



# Infodemics response during COVID-19 in the Kingdom of Saudi Arabia: A thematic analysis

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**Abstract.** Background: Well-timed information and guidance are pivotal to successful management during health emergencies. Right information at the right time is essential to deal with such crises. In an epidemic, dealing with misinformation is as important as dealing with the pandemic itself.

Aims: To identify the major misinformation categories and loopholes that prevailed in the Kingdom of Saudi Arabia (KSA) during COVID-19.

Methods: The present study is a qualitative and based on thematic analysis. The secondary data such as related articles in newspapers and published works in different journals were consulted in conducting this research.

Results: The issues related to infodemiology in the KSA have been categorized into (a) COVID-19 and Health, (b) false nutritional information, (c) rumors about COVID-19 control measures and (d) travel restrictions or opening of the international flights.

Conclusion: Our findings suggested the public should remain alert to the infodemic phenomenon and should never spread misinformation, nor become a tool to spread misleading and unauthentic figures and guidance. The public needs to support the management authorities in controlling the misinformation in the pandemic situation and comply with the given guidelines.

**Keywords:** COVID-19, Infodemics, Misinformation, Pandemic, Rumors, Saudi Arabia.

# 1 Introduction

## 1.1 Background

Timely information is pivotal to devise optimal and successful management plans in crises. Right information at the right time is key to tackle pandemics efficiently. However, the erroneous information (misinformation) may worsen the crises rather than solving it. With the advent of Information and Communication Technologies (ICT's), there is a boom in every occupation owing to speedy access to information. The health sector is also quickly reaping the fruits of ICT's in improving the quality of health services being catered. Conversely, misleading information, including misinformation and disinformation, leads to detrimental effects on the health of the masses. Misinformation is unintended while disinformation is deliberately propagated to inflict harm [1]. In an epidemic like situation, dealing with the misinformation is equivalent to dealing with the epidemic itself. The spread of misinformation impedes healthy behavior and promotes flawed responses that could escalate the pandemic spread and eventually elicit poor physical and mental health outcomes [2].

The general director of WHO commented, "We're not just fighting an epidemic; we're fighting an infodemic" during the 'Munich security conference' held on February 15, 2020, while speaking about the flood of misinformation after the emergence of COVID-19 [3]. Therefore, it is highly significant to verify the online health information to prevent the anxiety and misinformation associated with disease outbreaks, epidemics, and pandemics. The fake news spreads faster than the virus. Currently, 2 billion people worldwide have access to the internet that makes it the leading information and 'misinformation' resource. Online health information has grown since the 1990s, becoming popular among non-health personnel; yet, most of the online health information is unregulated, and of course, its worth remains questionable [4]. It is difficult to judge the reliability of health information on the internet for individuals with non-medical qualifications. Therefore, the need for critical evaluation of the online health information content is significant to fight with the infodemic.

COVID-19 pandemic is an ongoing infection, which has afflicted millions around the globe. KSA remained COVID-19 free until the first of March, 2020 [5]. However, soon after that, the kingdom faced a major cluster that hit it extremely hard. As KSA heavily relies on the human resource from many countries [6], there was a cocktail of misinformation during the pandemic which KSA government had to deal with. Moreover, KSA is home to the most sacred places for Muslims inviting its followers from across the world for the religious rituals performed throughout the year.

## 1.2 Aim

In this study, we intend to identify the main misinformation categories that prevailed in the KSA during COVID-19. Besides, we have also described how the government of KSA coped with infodemic along with the COVID-19 epidemic to contain the spread of misinformation linked to COVID-19.

## 2 Methods

The current study is a qualitative and based on thematic analysis. Secondary data such as related articles in leading news media, newspapers, and published works in different journals were examined to extract the relevant information to identify the themes. Databases such as Scopus, PubMed, and Google Scholar were also used for the literature survey on infodemics during the COVID-19 in KSA.

The key phrases that were used to retrieve the required information included “Infodemics in Saudi Arabia”, “misinformation about COVID-19”, “COVID-19 Fake news”, and “infodemiology in Saudi Arabia”. The articles and news reports relevant to the research topic were included and the rest were excluded from the study. The reported infodemics issues in the leading newspapers, were also identified and categorized based on the nature of the issue.

## 3 Results and Discussion

### 3.1 Results

The issues related to infodemiology in the KSA have been categorized into four main categories identified as i. COVID-19 and Health, ii. false nutritional information, iii. rumors about COVID-19 control measures and iv. travel restrictions or opening of the international flights (Table 1).

**Table 1.** Issues of Infodemiology during COVID-19 in Saudi Arabia.

Sr. Number	Type of Misinformation	Responded Ministry/Authority	Clarification/Response
1	COVID-19 and health	Ministry of Health (MoH)	Don't believe any information about COVID-19 other than from MoH and advised the people to seek information only from the official sources.
2	False nutritional information	National Nutrition Committee, Saudi Food and Drug Authority (SFDA)	Clarified that there are no specific foods proven to significantly enhance immunity and prevent COVID-19.
3	Rumors about COVID-19 control measures	Ministry of Interior (MOI)	Cautioned that severe provisions of the law will be applied against those spreading rumors and announced that a maximum fine of SR one million and a jail term for five years if spread rumors on social media sites

			and apps or publishing false information.
4	Travel restrictions, or opening of the international flights	General Authority of Civil Aviation (GACA), Saudi Arabian Airlines (Saudia), Jawazat (The General Directorate of Passports)	Denied the rumors about the resumption of international flights on regular basis and suggested people should follow official sources to avoid rumors or misleading or fake news

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## COVID-19 and Health

One of the early misinformation that spread quickly about the COVID-19 was from the Jeddah governorate. There were rumors on social media about the detection of COVID-19 cases in the governorate and these rumors were about a Chinese woman. The fight that took place on 10th March 2020 between a Chinese man and woman in a commercial shop was misrepresented [7]. This is a sample that how far the repercussions of a rumor could go what type of social problems it can cause including racist responses.

By targeting the misinformation, on 17 March 2020, the MoH warned against spreading rumors about COVID-19. The spokesperson of the MoH, KSA informed the public that all audio or video clips circulating about COVID-19 in the country other than released by the MoH, were not to be believed [8]. The MoH also recommended the public to directly contact the official Health Call Center of the ministry for any queries about the COVID-19 by calling at 937. The ministry also instructed the public to seek information only from the official sources and eschew rumors [9].

Besides creating awareness among the masses, the government also took stringent actions against those who were involved in spreading rumors and fake news about COVID-19 in the kingdom. The government arrested a person ‘for producing and sharing content on social media, including rumors and news from unknown sources about the novel coronavirus in a way affecting public order.’. According to an official source of the Public Prosecution, “by examining digital evidence and information identifiers, the suspect was arrested, interrogated and charged with producing COVID-19 rumors and news from unknown sources that affect public order and undermine trust in the precautionary and preventive measures taken by the competent authorities” [10].

Interesting misinformation regarding the COVID-19 took place in the ‘Asir region’, where a man in a video claimed receiving SR 1500 after recovering from COVID-19. In another video, also circulating on social media displayed a man emptying a bag with the Asir health directorate logo on it. He unpacked a rose, a bottle of sanitizer, chocolate bars, and SR 1500 (\$400). This video sparked rumors that people

were receiving gifts after being discharged from hospitals. Anyhow, the Asir health directorate disproved the video and warned the people to avoid spreading such ‘rumors’ [11].

### **False Nutritional Information**

Misinformation about diet and nutrition during the COVID-19 pandemic in the kingdom was also one of the significant issues. A momentous step was taken by the National Nutrition Committee of the Saudi Food and Drug Authority (SFDA), to put an end to all kinds of rumors and false nutritional information. The committee stated on 14th April 2020, clarifying that there are no specific foods proven to significantly enhance immunity and prevent COVID-19. However, the committee pressed upon “the importance of a healthy lifestyle that includes eating healthy and balanced food and drinking sufficient quantities of water” [12] that may help in avoiding the devastating impacts of COVID-19 infection.

### **Rumors about COVID-19 control measures**

The government has been taking all possible measures to control the spread of the COVID-19 in the country from the beginning. One such measure was the implementation of curfew and the suspension of community prayers in the mosques. The Riyadh police arrested a Saudi citizen who spread rumors on social media about the curfew timings in the country. In a video clip, which went viral, the person had claimed that on a certain date, performing prayers in the mosques would be allowed and the curfew timings would be altered [13]. As a result, the MOI warned the people who were spreading the rumors. The spokesperson of the ministry expressed that “the rumors might jeopardize Saudi Arabia’s efforts to combat coronavirus”. The ministry cautioned that severe provisions of the law would be applied against those spreading rumors and misleading information [14].

In May 2020, the MOI announced new measures to regulate the misinformation in the country. The ministry announced that a maximum fine of SR 1million and a jail term for five years would be in action for those spreading rumors on social media or publishing false information to cause panic or spur a violation of the pandemic related procedures and measures [15]. As per the available latest information, Public Prosecution registered 746 coronavirus procedure violations by 22 April 2020. Out of those, 41 cases were related to spreading rumors and sedition charges [16].

### **Travel restrictions or opening of the international flights**

One of the tempting misinformation that was regularly circulated during the pandemic was about the resumption of international flights by the Saudi government. Due to the outbreak of COVID-19, the government of KSA suspended all international flights from 15th March 2020 [17]. As numerous rumors were circulating about the resumption of international flights after this suspension, the Kingdom’s Saudia Airlines clari-

fied on 14th June that all international flights to and from KSA will remain suspended till further notice [18].

Even after this statement, rumors were circulating about the resumption of international flights in October, there was no official statement from the General Authority of Civil Aviation (GACA). The GACA has denied announcing the resumption of international flights and called the information being circulated was false [19]. Further, misinformation has been circulated about the opening of international flights. In response to this, Saudi Arabian Airlines, on 2nd September 2020, announced that international flights remain “suspended until further notice,” except for return flights for residents departing from the Kingdom and registering on the “Awdah” initiative to bring back the vital workforce [20].

Yet again, some rumors circulated regarding the opening of international airports and the reception of arrivals after the celebration of the National Day (23rd September 2020). This time Jawazat (the General Directorate of Passports) denied the rumors and suggested people follow official sources of Jawazat to avoid rumors or misleading information [21]. Later, Saudi Arabia announced on 13th September that it would be opening international flights starting from Jan. 1, 2021 [22]. Finally, Saudi Arabian Airlines (Saudia) announced on 23rd October 2020 that it will resume services to 33 international destinations sometime in November 2020 [23].

### 3.2 Discussion

The present study intended to find some of the misinformation issues prevailing in Saudi Arabia during covid-19 pandemic. The study also highlights the counter measures taken by the different authorities of the KSA to tackle these issues. We have categorized misinformation into four major types along with the strategies used for them (Table1). The Saudi Press Agency has reacted immediately within a day about the rumors in Jeddah and condemned the social media rumors as baseless [7]. The MoH not only warned the public not to spread rumors about the COVID-19 but also informed the public to use the services of Health Call Center to get the right and first-hand information about the COVID-19. The monitoring unit at the Public Prosecution Department of Saudi Arabia has been observing all the information circulating about the COVID-19 in the country. They are following everything cautiously that is being published and circulated through social media and the information network of experts using smart devices and modern technologies [10].

The National Nutrition Committee of SFDA has timely responded by conducting an extraordinarily important virtual meeting chaired by the chairperson of the National Nutrition Committee and CEO of the SFDA and issued a joint statement providing important recommendations and opinions about the nutritional information. They mainly highlighted the maintenance of a healthy lifestyle and drinking enough water to fight the infections.

All the government authorities such as MoH, Public Prosecution, Ministry of Interior, National Nutrition Committee (SFDA), regional health directorates, Police, Gen-

eral Authority of Civil Aviation (GACA) and Jawazat (The General Directorate of Passports (GDP)) have been working in close coordination and cooperation to break the spread of misinformation during the COVID-19 in the kingdom.

Strict punishments and fines have been defined for those violating the COVID-19 control measures. The government authorities have responded timely and cautiously to the variety of misinformation spreading during the COVID-19 with concerted coordination of various departments, MoH, public prosecution, National Nutrition Committee, and took stringent measures to mitigate infodemics. They have handled it well and responded fast with appropriate measures. As the misinformation on travel is one of the repeated issues of infodemics, the concerned authorities have been condemning the roamers. But the information on the resumption of international flights is not clear, though they made the announcements several times. Even the latest announcement by Saudia i.e., 23rd October, vaguely mentioned that it will open/resume the flights in November, but not mentioned the exact date.

There are certain limitations in this study. Firstly, we consider only the reported issues in the leading newspapers. Secondly, only news reports in the English language have been used in the analysis.

## **4 Conclusion**

The world is facing a flood of information that is hard to sift between information and misinformation. Henceforth, managing pandemic-like crises can be successfully done by the people who can put together the right information and eschew the misinformation at the right time. The right information could guide to think critically about the crises, take wise decisions. Knowing the importance of tackling the misinformation, the government of the KSA has taken all the necessary measures to check the spread of fake news during this pandemic. They suggested to the masses to use authentic sources to seek the right information from the concerned authorities.

The relevant authorities were proactive to disseminate the right information and tackle with any of the misinformation being shared over the media. They have responded quickly to the rumors going viral on social media and devised strategies accordingly that have resulted in perfectly containing the infodemic. We recommend that the public needs to support and cooperate with the relevant authorities, as their participation is pivotal to control the spread of the misinformation. They need to make themselves aware of the latest developments as this is an evolving situation that requires updated information. It is imperative to recommend that the public must verify the COVID-19 related news from the relevant authorities, should not become a part of the loop circulating fake news, only pay heed to official announcements, and must report all those who are spreading the misinformation.

## References

- Wang, Y., Mckee, M., Torbica, A., Stuckler, D., 2019. Systematic Literature Review on the Spread of Health-related Misinformation on Social Media. *Soc. Sci. Med.* 2019; 1;240:112552. doi:10.1016/j.socscimed.2019.112552
- Tasnim S, Hossain MM, Mazumder H. Impact of Rumors and Misinformation on COVID-19 in Social Media. *J Prev Med Public Health.* 2020;53(3):171-174. doi: 10.3961/jpmph.20.094.
- Zarocostas J. How to fight an infodemic. *Lancet* (London, England), (2020). 395(10225), 676. [https://doi.org/10.1016/S0140-6736\(20\)30461-X](https://doi.org/10.1016/S0140-6736(20)30461-X)
- Battineni, G., Baldoni, S., Chintalapudi, N., Sagaro, G.G., Pallotta, G., Nittari, G. and Amenta, F., 2020. Factors affecting the quality and reliability of online health information. *Digital health*, 6, p.2055207620948996.
- Atique S, Itumalla R. Hajj in the Time of COVID-19. *Infect Dis Health.* 2020; 25 (3): 219-221. <https://doi.org/10.1016/j.idh.2020.04.001>
- Atique S, Bautista JR, Block LJ, Lee JJ, Lozada-Perezmitre E, Nibber R, O'Connor S, Peltonen LM, Ronquillo C, Tayaben J, Thilo FJ. A nursing informatics response to COVID-19: perspectives from five regions of the world. *J. Adv. Nurs.* 2020; 76(10): 2462-2468.
- Police reject corona rumors in Jeddah. *Saudi Gazette.* 11 March 2020 (<https://saudigazette.com.sa/article/590813>, accessed 10 September 2020).
- Okaz. Rumors pose more risks than coronavirus: MoH. *Saudi Gazette.* 17 March 2020 (<https://saudigazette.com.sa/article/590994>, accessed 10 September 2020).
- Saudi Arabia reports 38 new cases of coronavirus, bringing total to 171. *Saudi Gazette.* 17 March 2020 (<https://saudigazette.com.sa/article/590997>, accessed 10 September 2020).
- Saudi Arabia to prosecute rumor monger. *Saudi Gazette.* 17 March 2020 (<https://saudigazette.com.sa/article/591052>, accessed 10 September 2020).
- Mohammed Al-Kinani. Saudi Arabia health officials dismiss cash for COVID-19 video rumors. *Arab News.* 18 May 2020 (<https://www.arabnews.com/node/1676231/saudi-arabia>, accessed 23 September 2020).
- National Nutrition Committee issues statement to put end to coronavirus rumors. *Saudi Gazette.* 14 April 2020 (<https://saudigazette.com.sa/article/591882>, accessed 24 September 2020).
- Saudi arrested for spreading rumors. *Saudi Gazette.* 2 May 2020 (<https://saudigazette.com.sa/article/592600>, accessed 24 September 2020).
- Saudi Arabia confirms first corona death, 205 new cases detected. *Saudi Gazette.* 24 March 2020 (<https://saudigazette.com.sa/article/591187>, accessed 24 September 2020).
- SR1m fine and 5 years jail for violating coronavirus measures. *Saudi Gazette.* 5 May 2020 (<https://saudigazette.com.sa/article/592724/SAUDI-ARABIA/SR1m-fine-and-5-years-jail-for-violating-coronavirus-measures>, accessed 30 September 2020).
- Public Prosecution records 746 coronavirus procedure violations. *Saudi Gazette.* 22 April 2020 (<https://saudigazette.com.sa/article/592208>, accessed 30 September 2020).
- MOI: Official Source at Ministry of Interior: Kingdom's Government Decides to Suspend International Flights For Two Weeks Starting Sunday [website]. *Saudi Ministry of Interior;* 2020 ([https://www.my.gov.sa/wps/portal/snp/pages/news/newsDetails/CONT-news-150320201!/ut/p/z0/04\\_Sj9CPykssy0xPLMnMz0vMAfljo8zivQIsTAWdDQz9LQwCXQ0CnV0MfyYnQgwM\\_M30g1Pz9L30o\\_ArAppiVOTr7JuuH1WQWJKhm5mXlq8f4ezvF6Kbl1perGtoamBsZGBkYKhfkO0eDgAmiJp-](https://www.my.gov.sa/wps/portal/snp/pages/news/newsDetails/CONT-news-150320201!/ut/p/z0/04_Sj9CPykssy0xPLMnMz0vMAfljo8zivQIsTAWdDQz9LQwCXQ0CnV0MfyYnQgwM_M30g1Pz9L30o_ArAppiVOTr7JuuH1WQWJKhm5mXlq8f4ezvF6Kbl1perGtoamBsZGBkYKhfkO0eDgAmiJp-/), accessed 4 October 2020).
- Tamara Abueish. Coronavirus: International flights to, from Saudi Arabia halted until further notice. *Al Arabia.* 15 June 2020



(<https://english.alarabiya.net/en/coronavirus/2020/06/15/Coronavirus-International-flights-to-from-Saudi-Arabia-halted-until-further-notice>, accessed 4 October 2020).

Rashid Hassan. Notice setting date for Saudi international flights 'is bogus'. Arab Nwes. 12 August 2020 (<https://www.arabnews.com/node/1718216/saudi-arabia>, accessed 8 October 2020).

Rashid Hassan. International flights to Saudi Arabia remain suspended, says Saudia. Arab Nwes. 3 September 2020 (<https://www.arabnews.com/node/1728776/saudi-arabia>, accessed 8 October 2020).

Jawazat clarified about the rumors of opening international flights. Express Riyadh. 10 September, 2020

(<https://xpressriyadh.com/jawazat-clarified-about-the-rumors-of-opening-international-flights/>, accessed 8 October 2020).

Saudi Arabia to lift all travel restrictions on citizens from Jan. 1. Saudi Gazette. 13 September 2020

(<https://saudigazette.com.sa/article/597910/SAUDI-ARABIA/Saudi-Arabia-to-lift-all-travel-restrictions-on-citizens-from-Jan-1>, accessed 8 October 2020).

1. Saudia to resume services to 33 international destinations in November. Saudi Gazette. 24 October 2020 (<https://saudigazette.com.sa/article/599496>, accessed 27 October 2020).

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