

# Suicide in China: The power of social and economic change

Bin Yu

Department of Preventive Medicine, School of Public Health, Wuhan University, Wuhan, China

Suicide has ever been a challenging public health problem in China, and has accounted for approximately 17% of all suicide deaths across the world.<sup>1</sup> With the rising economic levels and great social changes, a dramatic decline in suicide rates has been observed in China since the economic reform policy enacted dated back to 1970s.<sup>2-4</sup> The underlying mechanisms of the rapid declines are complicated and cannot be fully explained by the suicide theories that are mainly originated from western cultures.<sup>5</sup>

In *The Lancet Regional Health – Western Pacific*, Cai and colleagues applied the powerful spatial-temporal analysis model to investigate the spatial clusters and temporal trends with a main focus on the socio-economic determinants of suicide based on 25 years' data from the Global Burden of Diseases.<sup>6</sup> Findings of the study revealed that the central part of China showed higher risk of suicide, especially in the Hubei and Anhui Province, which has not been reported in previous studies. However, the authors did not provide thorough explanations about the geographic disparities, that may be related to the differences in socio-economic variations at the provincial level. It would be very interesting to compare the provincial differences in core socio-economic factors. It is also well-known that China has experienced a dramatic decline in suicide in the past decades.<sup>2,3</sup> The authors further compared the declines by gender across the provinces and spotted the biggest declines in males and females in provinces, like Jilin and Jiangxi, which provided data for the evaluation of public and mental health work in each province. Since the data cover all age groups, it is impractical to investigate the changes in trend by age groups as well as the birth cohort, that may confound the temporal trend.<sup>7</sup> Moreover, previous study has shown that the Z generation adolescents are facing increasing risk of suicide,<sup>2</sup> endorsing the necessity of further investigation of the temporal trend and geographic clusters of suicide among adolescents.

The most important contribution of this work is that the authors investigated the contribution of socio-economic factors on the risk of suicide in China. Findings of the study revealed protective effects from GDP growth and urbanization on suicide, which were

opposite to the conventional Durkheim's theory,<sup>8</sup> with the beneficial effect diminishing in recent years. Authors highlighted the importance of economic development in substantially reducing the suicide rate in a context of low living standards, while the effect would be reduced in a context of economic prosperity. Thus, it could be effective to prevent suicide through improving the living conditions in poor economic settings, which may not be as good in a relatively better economic setting. As authors stated in the study, when the economic development reaches certain levels, the suicide prevention strategy should focus on improving the overall well-being by "launching comprehensive mental health campaigns" and other social level interventions. Therefore, the suicide prevention strategies may be varied depending on the economic development in different provinces, which may constitute a province-specific public health intervention strategy. Another important finding is the constant risk from migration. According to the most recent national census report, there are approximately 375.8 million migrants in China.<sup>9</sup> Special and urgent attention is needed in suicide prevention among migrant population.

What are the implications for the study to clinical scientists for their practice and research activities? First, the geographic clusters of suicide risk in China suggest the need of further investigation of the determinants of the geographic disparities. Second, although the suicide rate was declining in the past decades, the speed of decline differed in males and females across different provinces. Clinical and public health scientists may try to figure out the underlying mechanisms of the differences. Third, the diminishing positive contribution from GDP and urbanization, the positive-to-negative effect from employment, constant negative effect from migration and divorce, and protective effect from having children suggest clinical scientists to develop individualized treatment plan for patients with diverse background during their daily clinical practices. All these findings underscore the importance of focusing on the prevention and intervention actions, including developing precise intervention strategies targeting suicide at the provincial level and individual level, paying special attention to the large and increasing vulnerable migrant population, and developing family-based intervention programs. Despite the declining trends of suicide, more work is still needed to focus on vulnerable

**The Lancet Regional Health - Western Pacific**  
**2022;19: 100356**  
 Published online xxx  
<https://doi.org/10.1016/j.lanwpc.2021.100356>

E-mail address: [binyu1029@whu.edu.cn](mailto:binyu1029@whu.edu.cn)

subpopulations, including migrants and adolescents, in the era of great social and economic changes in China.

#### Author contribution

BY contributed to the conceptualization, writing, and editing the manuscript.

#### Declaration of interests

The author declared no conflicts of interest.

#### Acknowledgements/Funding

None.

#### References

- 1 WHO. Suicide worldwide in 2019: Global Health Estimates. Geneva: World Health Organization, 2021.

- 2 Chen X, Sun Y, Li Z, Yu B, Gao G, Wang P. Historical trends in suicide risk for the residents of mainland China: APC modeling of the archived national suicide mortality rates during 1987-2012. *Social Psychiatry and Psychiatric Epidemiology* 2018;54:99-110.
- 3 Phillips M, Li X, Zhang Y. Suicide rates in China, 1995-99. *The Lancet* 2002;359:835-40.
- 4 Yip P, Liu K, Hu J, Song X. Suicide rates in China during a decade of rapid social changes. *Social Psychiatry and Psychiatric Epidemiology* 2005;40:792-8.
- 5 Karthick S, Barwa S. A review on theoretical models of suicide. *International Journal of Advances in Scientific Research* 2017;3:101.
- 6 Cai Z, Chen M, Ye P, Yip P. Socio-economic determinants of suicide rates in transforming China: a spatial-temporal analysis from 1990 to 2015. *The Lancet Regional Health - Western Pacific* 2021. <https://doi.org/10.1016/j.lanwpc.2021.100341>.
- 7 Yu B, Chen X. Age and birth cohort-adjusted rates of suicide mortality among US male and female youths aged 10 to 19 years from 1999 to 2017. *JAMA network open* 2019;2:e1911383.
- 8 Durkheim E. Suicide: A study in sociology. London, UK & New York, USA: Routledge Classics; 1897.
- 9 Statistical Bureau of PRC. Report of seventh National Census. published online 11. [http://www.gov.cn/xinwen/2021-05/11/content\\_5605791.htm](http://www.gov.cn/xinwen/2021-05/11/content_5605791.htm) (accessed Nov 23, 2021).