Editorial

Misinformation and Misconceptions About COVID-19 Vaccination in Pakistan: The Need to Control Infodemic

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An unprecedented global public health and economic disaster have emerged from the spread of SARS-CoV-2, the COVID-19 causal agent. The World Health Organization (WHO) has labeled the outbreak a pandemic on March 11, 2020. The spread of this infectious disease has created a humanitarian and economic crisis throughout the world. Vaccination has been shown to be effective in preventing such pandemics[1]. To prevent the spread of COVID-19, researchers developed COVID-19 vaccines in record time with the assistance of pharmaceutical industries. By December 2020, many candidate vaccines had demonstrated safety and efficacy in phase III trials, with efficacy rates as high as 95%. The public's acceptance of vaccination is critical to the success of any immunization program[2]. Public suspicion about vaccines reduces their acceptance rate. It is well known that conspiracy theories and religious beliefs are linked to vaccine hesitation. During the 2009 pandemic, studies revealed low vaccine acceptance rates (17–67%)[2,3,4]. Contrary to developed countries, developing countries' vaccination refusal and hesitancy is more common, as preventable diseases like polio persist[5]. Vaccine hesitancy is one of the top ten global health threats in 2019, according to the World Health Organization (WHO)[6,7].

To provide herd immunity against COVID-19, a novel COVID-19 vaccine would need to be accepted by at least 55% of the population, and possibly up to 85% depending on country and infection rate[7]. In Australia, 85.8 percent of 4,362 individuals admit the COVID-19 vaccine and in Arab countries, the prevalence of believers in these myths was 27.7 percent and 23.4%, respectively[8,9]. Social media is now a frequent source of health information. People may utilize social media during a pandemic to learn more about the disease, transmission, and prevention. Online health information is sometimes fueled by myths and conspiracy theories that lack scientific backing. Online health information searching exposes people to potentially harmful misinformation. Various Studies discovered that those exposed to vaccine-related information on social media were more likely to be uninformed and vaccine-hesitant and received negative comments regarding vaccination on social media sites [10,11].

Conspiracy theories are also circulating on social media in Pakistan. Such narratives may plant seeds of resistance against the COVID-19 vaccination program in Pakistan, where vaccine hesitancy is a major barrier[12]. According to a recent study in Pakistan, the COVID-19 vaccine conspiracy theories are believed by 9.3 percent to 28.4 percent of respondents. The most prevalent myths were that the COVID-19 vaccine can cause infertility and contains 5G-nanochips, which were believed by 12.0% and 9.3% of respondents, respectively, in Pakistan[13].

Because of the widespread availability of conspiracy theories around the COVID-19 vaccination and vaccine's low acceptance rate within Pakistani society, these beliefs can contribute to the perpetuation of these myths and misconceptions, resulting in unnecessary hospital admissions, dangerous self–medication practices, and public

panic. Strict legal action needs to be taken against people who spread fake news/make false claims during the pandemic. While the Judiciary must take action and punishment to control the spread of myths and fake claims, penalties should be heightened as much as possible to both the public and media alike. The mainstream media should be careful about how they present the different information on the COVID-19 infection. The impact of these misconceptions are having on public viewpoints, and disease transmission is undeniable. As a result of COVID-19, efforts to address misinformation on social media will have an even higher priority. The World Health Organization developed and publicized a single strategy to achieve global health. Increased community involvement is one of the most important aspects that need to be addressed immediately. It should form the cornerstone for vaccine acceptance for the general public to ensure that COVID-19 vaccine success is assured.

Moreover, governments and the health sector should also work on the following aspects to ensure a successful rollout of the upcoming COVID-19 vaccine. Health care workers and social media should inform the public about the COVID-19 vaccination program and concerns about vaccine hesitancy using etymological and ethnically appropriate language. To combat misinformation about the COVID-19 vaccine, various non-govermental organization especially celebrities and religious leaders should develop a strong educational and awareness campaigns. Electronic and social media should promote vaccine safety and disease prevention messages nationally. Furthermore, government subsidy is one of the keys to increase coverage of COVID-19 vaccine because acceptance is price sensitive. The health administration and policymakers should immediately dispel this misinformation by educating the public about vaccine safety and efficacy. Social media is primarily responsible for the spread of conspiracy theories and the regulatory authorities should take concrete steps to stop the spread of conspiracy theories.

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