

Search engine self-diagnosis and 'cyberchondria'

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Dr Guido Zuccon researched the effectiveness of 'Dr Google.'

QUT research is aiming to improve search engines after finding online self-diagnosis of health conditions provides misleading results that can do more harm than good.

Dr Guido Zuccon, from QUT's Information Systems School, found [major search engines](#) were providing [irrelevant information](#) that could lead to incorrect self-diagnosis, self-treatment and ultimately possible harm.

Dr Zuccon and colleagues from CSIRO in Brisbane and Vienna

University of Technology, Austria, assessed the effectiveness of results from Google and Bing in response to medically-focused searches.

The rush to define ailments online is a significant chunk of [internet searches](#), with Google reporting [one in 20 of its 100 billion searches a month was for health-related information](#). [Previous research](#) found 35 per cent of US adults had gone online to self-diagnose a medical condition.

"People commonly turn to 'Dr Google' to self-diagnose illnesses or ailments," Dr Zuccon said.

"But our results revealed only about three of the first 10 results were highly useful for self-diagnosis and only half of the top 10 were somewhat relevant to the self-diagnosis of the [medical condition](#)."

The researchers showed participants medically-accurate images of common conditions like alopecia, jaundice and psoriasis and asked what the participant would search for in an attempt to diagnose it.

For jaundice, for example, queries including "yellow eyes", "eye illness", "white part of the eye turned green" were searched for.

"Because on average only three of the first 10 results were highly useful, people either keep searching or they get the wrong advice which can be potentially harmful for someone's health," Dr Zuccon said.

He warned it was also possible those seeking to self-diagnose online would experience "cyberchondria" - where subsequent searches could escalate concerns.

"If you don't get a clear diagnosis after one search you would likely be tempted to keep searching," Dr Zuccon said.

"So if you had searched for the symptoms of something like a bad head cold, you could end up thinking you had something far more serious, like an issue with the brain.

"This is partly down to searcher bias and partly down to the way the search engines work. For example, pages about brain cancer are more popular than pages about the flu so the user is driven to these results."

Dr Zuccon said search engines performed effectively if the name of the illness was already known.

"They are great for providing a wealth of information about illnesses and diseases, so if you search for something like jaundice you'll have a lot of useful results," he said.

"But our findings suggest it is not the best option for trying to find out what's wrong with you."

Dr Zuccon said further research was needed to identify how to improve search engines to provide searchers with the most effective results.

"We are currently developing methods for search engines to better promote the most useful pages," he said.

"For example, along with colleagues at the CSIRO, we have developed algorithms that return pages that consumers find easier to understand, while maintaining the relevancy and correctness of the medical information presented."

Provided by Queensland University of Technology

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