



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

Public Health

journal homepage: www.elsevier.com/locate/puhe

Letter to the Editor

The enigma of health literacy and COVID-19 pandemic



Since the emergence of the coronavirus disease 2019 (COVID-19) pandemic, the disease has become one of the greatest challenges for healthcare systems and public health reforms globally. It is ironic that while there is an overwhelming necessity worldwide for tackling the disease, the issue of health literacy is ignored or misjudged as a public health problem in the current health dilemma. As today, there is a plethora of information and misinformation resources pertaining to the COVID-19 that led to the spread of fear and panic among the public far more speedily than the virus itself. Health literacy is a focal matter to slowing down the spread of the virus and prevention of the disease, as well as the preparedness of healthcare systems in dealing with the disease for situations that require rapid reaction.

Health literacy entails people's knowledge and competences to obtain, process, and understand health information and services to make appropriate health decisions.¹ No one is ever fully health literate, and everyone at some point needs help in understanding or acting on important health information or navigating a complex system, even in economically advanced countries with strong education systems. Some population categories most likely to experience low health literacy are older adults, racial, ethnic minorities, low educational level, migrants, and people with compromised health status.²

Since the spread of COVID-19, the healthcare systems and the way of people life have been questionable globally. The COVID-19 health emergency is showing the importance of tackling public health issues and increasing the preparedness of healthcare systems to fight off disease. No doubt, the risk of being infected is greatly dependent on other people's behavior and observing the precautionary procedures and national measures. The COVID-19 outbreak has clearly demonstrated the need for reforming the healthcare systems and health emergency services and the preparedness for the epidemic or pandemic crises as it has become very obvious that these disease outbreaks do not stop beyond certain boundaries or differentiate between countries, peoples, and systems but affect every individual and country. Health literacy was reported to be underestimated in the COVID-19 crisis.^{3,4}

The world is witnessing bombardment of complex and contradictory information about COVID-19 in relation to detection, diagnosis, prevention, and management of the disease. In this pandemic crisis, most individuals are having problematic issues in accessing trusted information, and social media pose higher risks than other conventional media because of the wider and faster outreach of the message and spreading of misinformation. The World Health Organization (WHO) is leading the effort to slow the spread of the COVID-19 outbreak, and Zarocostas⁵ reported that the WHO has launched platforms aiming to combat misinformation around COVID-19, 'We're not just fighting an epidemic;

we're fighting an infodemic'. It is not only the virus that is spreading but falsified information called 'infodemic' is also spreading, making the individuals doubtful and confusing to deal with information and misinformation.⁵ Paasche-Orlow et al.⁶ have showed that 26% of people living in the United States of America had low general health literacy. In Europe, 47% of people were shown to have limited health literacy.⁷ About 59% of Australians suffered from inadequate level of health literacy.⁸ One can imagine what will be the picture for other countries that their healthcare systems are undeveloped and their persons' health literacy is inadequate.

Health authorities and organizations have attempted to apply legislative, protective, and precautionary measures among citizens at different levels by issuing warnings and recommendations about COVID-19, by setting policies and legal restrictions, and finally by imposing a complete 'lockdown'. These procedures have encountered varying degrees of success and denial, but in general, people's response was unsatisfactory in most times, and these conditions were not fulfilled. People may underestimate the seriousness of the disease and may not consider themselves at risk of the infection.

Nowadays, the development of health literacy is becoming very important to prepare individuals and societies for emergency situations such as the COVID-19 outbreak that requires urgent actions and rapid containment. Specific measures and regulatory procedures are needed for educational settings, social media, work environments, marketplaces, and healthcare systems, as well as political and economic arenas, to combat the emerging disease and build individual and society bounciness.

Importantly, nations should invest in the health literacy of citizens that could help people to reduce the risk of infection spreading and understand the reasons behind the social responsibility and disease prevention. Health authorities and professionals should routinely conduct health literacy reports regularly to assess the preparedness of the individuals and societies for any disease outbreak and strengthen public health environment and policies.

References

1. Institute of Medicine. *Health literacy: a prescription to end confusion*. Washington, DC: National Academy Press; 2004.
2. Eichler K, Wieser S, Brügger U. The costs of limited health literacy: a systematic review. *Internet J Publ Health* 2009;54:313–24.
3. Paakkari L, Okan O. COVID-19: health literacy is an underestimated problem. *Lancet Publ Health* 2020;5(5):E249–50.
4. Abel T, McQueen D. Critical health literacy and the COVID-19 crisis. *Health Promot Int* 2020 (Cited 2020 June 1). Available from: <https://doi.org/10.1093/heapro/daaa040>.
5. Zarocostas J. How to fight an infodemic. *Lancet* 2020;395:676.

6. Paasche-Orlow MK, Parker RM, Gazmararian JA, Nielsen-Bohlman LT, Rudd RR. The prevalence of limited health literacy. *J Gen Intern Med* 2005;**20**(2):175–84.
7. Sørensen K, Pelikan JM, Röthlin F, Ganahl K, Slonska Z, Doyle G, Fullam J, Kondilis B, Agraftotis D, Ueters E, Falcon M, Mensing M, Tchamov K, van den Broucke S, Brand H, HLS-EU Consortium. Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU). *Eur J Publ Health* 2015;**25**(6):1053–8.
8. Australian Institute of Health and Welfare. *Australia's health 2018: in brief. Cat. no. AUS 222. Canberra: AIHW. 2018* (Cited 2020 June 1). Available from: <https://www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/indicators-of-australias-health/health-literacy>.

M.M.M. Abdel-Latif¹

Department of Clinical Pharmacy, Faculty of Pharmacy, Assiut University, Assiut, Egypt
E-mail address: abdellmm77@gmail.com.

7 June 2020

Available online 19 June 2020

¹ Tel.: +2 0882331711; fax: +2 0882332776.