credit: *Global Transitions* (2023). DOI: 10.1016/j.glt.2023.08.002

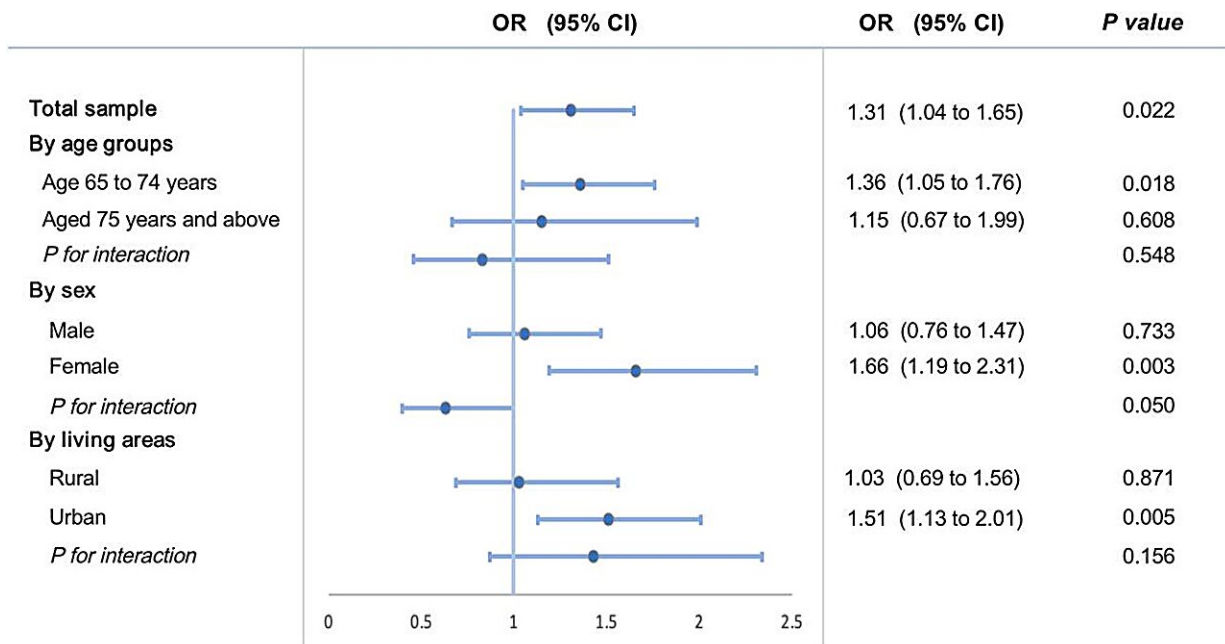
The Chinese government attaches great importance to the construction of Fifth Generation Mobile Communication Technology infrastructure (5G), which has been shown in a new study to play a positive role in the self-rated health of older adults in mainland China, indicating the health-promoting effects of technological advances.

## **5G development and health status among Chinese older adults**

China has built one of the largest and most technologically advanced 5G networks, and 5G industry applications have been integrated into more than 60 national economic categories including the medical and [health](#) care industries, aiming at meeting the growing medical and health needs of the people. However, as a new and emerging technology, the impact of 5G on public health at the national level has not been well elucidated with reliable empirical evidence.

In our study published in [Global Transitions](#), we explored the effects of 5G [development](#) on self-rated health (SRH) among [older adults](#) with different sociodemographic features in mainland China. Using the nationally representative data from the China Family Panel Studies (CFPS) in 2018 and its follow-up in 2020, we used the development of 5G as a natural experiment to capture the impact of 5G development on the health of older adults.

Older adults from provinces with 5G policies in varying levels between 2018 and 2020 were considered as the exposure group while others were considered as the reference group, and the differences in SRH of the older adults were compared in provinces with different numbers of policies.



The effect of 5G policies on self-rated health and heterogeneity across age groups, gender, and living areas among older adults. A number of covariates, including age, province, living areas, marriage status, income, employment, chronic disease, depression and health-related behaviors were controlled for in the total sample analysis and in the subgroup analysis. Credit: *Global Transitions* (2023). DOI: 10.1016/j.glt.2023.08.002

## The health effects of 5G development

Our findings revealed that the development of 5G significantly increased the SRH of older adults. After the enactment of the 5G policies, the probability of self-rated [good health](#) increased by 31% for each unit increase in the development level of 5G policies. And there were notable disparities in age group, gender and living areas.

The improvement effect of the 5G policies on SRH was intensified in the younger cohort, those aged 65 to 74 years, females, and those living

in urban areas. The probability of self-rating good health of older adults aged 75 years and above, males, and those living in rural areas also increased after being exposed to the 5G policies but was not statistically significant.

## Public health facilitated by technological development

To the best of our knowledge, our study provides novel insights into the impact of 5G development on the SRH of older adults for the first time. The findings are that 5G development has a positive effect on the SRH of older adults and SRH is found to be particularly improved in the 65- to 74-year-old groups, female groups, and urban participants.

The introduction of 5G policy provides a micro-opportunities and a macro-environment for older adults to promote their [health status](#). At the micro level, 5G enables more older adults to use smart devices and access the internet, facilitating access to [health information](#) and promoting social participation. At the macro level, 5G-related application in the medical and [health care industry](#) contributes to meeting the medical and health needs of the older adults.

However, considering the heterogeneity, some older adults are in the economic, health and [digital divide](#) at the same time, and the gap between them and the older adults who occupy the advantage of digital resources is gradually increasing with the trend of technology development. Target measures should be adopted to avoid worsening inequality and improve the health of all older adults.

We hope that the fast penetration of digital technologies such as 5G will facilitate and scale up the innovations that can create and spread health, allowing [public health](#) to fulfill its vision of everyone, regardless of gender and age, being able to enjoy a healthy life at last.

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**More information:** Huameng Tang et al, The effect of 5G policy development on self-rated health among Chinese older adults: A quasi-experimental study, *Global Transitions* (2023). [DOI: 10.1016/j.glt.2023.08.002](#)

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