

Data mining the dangers of self-medication

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Self-medication for minor ailments and illnesses is common. Often the remedies people turn to are simple over-the-counter pharmacy medications or products available in other outlets that may or may not have proven physiological activity. There is a notion that self-medication may cause more harm than good, if a person with significant symptoms of disease opts for a shop-bought remedy rather than seeking

professional medical advice. Ultimately, it might lead to a problem essentially being untreated and in the worst-case scenario could lead to a degradation of a person's health or even death.

[Research in the *International Journal of Business Intelligence and Data Mining*](#) has used online social network [data mining](#) to investigate the phenomenon of dangerous self-medication.

Reza Samizadeh, Mahsa Jadidi, and Sahar Vatankhah of Alzahra University, Morteza Khavanin Zadeh of the School of Medicine at Iran University of Medical Sciences Alzahra University, Tehran, Iran, and Mohammad Rezapour of the Iranian Ministry of Science, Research and Technology, have looked at social media updates on metabolic disease, obesity, and diabetes. Their data classification using text-mining algorithms and naive Bayes analysis was more accurate than a support vector machine approach, they explain.

The results show that lots of people are using prescription anti-obesity drugs and recommending them to each other. Many of these drugs have only a modest impact on obesity but worryingly can have serious side-effects or contraindications with other medicines. Samizadeh and colleagues point out that these products should not be used without [medical supervision](#) and yet their analysis of social media updates suggests that people are buying and using the drug outside the safety net of a doctor's advice.

The team suggests that there is an urgent need to raise public awareness of the risks of taking medical advice from non-experts on [social media](#) where all kinds of distortions of the science can so easily be passed off as expertise. Where this might be said in the realm of diabetes, metabolic disease, and obesity, so too it is likely to be occurring in discussions of [self-medication](#) for [heart disease](#), kidney disease, and cancer.

Indeed, when a world leader can offer truly dangerous advice regarding treatments for a pandemic disease and have people believe them, it is no stretch of the imagination to suggest that there are thousands if not millions of people taking drugs for a wide range of potentially lethal illnesses without ever having sought professional medical advice.

More information: Reza Samizadeh et al, Discovery of dangerous self-medication methods with patients, by using social network mining, *International Journal of Business Intelligence and Data Mining* (2023).
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