

First large-scale study of stock market volatility and mental disorders

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Falling stock prices lead to increased hospitalisations for mental disorders, according to new research published today in the journal *Health Policy and Planning*.

Researchers assessed the relationship between stock price movements and mental disorders using data on daily hospitalisations for mental disorders in Taiwan over 4,000 days between 1998 and 2009. They found that a 1000-point fall in the Taiwan Stock Exchange Capitalisation Weighted Stock Index (TAIEX) coincided with a 4.71% daily increase in hospitalisations for mental disorders.

A downward daily change in stock [price index](#) coincided with significantly increased hospitalisations for mental disorders – when the stock price index decreased by 1% in a single day there was a 0.36% increase in hospitalisations for mental disorders on that same day. The researchers also found that falls in stock price index on consecutive days were associated with a 0.32% daily increase in mental disorders hospitalisations – when the stock price index falls consecutively for 5 days there was a 1.6% increase in the number of mental disorder hospitalisations on the fifth day.

These effects were found to be significant for both genders, with daily and consecutive changes in stock price index having a greater impact on men's [mental health](#). Low stock price index and daily change in stock price index had a significant effect on hospitalisations for the 35-54 age groups while consecutive change affected the 45-54 age groups.

The research, led by Dr Chung-Liang Lin at Dong Hwa University and Dr Chin-Shyan Chen and Dr Tsai-Ching Liu at Taipei University, is the first of its kind to investigate a potential relationship between stock market volatility and nationwide prevalence of mental disorders. The results suggest that the mental health of middle-aged males may be critically influenced by the stock market – when the [stock price](#) index is low, hospitalisations for [mental illness](#) are relatively high.

Previous research has suggested that mental disorders are more likely to affect disadvantaged members of society, with financial hardship having a negative impact on psychological health. The global financial crisis led to a decline in wealth for many and subsequent research has looked at the links between national economic conditions and the general health of the public. Data have also shown that economic recession has an exacerbating effect on the use of mental health services and decline in reported happiness. Most research on economic recession looks at involuntary job loss; few studies have looked at the effects of a fluctuating stock market on population health outcomes.

The researchers used stock market movements as a proxy for changes in economic conditions and assessed the relationship with mental disorders using data from the National Health Insurance Research Dataset published by the National Health Research Institute of Taiwan. Dr Lin, Assistant Professor of Economics, said: "The stock market became the most watched indicator for much of the economic recession. Drops in the value of stocks can, and often do, announce a reduction in wealth and the multiplication of business failures with consequential pay cuts or layoffs. Indeed, it is reasonable enough for people to have dire fears about the future, and those fears are heavily reinforced by media coverage. A falling stock market, therefore, influences investors' and the public's emotional, psychological and economic problems that could adversely affect mental [health](#). Our results suggest that, if someone is undergoing stressful and depressed conditions or has a mental illness,

they should be encouraged to pay less attention to daily [stock market](#) movements, particularly middle-aged people who are suffering various pressures coming from job security, family and investments."

The study has several limitations including, the diagnoses of mental disorders rely on claims data reported by physicians or hospitals, which may be less accurate than diagnoses carried out individually. Also, the authors were unable to analyse the impacts of socio-economic and behavioural factors (such as education, employment, smoking) on [mental disorder](#) hospitalisations.

More information: Lin CL, Chen CS & Liu TC. Do stock prices drive people crazy? Health Policy and Planning 2014; 1 [DOI: 10.1093/heapol/czu007](#)

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