



Central European
Digital Media
Observatory



Debunking Medical Disinformation with WhatsApp

Coffee Beans

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Disinformation can be as contagious as a virus - sometimes even more. They can diminish protective health measures, encourage risky population behavior, and promote the spread of infectious diseases in their consequences. The rapid increase in the use of social media has increased the volume of disinformation and the speed in which they are spreading.

Despite the urgent need for tools to counter medical disinformation, there is limited evidence on which strategies are effective. Detailed counterarguments provided by a trusted source during a disinformation campaign underway may (or may not) be effective. An alternative approach to detecting disinformation emphasizes the pre-emptive provision of correct information to prevent the spread of the disinformation narrative in advance (1, 7, 11).

Most studies designed to test possible strategies in practice have been conducted using small cohorts of university students. Moreover, most of these studies were not anchored in a real-world context. Indeed, the effectiveness of "debunking" strategies has been evaluated by experimentally introducing concrete disinformation and then countering its content (1-3).

Therefore, a completely different set of probands was chosen for an experiment closer to real conditions. These were indigenous volunteers, over the age of 18, living in Freetown, the capital of one of the poorest countries in the world, Sierra Leone. All volunteers owned and actively used a mobile phone and the WhatsApp app. None of them were hearing impaired (4, 10).

In Sierra Leone, disinformation that typhoid and malaria are closely related is widespread. People here commonly understand typhoid and malaria as a single disease, the so-called 'typhoid-malaria'. The perceived similarity of the two diseases leads many people to believe that typhus is caused by mosquitoes (4,6).

Although typhoid fever and malaria share some symptoms, they are distinct diseases. Typhoid fever is caused by a bacterial infection usually transmitted through contaminated food, water, and the fecal-oral route. On the other hand, malaria is a disease caused by parasitic protozoa and is spread by infected mosquitoes (5, 6).

The Contagious Misinformation Trial developed and tested two intervention strategies designed to combat widespread disinformation about infectious diseases in Sierra Leone, specifically the belief that (1) mosquitoes cause typhoid fever and (2) typhoid fever co-occurs with malaria. An information intervention strategy designed for Group A (246 people) purposefully discussed the disinformation and explained why it was incorrect. The group was then provided with scientifically correct information. The intervention strategy for Group B (245 people) focused only on providing correct information without directly discussing the associated disinformation. Both interventions were delivered to the groups through 2 - 5 minute audio messages on the WhatsApp platform. The audio messages were recorded by a popular local acting group, "Freetong Players." Group members revealed their identities at the beginning of the recording while health professionals (doctors and nurses) added expert information (4, 8).

At the start of the experiment, 51% of the volunteers believed that mosquitoes cause typhoid fever and 59% of the study participants believed that typhoid fever and malaria always occur together. The results of the analysis showed that both intervention strategies significantly reduced belief in disinformation. However, they showed that a strategy where disinformation is directly exposed is more effective in combating disinformation. At the same time, both intervention strategies proved effective in improving people's knowledge and behaviour in relation to reducing typhoid risk and also led to an increase in a very important preventive behaviour - drinking treated uncontaminated water (contaminated water is one of the routes of transmission of typhoid).

These results from a field experiment in a community setting show that highly prevalent health disinformation can be countered. A direct and detailed explanation of disinformation and its nature is the most effective strategy in combating it. Although the experiment was conducted in a distant country, on a different continent from our Central European perspective, its findings have global validity and applicability to Central Europe.

Like other social media, WhatsApp, a widely used messaging platform with a global reach, is a place that can enable the spread of disinformation. At the same time, WhatsApp's broad reach could be used to deliver compelling public health communication campaigns. It carries the added advantage of online consumption of information - traditional information channels such as radio or television are limited by the time and place of broadcast (8, 9, 11).



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