

# Crisis communication with persuasion: The official Instagram messages of the Bahraini Minister of Health concerning the COVID-19 pandemic in light of the Extended Parallel Process Model (EPPM)

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## Abstract

While social media is being increasingly used for health crisis communication, few studies, especially in the Arab region, have examined the field of crisis management communication from a persuasive perspective. Generally, convincing the public of the importance of such messages is the main criterion in managing any crisis, and especially an international health crisis such as COVID-19, which was declared a pandemic by the WHO on 11 March 2020. This study seeks to identify the methods used to manage the pandemic by the Ministry of Health (MOH) in the Kingdom of Bahrain, in light of persuasive message techniques. The results suggest that the MOH's Instagram messages promote public common responsibility through many persuasive techniques and strategies. Crisis management messages use a mixture of many techniques, appeals, and persuasive strategies with obvious stress on the "fear" appeal.

**Keywords:** COVID-19, persuasion, crisis communication, Instagram, Kingdom of Bahrain. The Extended Parallel Process Model (EPPM)

## Introduction

No one can deny that official crisis communication messages need to be persuasive in order to promote required public responses. However, few studies have examined the crisis communication messages through social media from a persuasion perspective, especially in the field of health crises (Li et al., 2018). At the same time, little attention has been paid in the Arab region to investigating the content of health crisis messages for their potential contribution to persuasion, especially when those messages are sent through government social media. Generally, the persuasive aspect of crisis messages refers to the message's ability to convince the public to take the intended and appropriate action during the crisis. The lack of persuasive message factors (PMFs) may lead to non-compliance with lifesaving messages.

Considering how few studies have examined health crisis communication from the persuasion perspective, this research investigates the use of these PMFs in COVID-19 messaging by analyzing the content of Instagram messages posted by the Bahraini Ministry of Health (MOH). Specifically, it examines how the Bahraini MOH, as an official source of information, uses social media in order to communicate with the citizens and residents during the COVID-19 pandemic to persuade them to adopt all the practices required to limit the spread of the disease.

## Theoretical Background

- Health Crisis Messaging Over Social Media

During the COVID-19 pandemic, people have been tending toward excessive use of social

media, which can reduce their feelings of loneliness and can provide them with information on the current state of COVID-19 emergency in their countries and globally (Shen et al., 2020). The pandemic is characterized by rapid spreading, which has led to feelings of insecurity and fear in several populations (Molteni, 2020).

Generally, the global spread of COVID-19 has been reflected in the dissemination of misinformation, especially on social media, in addition to the conspiracy theories about its origins (Pickles et al., 2021). For example, and since the beginning of the spread of COVID-19 in the Arab region, many fake news stories have been shared on social networks. Examples include that the virus was deliberately disseminated for financial or political reasons, was no more dangerous than influenza, or was a biological weapon. Of course, everyone is interested in receiving updated and reliable information concerning the pandemic, vaccines, and any other matters related to COVID-19 (Usher, 2020). For this reason, people are exposed to a wide range of information, which includes information from official sources like national ministries of health and the WHO, to avoid misleading news from unreliable sources. In this case, it seems that the credibility of the message source has a significant role in influencing target audiences.

The major challenge facing healthcare decision makers in many Arab countries, including the Kingdom of Bahrain, is how to convince people about the truth of facts concerning COVID-19. Social media is considered by the Bahraini MOH as an essential tool to give people instruction, from a persuasive perspective, concerning dealing with COVID-19. However, few studies in the Arab region have examined how crisis messages during the pandemic, shared through social media platforms, can persuade the public to take protective action.

- Persuasive Communication in the health crisis context

Persuasion can be defined as “a process aiming at changing attitudes or behavior towards a specific issue by employing written or spoken messages” (Faris et al., 2016, p. 192). Persuasive

communication in the COVID-19 context refers to any message that seeks to reshape or change individuals’ responses and behavior towards dealing with the pandemic. Naksawat, Akkakoson and Loi (2016, p.4) described persuasion as “a symbolic process in which communicators try to convince target audiences to change their attitudes or behavior concerning an issue through a persuasive message, in an atmosphere of free choice”. So, this definition contains the main characteristics of persuasion: it is a symbolic process, it aims at influencing target audiences, in both their attitudes and behaviors, and finally, it requires free choice.

According to the Elaboration Likelihood Model, Noar et al. (2017, pp. 416-417) suggested that the “first step in persuasion consists of exposure to a message, followed by paying attention to it. After this, the occurrence of cognitive, attitudinal, and behavioral change can occur in the recipients”. Thus, to have an impact, a message should be available, attract attention, and be processed by the target audience, in addition to using the appropriate persuasive appeals. Huang et al. (2016, pp.1376-1381) pointed out that “cognitive persuasion is a substantial intermediating factor that leads to attitude and behavior changes. At the same time, the type and nature of cognitive processing can affect the process of these changes”. Vargheese et al. (2016, pp.190-214) classified persuasive strategies as follows. (1) social proof: an individual may decide what is appropriate behavior based on others’ behavior; (2) friends’ presence: by increasing the appeal of participating in any activity by focusing on the chance to socialize with friends; (3) likeability and aesthetics: individuals will agree with a belief or action that they like; (4) fun: based on whether an activity falls within an individual’s interests; and (5) incentives: offering incentives for participating in a specific action.

Okuhara, Okada, Kiuchi (2020) argued that the basic assumption of most of the persuasion models is that attitude and behavioral intention changes according to the likelihood that persuasive issues will be positively evaluated by the target audience. Many researchers link persuasion with using social media, especially in the health context. For example, Petty and Briñol

(2015) found that persuasive messages via social media stimulate attitude and behavior change. Research has shown that the persuasive effect via social media depends on how message recommendations are framed. “While a positively framed message presents the positive outcomes associated with the implementation of the recommended behavior, a negatively framed message presents the negative outcomes associated with not performing the recommended behavior”. (Carfora & Catellani, 2021, p.2).

Regarding persuasion and health crisis management, it is well established in the literature that “crisis messages addressing risk reduction behaviors will be more persuasive if delivered by similar others” (Nobles et al., 2020, p.12). Similarly, Becker et al. (2020, pp.37-38) stressed how “persuasive communication affects the revealing of personal health information”; health message content can be presented to people in different frames and at different levels of the usefulness of the information as persuasive techniques. Sutton et al. (2015) found that crisis health messages on social media are short as a result of the limited number of characters allowed. However, this should not affect the persuasiveness of crisis messages but highlight the urgency of providing evidence-based suggestions in which PMFs are crucial. According to Yajie, Hughes and Peter (2018), many studies have focused on the information content of responder messages, the style of communication that responders use, and the ways in which they seek to foster trust in their communications. At the same time, “limited studies have examined how crisis messages, shared via social media, persuade members of the public to take protective action” (Stewart & Wilson, 2016, p.240). Overall, online persuasion via social media has become increasingly important in the health crisis context. However, there has been little research into persuasive health communication messages, including COVID-19, by Arab government institutions on social media websites.

The current study investigates if the Bahraini MOH depended intensively on fear appeal while managing the COVID-19 crisis during the study period. Fear, as one of the persuasive appeals,

describes as a strategy for motivating the target audience to take a specific action by arousing fear. According to many research findings, fear-appealing communication has an impact on health compliance and has been widely investigated for promoting health behaviors related to various diseases (Yang et al., 2020). Despite many studies indicating the positive effect of fear on persuasion, other few report the negative effect of fear. On the other hand, some other research confirmed that the effects of fear-appeal messages interact with various variables like source, message content, and receiver, which cannot be described easily (Yang et al., 2020). Generally, this study focuses on analyzing the persuasiveness with different appeals and strategies considering the fear appeal messages while managing the COVID-19 crisis by the Bahraini MOH.

#### - The Extended Parallel Process Model (EPPM)

This research depends on the extended parallel process model (EPPM) as a key theoretical basis. In the healthcare crisis context, public health agencies deliberately use different media content to create individual awareness, attention, and actions. “Crisis messages must adequately communicate the relevant threat and must establish the specific steps necessary to avoid the threat” (Turner et al., 2013, p.114). Generally, fear appeals are a type of persuasive message that attempts to arouse fear in individuals by emphasizing the potential danger of failing to adopt the recommended message (Tannenbaum, 2015). At the same time, fear messages are often used in a public health context to reduce risky intentions, attitudes, or behaviors and to persuade audiences of required action (Xu et al., 2015). While some media practitioners are confident in the power of the fear appeal to persuade the public, others confirm that such messages having the opposite of the desired effect (Peters et al., 2013). The EPPM concerns the level of fear (low, moderate, and high), the use of efficacy statements, and the level of severity within messages (De Hoog et al., 2007).

According to the EPPM, If the fear message is sufficiently high, the recipients evaluate the efficacy of the response proposed in the message,

then they choose whether to control the danger by adopting the proposed response or to control the fear by denying the message. (Lennon & Rentfro, 2010). In the same context, fear appeals have two main components: threat and efficacy (Petersen et al., 2013). “The threat component consists of severity and susceptibility. Severity in a fear appeal is expressed by content communicating the dangers and negative consequences of a risky behavior” (Diegelmann et al., 2020, p. 245). The efficacy component includes recommended responses, which are specific tips to describe how to change the risky behavior (Cismaru, 2014). Based on the EPPM, fear appeals “work only when accompanied by efficacy messages”. (Witte & Allen, 2000, p. 606). Furthermore, perceived severity is a “critical persuasive concept for information-processing under risks” (Yajie et al., 2018, p.52). So, individuals’ evaluation of fear-invoking messages initiates their appraisal of the risk or degree of danger if that threat occurs. If the degree of this appraisal is low, there will be no response to the fear-based messages. On the other hand, if individuals believe they are at a high level of threat, they will be strongly motivated to pay attention to the message (Turner et al., p. 2013). Accordingly, fear is a necessary element in crisis management, as in the COVID-19 case, as it produces motivation in response to the risk messages. The EPPM has been applied in many healthcare crisis contexts. This study explores whether the MOH’s Instagram posts are effective in using fear appeals during COVID-19 crisis management as a persuasive tool to affect the target audience.

## Literature Review

Regarding the use of persuasive messages in the health context, Shuang et al. (2020) highlighted the importance of personalizing health campaign messages to increase their final effectiveness, by using specific persuasive strategies according to different cultural backgrounds. Okuhara, et al. (2020) examined the messages most likely to encourage people to stay at home and stop gathering during the COVID-19 pandemic. They concluded that using persuasive messages from physicians increased the intent of the public to

stay at home during the pandemic. Hill and Hayes (2015, p. 1747) suggested that “persuasive campaigns regarding health care should move beyond only gaining attention and creating awareness to persuading the public to change specific attitudes and behaviors”. Dijkstra (2014) confirmed that persuasive healthcare messages should convey the awareness that if a person is violating an important value, like good health, by engaging in any risky behavior, this can lead to feeling inadequate, inconsistent, and non-adaptive. In the same context, Nobles et al. (2020) found that persuading people of health risks is affected by who they see portrayed as at risk in the media. In these cases, viewers usually ask themselves: “do those portrayed as at-risk look like me?”.

Many other studies examined the role of fear appeal in the health crisis contexts in light of EPPM. Yubin et al. (2020) found that risk perception played an essential role in affecting and persuading people of required action in public health crises. Demirtaş-Madran (2021) found that the content and the level of fear messages determined the persuasive power of the fear on the public’s behaviors in the COVID-19 context. Many studies have found that fear appeal is positively related to compliance with COVID-19 precautionary behaviors (Cypriańska & Nezlek, 2020).

At the same time, many empirical studies have demonstrated that social media should be used for communicating with the target audience during healthcare crisis management to improve awareness as a first step of persuading people to take the required action. Melovic et al. (2020) explained that government decision makers should consider using social media platforms for persuading the target audiences with healthcare campaign messages.

## Scope of the Study

This study examines the persuasive techniques and strategies used by the Bahraini MOH via its Instagram website to prevent the spread of COVID-19 and if it depended on fear messages intensively compared to other persuasive appeals to persuade people to adopt COVID-19 health-

related behaviors. The study also examines how these Instagram messages use a persuasive perspective in interacting with individuals to convince them of all the procedures required in order to limit the spread of COVID-19 in Bahrain, including keeping social distance, using face masks, washing hands, and covering their coughing. Identifying the persuasive factors reflected in the MOH's Instagram messages will improve the understanding of the use of persuasive message design during the management of COVID-19.

Considering the limited number of Arab studies that integrate the concepts of crisis management and persuasion, this study attempts to understand the communication messages of the Bahraini MOH in managing the COVID-19 pandemic. It focuses on the effectiveness of the persuasive approach in limiting the speed of the spread of the virus.

### Research Questions

This study focuses on five research questions derived from the literature, all related to the MOH's Instagram messages regarding COVID-19 during the study period.

RQ1. What is the dominant feature of the MOH's communication messages during the management of the COVID-19 crisis as seen on its Instagram site?

RQ2. To what degree are persuasive appeals included in the MOH's Instagram messages in light of EPPM?

RQ3. What is the dominant fear level (low, moderate, or high) during the study period in the MOH's Instagram messages?

RQ4. What are the most important persuasive strategies used by the MOH in the framework of the COVID-19 crisis communications?

RQ5. What is the level of influence (cognitive – emotional – behavioral) targeted by the MOH's Instagram messages regarding the COVID-19 crisis management?

RQ6. What are the dominant communicators during the study period in the MOH's Instagram messages?

### Method

To understand how the Bahraini MOH managed the COVID-19 crisis from a persuasive perspective, a content analysis was conducted on 648 posts on its Instagram website. The study period started from 24 February to 15 July 2020. It became clear that managing this crisis during the study period took place in two major stages: Stage 1 started at the beginning of the outbreaking Bahrain on February 24 and continued until May 31 with only the adoption of the slogan "Stay home". The total number of posts analyzed in this phase was 412. Stage 2 took place from June 1 to July 15, the Bahraini government announced that there was no need to stay at home, and all malls and gymnasiums were opened with obligatory to wear a face mask and social distance, with the beginning of the planning for a return to normal life, especially with later use of the COVID-19 vaccine. 236 posts were analyzed in this stage. The total number of posts examined was thus 648 posts, comprising 198 photos, 173 texts, 123 reports, 65 static images, 89 videos, and 33 infographics.

This research aims at conducting a more intensive content analysis through a mixed perspective by adding the qualitative component to the quantitative examination. "Instagram posts are qualitative in nature, yet content analysis relies on counting and comparing frequencies of coded characteristics of interest, reporting quantitative analysis statistics" (Picardo et al., 2020, p. 8). Further, content analysis is particularly useful for drawing inferences from both text and visual information in addition to evaluating social media posts (Azungah, 2018).

At the same time, a professional tool for analyzing digital activities, Rival IQ, was used to calculate the number of the MOH's Instagram messages during the study period. It revealed that MOH's posting frequency was about 57 posts per week. Additionally, it provided the researcher with comprehensive analytics and automated insight generation regarding the audience

interaction with the MOH's Instagram messages during the study period by using its logarithms to calculate this kind of engagement. It revealed that the number of MOH's posts averaged 6-8 a day during the study period. 39.1% of viewers reacted with comments, likes, or both. The daily COVID-19 reports were the top posts with which the public engaged (67.6%), then the photos (42.3%).

The MOH has accounts on many social media platforms, usually with the same posts on all of them. The Instagram account is followed by a wider audience than are the other accounts, so the researcher chose to analyze this one. At the same time, Instagram was useful for analysis because it is an essential medium for sharing health content (Byrne et al., 2017), and is the most popular social medium in Bahrain (Elgammal, 2021); according to the Statcounter GlobalStats website (2020), Instagram usage ranks first among Bahraini people, compared to other social media platforms.

## Findings

**RQ1.** What is the dominant feature of the MOH's communication messages during the management of the COVID-19 crisis as seen on its Instagram site?

The content of the messages delivered through the MOH's Instagram site ranged between informative and persuasive, although the persuasive messages were dominant (42.4% of total posts, as seen in Table 1), aimed at persuading the recipients to change their daily practices to avoid infection. When COVID-19 first emerged, it was found that these communications aimed to increase the recipients' level of knowledge regarding the unknown disease (30.5% of total posts) by mentioning the COVID-19 mechanisms, and its symptoms. Later, the messages moved to a call for taking precautionary measures to avoid infection, such as urging frequent hand washing, clarifying methods of washing hands, and many other essential precautionary measures. In the second stage of crisis management, persuasive messages began to move towards changing the social gathering habit, with large groups, for which the Bahrainis have long been famous. As a result, the messages began to focus on maintaining social distance and wearing face masks as permanent behavior for everyone, continuing until a more stable stage of crisis management. As seen in Table 1, the persuasive posts significantly increased from 25.0% in the first stage to 72.9% in the second stage ( $\chi^2 = 7.65, p < 0.05$ ).

**Table 1.** Persuasive posts categories by crisis management stages.

Theme Categories	Overall (N=648)	Stage 1 (N= 412)	Stage 2 (N=236)	( $\chi^2$ )
<i>1-message feature</i>				
Informative	198 (30.5%)	110 (26.7%)	88 (37.3%)	6.35
Persuasive	275 (42.4%)	103 (25.0%)	172 (72.9%)	7.65*
Both	175 (27.0%)	65 (15.8%)	110 (46.6%)	6.36
<i>2- persuasive appeal</i>				
Mental	75(11.6%)	33 (8.0%)	42 (17.8%)	7.25
Emotional	63 (9.7%)	25 (6.0%)	38 (16.1%)	6.35
Fear	309 (47.7%)	213 (51.2)	96 (40.6%)	7.38

Call of duty	119 (18.4%)	35 (8.5%)	84 (35.6%)	9.35*
Mixed	85 (13.1%)	40 (9.7%)	45 (19.6%)	5.35
<b>3- Fear levels</b>	N=309	N=213	N=96	
High	157 (50.8%)	113 (53.0%)	44 (45.8%)	7.98
Moderate	87 (28.2%)	53 (24.9%)	34 (35.4%)	7.45
Low	65 (21.0%)	47 (22.1%)	18 (18.8%)	7.21
<b>4- persuasive strategy</b>				
Social proof	213 (32.9%)	101 (24.5%)	103 (43.6%)	6.54
Repetition	204 (31.5%)	102 (24.8%)	111 (47.0%)	7.65
Usig social influencers	103 (15.9%)	32 (7.8%)	71(30.0%)	9.65*
Mixed	122 (18.8%)	55 (13.3%)	67 (28.4%)	5.32

Note: \*  $p < 0.05$  (Statistically significant difference).

**RQ2.** To what degree are persuasive appeals included in the MOH's Instagram messages in light of EPPM?

As seen in Table 1, the main type of persuasion throughout the study period was the "fear appeal" (47.7%: 51.2% in the first stage and 40.6% in the second), stressing the consequences of not following the precautionary measures in addition to highlighting the daily confirmed COVID-19 cases and deaths. In the second rank was the "call of duty" appeal (18.4%), which significantly increased from the first stage (8.5%) to the second stage (35.6%) ( $\chi^2 = 9.35$ ,  $p < 0.05$ ). This appeal appeared through the repetition of the phrase "for Bahrain's sake", with an indication that applying all measures to prevent the spread of the virus would benefit not only the individual but also Bahraini society as a whole. The "mixed" appeal, which contains many types of persuasive appeals in the same message, was also included in these messages (13.1%). The use of the "mental" appeal appeared (11.6%) throughout the daily broadcast of the statistics that confirmed the increasing spread of the virus, in addition to relying on logical arguments that emphasized the importance of social distancing. Finally, the "emotional" appeal (9.7%) appeared in many messages that addressed youth in particular, encouraging them to take precautionary measures in order to preserve their parents from infection.

At the same time, the persuasive techniques were strengthened in text messages written in colloquial dialect (82.9%) instead of standard Arabic, bringing them closer in clarity and understanding, and thus persuasion. Further, the content analyses revealed that 30.6% of the MOH's Instagram posts were translated into English, Hindi, and Bengali to be easy for the residents in Bahrain to understand.

**RQ3.** What is the dominant fear level (low, moderate, or high) during the study period in the MOH's Instagram messages?

As seen in Table 1, the main type of fear level throughout the study period was the "High fear level" (53.0%) in the first stage and (45.8%) in the second stage of Covid-19 crisis management. The same Table also shows that MOH depended on all fear levels while managing the COVID-19 crisis during the study period. "Moderate fear level" was used (24.9% in the first stage and 35.4% in the second stage) while "Low fear level" was used in the first stage with 22.1% in the first stage and 18.8% in the second stage.

**RQ4.** What are the most important persuasive strategies used by the MOH in the framework of the COVID-19 crisis communications?

If persuasive messages are used by good communicators as a positive force, they can

introduce change and help people to improve their lives. By analyzing the MOH's Instagram messages concerning COVID-19, and based on Table 1, it appears that the "social proof" strategy was the one most widely used (32.9%). This persuades the public through messages sent by individuals who are similar to the target audience, narrating their experiences of infection as a result of non-compliance with the preventive instructions. The "repetition" strategy was also used (31.5%), presenting the same awareness messages and slogans at close intervals of time. It was used intensively, but with slight variations in the message content, so as not to bore the

recipients. For example, the MOH communicators used different slogans for the same repeated messages, such as: "We will continue resolutely", "We should stay apart to meet soon", "To keep Bahrain majestic", "Coherent and United," and "We keep apart, let us meet soon. A "mixed" strategy, which used more than one strategy in the same post, was also used (18.8%) in the two crisis stages. As seen in Table 1, using only the "social influencers strategy" increased significantly from the first (7.8%) to the second stage (30.0%) ( $\chi^2= 9.65$ ,  $p < 0.05$ ).

**Table 2.** Level of influence categories by crisis management stage.

Level of influence	Overall (N=648)	Stage 1 (N= 412)	Stage 2 (N=236)	( $\chi^2$ )
<i>Cognitive</i>	202 (31.2%)	152 (36.9)	50 (21.2%)	7.86*
<i>Emotional</i>	117 (18.0%)	52 (12.5%)	65 (27.5%)	8.65*
<i>Behavioral</i>	209 (32.3%)	102 (24.8%)	107 (45.3%)	6.73
<i>Mixed</i>	120 (18.5%)	55 (13.3%)	65 (27.5%)	6.85

Note: \*  $p < 0.05$  (Statistically significant difference).

**RQ5.** What is the level of influence (cognitive – emotional – behavioral) targeted by the MOH's Instagram messages regarding the COVID-19 crisis management?

The Instagram messages targeted three areas to influence the public: cognitive, emotional, and behavioral levels. At the beginning of the outbreak (stage 1), messages targeted the cognitive level of influence (36.9%) according to Table 2, introducing the main information about COVID-19 and the reasons for its spread, although there was a significant drop in the second stage ( $\chi^2=7.86$ ,  $p < 0.05$ ). On the other hand, the emotional level of influence significantly increased from 12.5% in stage 1 to 27.5% in the second stage, emphasizing the need

for protecting older people and families in general by following the required precautionary actions. At the same time, other messages were aimed at influencing the behavioral level of the public (32.3%), creating actual behavioral change, such as not leaving home except out of necessity, handwashing behaviors, changing the traditional ideas of social gathering and family visits which were considered as an essential part of their culture, and other behaviors required to avoid the further spread of infection. Table 2 also shows that 18.5% of the posts analyzed used messages integrating two or three influence levels.



**Table 3.** The most dominant communicators during the study period on the MOH's Instagram Messages

Type of communicators	Overall (N=648)	Stage 1 (N= 412)	Stage 2 (N=236)	( $\chi^2$ )
<i>Public health professionals/ Doctors</i>	219 (33.8%)	135 (32.8%)	84 (35.6%)	7.64
<i>Media professionals</i>	79 (12.2%)	47 (11.4%)	32 (13.6%)	6.52
<i>Famous personalities</i>	72 (11.1%)	40 (9.7%)	32 (13.6%)	6.32
<i>Real infected persons</i>	62 (9.6%)	25 (6.1%)	37 (15.7%)	6.85
<i>Social media influencers</i>	40 (6.2%)	27 (6.6%)	35 (14.8%)	8.65*
<i>Mixed</i>	33 (5.1%)	17 (4.1%)	16 (6.8%)	6.65
<i>Without communicators</i>	143 (22.1%)	67 (16.3%)	76 (32.2%)	5.65

Note: \*  $p < 0.05$  (Statistically significant difference).

**RQ6.** What are the dominant communicators during the study period in the MOH's Instagram messages?

Many media communicator types were used during managing this health crisis. According to Table 3, the most dominant were as follows: public health professionals/doctors (33.8%), messages without any communicators (22.1%), media professionals (12.2%), famous personalities (11.1%), real infected persons (9.6%), social media influencers (6.2%), and a mixture of the previous categories (5.1%). Using public health professionals and doctors intensively can be an indication of persuasive communication with the target audience. According to Okuhara et al. (2020), health professionals' communication via social media during health crises may provide opportunities for the public to access persuasive messages. Based on the same table, posts using social media Influencers significantly increased from stage 1 (6.65%) to stage 2 (14.8%) ( $\chi^2=8.65$ ,  $p < 0.05$ ). This was because of the heavy use of the public health professionals and doctors in the first stage, to explain all matters regarding the pandemic, which paved the way for other types of communicators in the second stage. Referring to Table 3, we can conclude that using social media influencers intensively in the second stage

was an essential persuasive strategy used by the MOH.

## Discussion

This study introduced knowledge on the composition of health crisis communication management in light of persuasion appeals strategies. It examined the persuasive techniques used by the Bahraini MOH via its Instagram website to prevent and manage the spread of COVID-19.

The results show that the cognitive messages were dominant on the Bahraini MOH's Instagram website during the first stage of crisis management, paving the way for the persuasive messages which dominated the second stage. Effective persuasive communication requires attracting people's attention first by giving them essential knowledge, before sending persuasive messages. That is, we believe that persuasive messages could not be expected to produce a strong response without being preceded by basic knowledge and information.

The main type of persuasive appeal while managing the COVID-19 crisis by the Bahraini MOH was the "fear" appeal, stressing the consequences of not following the precautionary

measures. Using fear during the early emergence of COVID-19 in Bahrain has been quite successful, as people usually respond positively to fear based on self-interest, as highlighted by the EPPM. It was noted that the fear-based messages delivered through the MOH's Instagram account during the study period used written texts, infographics, or videos. Veljanova et al. (2019) concluded that the fear appeal is effective in positively influencing intentions, attitude, and behavior. However, as mentioned above, and according to the EPPM, fear appeals usually work well only when accompanied by efficacy messages. Du et al. (2020, p. 1) concluded that "when the prevalence rates of COVID-19 increase, people would experience more fear, which in turn would predict more searches for protective behaviors and health-related knowledge". In the same context, many scholars assume that an efficacy message means a statement that ensures that the public takes the fear appeal's recommended actions and that these actions will lead to desirable consequences (Tannenbaum et al., 2015). In other words, the fear appeal can produce the greatest behavioral changes when people feel capable of managing this threat. For this reason, fear messages should present the required action clearly, in order to reduce the fear level in the target audience.

The study results also showed that the MOH depended on a "high fear level" in the two stages of managing COVID-19 during the study period compared to other fear levels (moderate and low). Some studies found that moderate levels of fear perform better. On the contrary, many other studies revealed that "high-fear" messages were more effective at motivating changes in public behavior in many health crisis contexts. (Lennon & Rentfro, 2010), which means that more fear will lead to a high level of persuasion, especially in the health emergency cases like COVID-19. As mentioned above, the EPPM assumes that a higher level of fear is more effective than other levels in changing attitudes and behavior. In addition, the proposed action should be coping within the target audience's ability and should be mentioned clearly in the message. The high-fear messages by the MOH directly aligned death to not allowing required precautionary measures. All proposed protective actions via Instagram

were in many forms like infographics, daily reports, awareness campaigns, and interviews with medical specialists.

At the same time, the effectiveness of the fear appeal depends on its level of severity. A message of at a high fear level emphasizes the recipient's personal risk of negative consequences (Diegelmann et al., 2020). In the first stage of the crisis management, the MOH's Instagram messages stressed the negative consequences of not following the required precautionary measures, by describing COVID-19 as a serious disease. Consequently, individual susceptibility expressed through the fear appeal led to improved attitudes, intentions, and behaviors. The daily reports on COVID-19 that the MOH posted included new and existing cases of infection, and the explicit mention of the number of deaths strengthened the fear factor. According to Tannenbaum et al. (2015), when fear appeals mention death, the public usually increase their commitment to recommended behaviors. Similarly, the many videos conveyed a high level of fear through messages that showed the likelihood of experiencing the same negative consequences resulting from social gatherings and their role in infection. Generally, "mental", "emotional", "fear", and "call of duty" appeals were combined in the Instagram messages, and this diversification is itself a persuasive technique, aimed at persuading the diverse audience of citizens and residents in Bahrain to adopt all the required precautionary measures.

In addition to respecting the cultural diversity of the target audience, largely through the use of both colloquial Arabic and foreign languages, the MOH adopted the persuasive technique of the "similarity between the source of the message and the recipient". In a related context, persuasive messages targeted three levels, in the following order: the "cognitive", "emotional", and "behavioral" levels of the recipients. It would have been difficult to influence the behavioral level of the target audience directly without first trying to influence their cognitive side by increasing their knowledge, and then emotionally to change some of their inherited cultural beliefs, such as family visits. Finally, influencing their behavioral level targeted was possible.

In parallel with the persuasive methods used within the framework of the MOH's messages on its Instagram website, other persuasive strategies were employed. One of the most frequently used was the "social proof" strategy. Several television interviews were conducted with real infected persons, who talked about their bad experience in transmitting the virus to their parents and families without knowing that they were carrying it. Many interviews were also conducted with those who were infected by COVID-19 because of failing to follow the precautionary measures. Similarly, Loman et al. (2018) had proposed that an excellent persuasive technique was "self-persuasion", which enables the target audience to generate arguments on a specific issue, by presenting people with open-ended questions (Li et al. 2018; Damen et al. 2015).

As the Kingdom of Bahrain is distinguished by cultural diversity, cultural background should be taken into consideration as a persuasive technique for effective government health campaigns. For example, Shuang et al. (2020) found that cultural background played an essential role in the relationship between persuasion and healthy eating campaigns for the three sub-populations in the Netherlands. Considering different cultural backgrounds was reflected in the MOH's Instagram messages through several videos broadcasted in English, to be understandable to the non-Arab residents of Bahrain. At the same time, some Arabic texts were translated into English, Hindi, Urdu, and Bengali.

The most visible persons on the Bahraini MOH's website during the study period were the doctors, especially those working at the MOH, to give citizens guidance on the precautionary measures aimed to prevent the spread of the disease and to clarify the efforts made by the Bahraini medical team. This "linking the content to the source" was thus an important strategy of persuasion, aimed at persuading the recipient to adopt a certain behavior on the basis of information from a highly credible source. In some persuasive situations, the communicator may use celebrities such as football players, artists, or social media influencers to convince the target audience of the

message; here, however, the MOH relied on doctors having the greatest impact on persuading the public, more than other governmental officials, whose role was focused only on giving direct instructions such not contravening the safety guidelines. At the same time, Edelman's research (2020) confirmed that medical doctors and health officials were the source of information most trusted by people at the beginning of the COVID-19 outbreak, followed by journalists and government officials.

## Conclusion

This is one of the few Arab studies to investigate persuasive communication in social media contexts through examining the official MOH's Instagram messages in managing the COVID-19 pandemic. "High fear" was the most widely used appeal, and this study suggests that healthy behaviors can be encouraged through exposure to fear-based online messages. It is worth noting that there is a shortage in the current Arabic literature on the fear appeal during health crisis management. Accordingly, there is a need for more studies to investigate the mechanisms behind the fear appeal effects during any health crisis.

According to the EPPM, when people are exposed to any risky situation, they usually react based on the efficacy of the recommended action and the level of perceived threat. Thus, to influence people's behavior to follow the COVID-19 health recommendations, future studies need to examine how people perceive and assess the risk messages and how such assessments might lead them to change their behavior. Briefly, it is necessary to know how and why the fear appeal works in managing health crises. Of course, this knowledge could be used to design more effective fear messages.

The study results also revealed that MOH combined many persuasive techniques and strategies to convince the target audience of required actions. Generally, and based on the study results, we can conclude that persuasive strategies in content creation on social media that encourage audience engagement have the

potential to involve the target audience in the delivered content.

This study also points to a future research field to identify the most appropriate persuasive appeals, techniques, and strategies for the various stages of crisis management. This field of research, which combines crisis management with persuasion, also needs to be considered in the Arab studies context. At the same time, to understand how any organization can position itself as a reliable source of information, communicators need to understand how crisis messages can persuade the public.

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