



## Assessing the Relationship between Economic Development and Mental Wellbeing in South Korea

*Ephraim Kwashie Thompson, \*So-Yeun Kim*

*Department of Business Administration, Seoul National University of Science and Technology, 232 Gongneung-ro, Nowon-gu, Seoul, 01811, South Korea*

**\*Corresponding Author:** Email: s22kim@seoultech.ac.kr

(Received 03 Jun 2022; accepted 20 Jun 2022)

### Dear Editor-in-Chief

Researchers have long been concerned about the relationship between economic growth and mental health. Periods of recession have been linked with an increase in mental health disorders and suicides in many market economies like the US and England (1, 2) and the effect is different between males and females (3).

In Asia, Wang and Granados (4) used Chinese survey data and contrastingly find that increased economic growth is associated with increasing mental health problems even though the effects are small and quite similar in women and men. Researchers have stressed the heterogeneity of the findings on this issue and suggested that the impact of economic growth on mental wellbeing is not universal and may vary over time (4, 5). Thus, we are interested in the evidence for South Korea, which has experienced such an unprecedented economic growth since the Korean War.

The main dependent variables are two variables related to mental health: mental disorders and substance-use disorders collected from the Global Health Data Exchange (GHDx) database maintained by the Institute for Health Metrics and Evaluation (6). We collated data on the number of new cases (incidence) from 2000 to 2018, scaled by the population. The main independent variable is Gross Domestic Product (log

of GDP), sourced from the Organization for Economic Co-operation and Development (OECD). We controlled for other factors that can affect economic development: all the control variables are lagged by one year.

The results in Table 1 suggest that in South Korea, economic growth is significantly positively associated with mental health problems. Specifically, we found that an increase in GDP is associated with a 1.5% significant increase in the incidence of mental disorders (1.5%,  $P<0.01$ ) supporting a similar positive relationship found by Wang and Granados in China (4). The relation is also positive for substance-use disorders (0.61%,  $P<0.01$ ). The increase in mental disorders and substance-use disorders is significant for males as well as females but the increase is greater for females (1.14%,  $P<0.01$ ) than for males (0.36%,  $P<0.05$ ) in the case of mental disorders; while the increase is slightly greater for males (0.32%,  $P<0.1$ ) than for females (0.28%,  $P<0.01$ ) in the case of substance-use disorders. Even though South Korea is a market economy, these results contrast the results of other market economies (1, 2) but support that of Wang and Granados (4) for China. We believe that the similarities in workplace culture, which are strict and stressful in terms of overtime requirements and rapid pace



of work; less time for recreation and rest; stress from rising income inequality, etc. in these Asian countries (4, 7) possibly play a stronger role in dictating this relationship rather than the influence of South Korea's state as a market economy. While this work is limited and does not comprehensively consider all dimensions of the relationship between economic development and mental health wellbeing, the results help us to suggest

and opine that in South Korea, the rapid economic development has been associated with poor mental health wellbeing, with this effect holding for both males and females. Thus, we call on the government and related agencies to not only focus on increasing economic growth but also to pay adequate attention to the mental wellbeing of its citizens.

Table 1: OLS regression

Variables	1	2	3
	PANEL A (Mental Disorders)		
	Both	Male	Female
GDP	0.0150***	0.0036**	0.0114***
Interest rate	0.0063	0.0077	-0.0014
Inflation rate	-0.0253*	-0.0087	-0.0166
Export-import ratio	0.0010	0.0006	0.0004
Employment rate	-0.0360*	-0.0080	-0.0280*
Environmental pollution	0.0224*	0.0141***	0.0083
Health expenditure	-0.0303	0.0532**	-0.0835*
Constant	-0.1625***	-0.0403*	-0.1222***
Observations	19	19	19
R-squared	0.973	0.977	0.957
	PANEL B (Substance-use disorders)		
	Both	Male	Female
GDP	0.0061***	0.0032*	0.0028***
Interest rate	-0.0066	-0.0077	0.0011
Inflation rate	0.0021	0.0005	0.0016
Export-import ratio	0.0018	0.0012	0.0005
Employment rate	-0.0011	0.0125	-0.0136***
Environmental pollution	-0.0114*	-0.0090*	-0.0024*
Health expenditure	-0.1157***	-0.0873***	-0.0285***
Constant	-0.0617**	-0.0361	-0.0256***
Observations	19	19	19
R-squared	0.938	0.915	0.970

The table represents an OLS regression of mental disorders (in Panel A) and substance-use disorders (in Panel B) on GDP and other control variables for South Korea from 2000 to 2018. P-values: \*\*\* < 0.01, \*\* < 0.05, \* < 0.1

### Acknowledgements

This study was financially supported by Seoul National University of Science and Technology.

### Conflict of interest

The authors declare that there is no conflict of interest.

### References

1. McInerney M, Mellor JM (2012). Recessions and seniors' health, health behaviors, and healthcare use: Analysis of the Medicare Current Beneficiary Survey. *J Health Econ*, 31(5):744-751.

2. Jofre-Bonet M, Serra-Sastre V, Vanderschueren S (2018). The impact of the Great Recession on health-related risk factors, behaviour and outcomes in England. *Soc Sci Med*, 197:213-225.
3. Katikireddi SV, Niedzwiedz CL, Popham F (2012). Trends in population mental health before and after the 2008 recession: a repeat cross-sectional analysis of the 1991–2010 Health Surveys of England. *BMJ Open*, 2(5):e001790.
4. Wang Q, Granados JAT (2019). Economic growth and mental health in 21st century China. *Soc Sci Med*, 220:387-395.
5. Marazziti D, Avella MT, Mucci N, et al (2021). Impact of economic crisis on mental health: a 10-year challenge. *CNS Spectr*, 26(1):7-13.
6. Institute for Health Metrics and Evaluation. Global Health Data Exchange. Available from: <http://ghdx.healthdata.org/gbd-results-tool> (Accessed November 14, 2021.)
7. Kino S, Jang SN, Kawachi I (2021). Healthy but unhappy? Cross-national comparative analysis of depressive symptoms in Japanese vs. Korean elders. *Arch Gerontol Geriatr*, 95:104426.