



Dealing with Health Misinformation in Diverse Social Media

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Introduction

Health misinformation can be defined as "health-related claims of fact that are currently false due to lack of scientific evidence." (Chou et al., 2018)

It's without a doubt that the spreading of health misinformation has been a significant problem that is constantly occurring at all times worldwide, not only does it launch various adverse impacts nationally and internationally, but it even causes the society to be immersed in panic and fear as well as increasing the risk of mortality of the related diseases and pandemic.

With the rapid development of technology and prevalence of the Internet, people can easily access all sorts of information with just a few clicks via diverse kinds of social media without borders between areas and countries. In 2013, the World Economic Forum warned that potential "digital wildfires" could cause the "viral spread" of intentionally or unintentionally misleading information. Even though realizing that not all information presented is correct with evidence to support it, people often believe in rumored information without being aware of its credibility and authenticity. A study directly pointed out that misinformation would reach users way faster and deeper than correct information (see Appendix A). While more and more people are aware of this serious problem and the impacts that it would lead to, it's still a harsh task to deter this phenomenon from happening, suggesting that currently we still lack effective methods that can eliminate the spreading of misleading information.

In 2020, Taiwan has gained a great achievement in combating the pandemic of COVID-19. One important execution to fight back against the disease is definitely clarifying health misinformation. Our government rapidly discovered how immense damage health misinformation could cause; therefore, they set up a platform to clarify health misinformation on their website as well as holding press conferences. This action did make a great influence

on the citizens. Residents truly become more critical to the health information they gained and started to check the accuracy before believing. One of the achievements is that: until 11/14/2020, Taiwan has no locally transmitted case for 200 days. However, we still have to take measures to stop health misinformation from spreading in the future, for the worldwide pandemic and other health related issues.

Outlined Problems

The spread of health misinformation has been prevailing across the society, which has led to a myriad of social issues. The following are some examples that are currently observed in the society, whether regionally or globally.

Circulating of unconfirmed health information

Ever since the introduction of social media supported by the Internet, the speed of sending messages has increased rapidly, and thus giving rise to misinformation dissemination. In Taiwan, a phenomenon that a variety of health information circulating on social media and instant messengers, such as “Line”, “WeChat”, e.t.c., can be observed. However, this information which has hardly been confirmed by the professionals can somehow earn the trust of the middle-aged and the elderly at the first sight as they were written in a professional tone. Conceivably, the misinformation within usually misleads people, driving their body conditions even further away from a healthy status, rather than providing health benefits.

Spreading of health misinformation about COVID-19

Under the recent COVID-19 pandemic, the society is overwhelmed by misinformation regarding this disease. Fearing that the worst scenarios may play out soon, people start to search for related information. No matter how alarming their attention to information authority is, they

mostly won't care about where the information comes from but whether it is helpful (Case DO, 2012; Dervin B, 2016), and their trust in online health information was not correlated with personal status, including income, education, and health condition. There has been no actual cure for COVID-19 so far. Though people may not be the next one coming down with the coronavirus since most of them have taken the best precaution against it, there is still quite a possibility that any individual becomes the next victim of health misinformation, then leading to the virus infection sooner or later. Consequently, measures regarding combating the spread of health misinformation are in urgent need.

Negative effects resulted from health misinformation

The existence of misinformation and its “infodemic” fostered by social media have triggered negative effects to our society. For instance, the spread of misinformation hinders medical institutions to prevent the disease from spreading and the government to launch and implement correct health policies. Moreover, the public would be confused about what to believe in, thus resulting in the lack of consensus respecting public health issues. What's worse, some horrifying misinformation could also induce the public's panic, causing unnecessary chaos in the society. Recent news about getting the flu vaccine, for example, may contribute to neurological disorder, and even death. This is a misinformation but was widely spread, and has led to a panic among Taiwan's society, but, it is in fact an avoidable phenomenon.

Judging from the circumstances mentioned above, efficient solutions to these problems are in emergency.

Proposed solution

While facing the phenomenon and the adverse impacts that health misinformation has brought, there are several existing policies and methods that have been put into action in Taiwan.

A. Media Producers

- a. Media producers and journalists should double check the authenticity and reliability of the information that they are providing, and establish an examining standard operation procedure so that this goal can be achieved.
- b. It's necessary for them to notice the importance of self-regulation so that qualified information is guaranteed.

B. Online Platforms

- a. Deleting fake accounts.
- b. Provide procedure for the public to report on health misinformation noticed.
- c. Release the results in whether the information verified is true or false.
- d. Penalize fan pages or official pages that provide false health information, such as decreasing the frequency and time that their posts are shown.

C. Government

- a. Immediate clarification of health misinformation and provide accurate ones.
- b. Found inter-departmental cooperation to take action when essential.
- c. Promote right information using creative posters, advertisements, and propaganda.
- d. Legislate law to fine media producers who add health misinformation in the content and request them to remake the content into correct ones.

The measures mentioned above are some that have been effective in preventing the spread of health misinformation in Taiwan. Yet, it is still uncertain whether these measures can fully eradicate the prevalence of health misinformation for good. Therefore, we would like to come up with more possible solutions so that the negative effects of this problem can be minimized not only in the short term but also in the long term.

Deliver correct health information via celebrities and dramas

Making use of the influence of celebrities and drama, the government could subsidize film makers and urge them to place proven health information into plots or lines. Taking advantage of the popularity of soap operas, especially among elders who tend to fall prey to health misinformation, episodes of short films or soap operas could send the right messages to the public, thus deterring the harm brought by health misinformation.

Education of media literacy

Media literacy is one of the most important things that could protect us from health misinformation. Education builds the most solid defense in every individual's mind. Teaching kids how to distinguish between health misinformation and right ones could form a long-term protection in society. Children could then share the accurate concept of health literacy to their families and even influence the future generations so that the ability to differentiate misinformation could pass down easily and eternally.

What we can do as medical students

As medical students, the most practical thing that we can currently do is check the authenticity of those information in the first place prior to believing them easily. By adopting this simple action when receiving health information, a great amount of health misinformation could be prevented from being widely-spread. Moreover, if we observed people around us

receiving health misinformation and are prone to falling prey to believing and sharing these information at the first sight, we can convey the concept of thinking twice before spreading unconfirmed health information. In this way, it would be more effective to prevent health misinformation from circulating in the society and thus reducing the harm brought by this issue.

Additionally, we can cooperate with students in departments related to information and computer science and set up a system using AI to confirm which post includes health information. In response to the increasing amounts of health misinformation, it is suggested that search engines pop up a window informing Internet users whether the website now visiting is credible or not. We can classify information shown into different categories, including “true”, “required further evidence”, and “false”, and then label them to show viewers the authenticity about what they are currently reading at. This would be beneficial to the public in being aware of the authenticity of what they are about to see. The information on websites could be verified as long as authors provide recent research data or announcements made by acknowledged authorities, such as WHO or local government, to support the websites' credibility. What's more, we can introduce the system to more well-known search engines so that we can maximize the benefits and provide the public with a more misinformation-free environment.

Last but not least, we can design posters regarding this issue to raise social awareness by using simple and memorable pictures and slogans. Since we consider middle-aged groups and the elderly to be those who play an important role in this issue, we believe that by putting up these posters in places where they gather together or will frequently walk by, they can easily realize what we would like to deliver to them and have the correct health concepts in mind.

By implementing the actions mentioned above, it is expected that the influence of health misinformation could be deduced to a minimal degree and assist the public to make right health decisions, thus improving the health welfare of the entire human race.

Conclusion and Recommendations

Misinformation is a dominant factor that influences people while making decisions, and it often spreads faster than true ones with sensational headlines and emotional words that are so attractive; therefore, it's necessary for all of us to put emphasis on this issue. Every member of the society is responsible for hindering health misinformation from flooding, and everyone can contribute different efforts to the success of dealing with this problem.

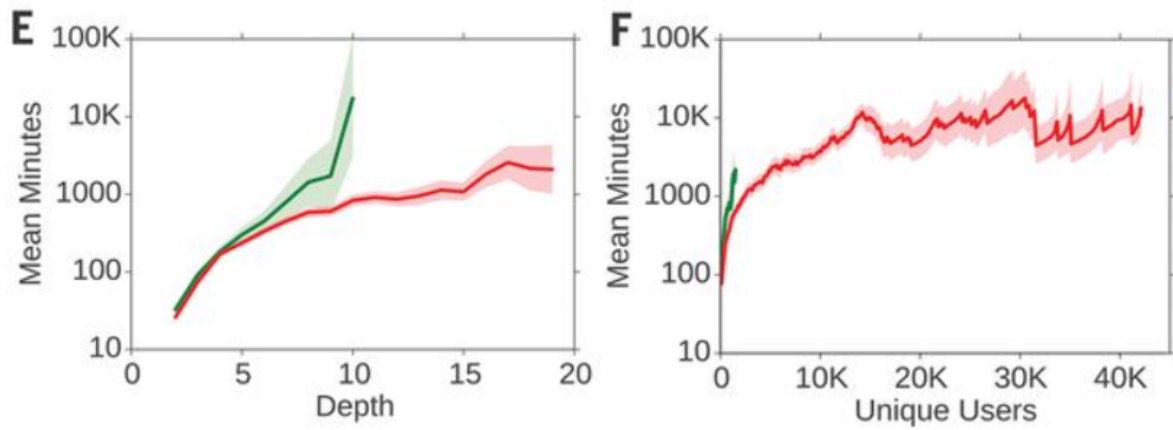
Diverse media and online platforms should set a norm for everyone to follow and punish those who violate the standards. From the aspect of governments, legislating laws to restrain the generation of misinformation and to sponsor media makers to correct it is what our society needs. As for education institutions, instructors should not only teach knowledge in textbooks but also how to differentiate skeptical information from trust-worthy ones. As medical students, we could work together with students that are professional in computer science and information to establish a system to classify health related information into different categories and provide the readers with clear labels. Furthermore, we can promote what people can do when receiving unconfirmed health information by designing and presenting posters to raise public awareness. Finally, every individual should think twice before believing and forwarding received information.

Health information without proven data should not be a clickbait and direct people to make wrong health decisions. Receiving misinformation could ruin the society more than not

knowing the truth. By executing the above methods, we can foresee a tremendous change in our society, and prevent infodemic from being out of control.

Appendix

A.



The number of minutes it takes for true and false rumor cascades
to reach any (E) depth and (F) number of unique users

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