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Social Media Responsibility towards COVID 19 News: The Case of Qatar

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Abstract

Objectives: This study explored to what extent people in one nation in the Middle East, Qatar, used social media to obtain information regarding COVID-19. It also looked at how social media organizations review and attempt to verify posted information and what they do when and if they discover fake news

Methods: The researchers surveyed 400 Qatari citizens to determine their perceptions of the credibility of government and private social media sites and how that differed from their perception of the credibility of traditional mass media news outlets.The research also addressed the interrelationship between browsing social media for information and disinformation about COVID-19 and a person's feelings of threat, anxiety, and fear.

Results: The study found that social media users may have difficulty telling the difference between information and disinformation. This can increasetheir fear, anxiety, and stress. This relationship appears to be clear, and cuts across all demographic lines. What is unclear is whether fear drives people to increase their social media searching for COVID-19 information, or if increased consumption increases fear? It's quite possible that it is a circular relationship.

Conclusions: The study recommended that interventions from multiple stakeholders are essential in order to rationale social media performance and harness it's power to disseminate reliable information.

Keywords: Social media, Media responsibility, COVID 19, Fake news, Infodemic, Media credibility, Media dependency.

مسؤولية وسائل التواصل الاجتماعي تجاه أخبار جائحة كوفيد 19 – دراسة حالة على دولة قطر

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ملخّص

الأهداف: استكشفت هذه الدراسة إلى أي مدى استخدم الناس في قطر، وسائل التواصل الاجتماعي للحصول على معلومات بشأن فيروس كورونا. كما بحثت كيفية مراجعة مؤسسات وسائل التواصل الاجتماعي للمعلومات المنشورة ومحاولة التحقق منها وماذا تفعل عندما تكتشف أخبارًا مزيفة بشأن الجائحة.

المنهجية: قام الباحثون باستطلاع آراء 400 مواطن قطري لتحديد تصوراتهم عن مصداقية مواقع التواصل الاجتماعي الحكومية والخاصة وكيف اختلف ذلك عن تصورهم لمصداقية وسائل الإعلام التقليدية، كما تناول البحث العلاقة المتبادلة بين تصفح وسائل التواصل الاجتماعي للحصول على معلومات حقيقية أو مضللة عن الفيروس ومشاعر الشخص بالتهديد والقلق والخوف.

النتائج: توصلت الدراسة الى ان مستخدمو وسائل التواصل الاجتماعي قد يواجهوا صعوبة في معرفة الفرق بين المعلومات الحقيقية والمضللة. هذا يمكن أن يزيد من خوفهم وقلقهم وتوترهم. وقد تبدو هذه العلاقة واضحة وخاصة عند ربطها بالعوامل الديموغرافية. ما هو غير واضح هو ما إذا كان الخوف يدفع الناس إلى زيادة البحث على وسائل التواصل الاجتماعي عن معلومات فيروس كورونا، أو إذا كان الاستهلاك المتزايد يزيد الخوف؟ من المحتمل جدًا أن تكون علاقة دائرية في الاتجاهين.

الخلاصة: أوصت الدراسة الى ان التدخلات من العديد من أصحاب المصلحة أمرًا ضروريًا من أجل ترشيد أداء وسائل التواصل الاجتماعي وتسخير قوتها لنشر معلومات موثوقة.

الكلمات الدالة: وسائل التواصل، مسؤولية الإعلام، جائحة كورونا، الأخبار الكاذبة، الوباء المعلوماتي، مصداقية الإعلام، الاعتماد على وسائل الإعلام.

Introduction:

The ongoing COVID-19 pandemic has a major precedent almost exactly a century ago: the world-famous H1N1 influenza virus pandemic, sometimes known to the general public as the Spanish flu.The 1918 influenza pandemic is the most recent pandemic to share a number of important parallels with COVID-19. Both pandemics involve novel, highly contagious, respiratory diseases that were caused by a virus. Both pandemics spread across the globe in a matter of months. As of July 2020, both pandemics lack medical treatment, and so both pandemics saw the adoption of non-pharmaceutical interventions to slow the spread but this was massive at COVID-19 due to social media(Beach, B., Clay, K., & Saavedra, M. 2022)

The unfolding of the COVID-19 pandemic has demonstrated how the spread of misinformation, amplified on social media and other digital platforms, is proving to be as much a threat to global public health as the virus itself. Technology advancements and social media create opportunities to keep people safe, informed and connected. However, the same tools also enable and amplify the current infodemic that continues to undermine the global response and jeopardizes measures to control the pandemic (Volkmer, I. 2021).

The year 2019 was, perhaps, one of the most challenging years in the history of the world thanks to the COVID-19 pandemic (Gharib, 2020). It has been referred to as a "super year" (Djalante, Shaw, & DeWit, 2020) because it has resulted in harm to humanity not only as a result of the health effects of the virus, but also the extreme socioeconomic upheaval resulting from world government's attempts to contain the virus through lockdowns. The severe magnitude of damage resulting both directly and indirectly from COVID-19 reached a planetary scale(Vallejo Jr & Ong, 2020). **Dr Tedros Adhanom Ghebreyesus** , the director-general of the World Health Organization declared that the media and social media coverage of COVID-19 resulted in an 'infodemic' of information and an executive of the WHO's Health Emergencies Program has said that 'we want a vaccine against misinformation"(Barua, Barua, Aktar, Kabir, & Li, 2020)

The Secretary-General of the United Nations (António Guterres) stated that "our enemy isn't solely COVID-19; however, additionally, the 'infodemic' of information"(Earnshaw & Katz, 2020). As a result of concern and the threat from COVID-19, the speed of medical information has been circulated and distributed rapidly from heterogeneous and unspecialized sources(Frenkel, Alba, & Zhong, 2020). The flood of social media information has been delineated as a new tsunami(Shaw, Kim, & Hua, 2020). People in several countries have relied on social media to get information regarding the virus.

During the first stage of COVID-19, 93.5% of the Chinese public used the Internet as their main source of health information. Several YouTube videos were deceptive as distributive information. Facebook placed warning labels on 90 million items of content associated with COVID-19 including false cures, anti-vaccination information, and conspiracy theories. The same issue occurred across different social media platforms (Barua et al., 2020) .The COVID-19 crisis has been correlated with a significant increase in web consumption as most of the public hurried to search for any piece of knowledge that might decrease their tension and anxiety. This trend was on the rise throughout the quarantine and its aftermath. Browsing, uploading, and downloading reached unprecedented rates. Approximately 70% of adults were found to trust social media services for looking up health and medical information(Li, Bailey, Huynh, & Chan, 2020). The majority of people were sharing what information they had received regardless of the source's credibility.

Qatar has ranked number one globally in Internet Adoption according to 'The Global State of Digital 2021' report released by Hootsuite. The report features in-depth profiles of more than 230 countries and territories around the world. With a population of 2.91 million in January 2021, over 99 percent of Qatar's population live in urban areas, and 2.88 million Internet users were recorded in Qatar in January 2021, an increase of 29,000 between 2020 and 2021, the report said.The Hootsuite report also stated that Qatar has 2.87 million social media users, equivalent to 98.8 percent of the total population as of January 2021. Qatar's mobile connections increased by 35,000 (+0.8%) between January 2020 and January 2021, raising the connections to 4.67 million and 160.6% of the population. The mobile connection figures are shown to exceed the total population because many people use several mobile connections.

The COVID-19 panademic pushed people in Qatar to increase their usage to social media to reduce their panic and keep updated .

Statement of Problem

Social media has become the main source of information for a majority of the people during the COVID-19 crisis; however, there has been limited research so far from the academic community examining whether social media platforms have behaved in a responsible or irresponsible manner. A number of up-to-date studies have compared social media and traditional media. These studies concluded that people distrust both in terms of reliability of information. What complicates this situation is the fact that social media platforms are completely free, decentralized and operate without any sort of accountability. Reviewing both literature and social media content regarding COVID-19 reveals that the overwhelming majority of content posted was not true, which is supported by countless examples.

There are many COVID-19 related myths that have been promoted via social media: warm temperatures will kill the virus; the virus settles to ground; and the virus is not transmitted through the air. Additionally, some posts and tweets promoted that ingestion of onions, or herbs would kill the virus. In addition, in some countries like Bangladesh, the Imam of a place of worship asked believers to attend their place of worship to wash their souls, which he claimed would stop the virus from attacking them. While this was preached in many countries about many religions, in many cases believers hurried into mosques and churches in large numbers with no masks or gloves as well as ignoring social distancing regulations(Team, 2020)

The same issue arose in Egypt when Egyptians in many areas emerged on the balconies of their homes and called on God to lift the cloud. This would spark widespread dispute when a number of Egyptians took to the streets in marches, cheering and praying, in a scene not dissimilar to the cluster singing witnessed in some regions of Italy and other European nation in an effort to boost the morale of the population. Unreliable information or information leading to mistrust publicly, ultimately adversely affects individual choices related to health(Poland & Spier, 2010)

The social, economic, and human price of the "infodemic" is large because it incorporates a negative impact on the public. An "infodemic" will encourage racism, fear, and stigma as well as create unhelpful and threatening behavior(Ippolito, Hui, Ntoumi, Maeurer, & Zumla, 2020). This "infodemic" contributed to panic buying which resulted shortage of personal protective equipment like masks, gloves, and sanitizers in the early days of the pandemic.

The shortage of vital medical supplies extended to certain foodstuffs like onions and lemons, which disappeared from markets as some stories, mentioned that they could be employed in overcoming the virus(Addo, Jiaming, Kulbo, & Liangqiang, 2020). Some people acquired toxic substances based on recommendations from social media(Chou, Oh, & Klein, 2018). A resident of Phoenix, Arizona (USA), hearing on the news that a certain antimalarial that was ordinarily used at aquariums to scrub fish tanks could cure COVID-19, died after using the drug (Waldrop et al, 2020).

Misinformation referring to and about COVID-19 is thought of adversely and as a source of stress and anxiety due to its relationship to serious health issues. The "infodemic" has had a serious negative impact on the psychological and physical health of the general public. It has caused a high degree of stress, anxiety, depression, and frustration (Zandifar & Badrfam, 2020)"Infodemics" or information content can be created in several ways like inaccurate information or exaggerated info(Rajkumar, 2020)

This study explored to what extent people in one nation in the Middle East, Qatar, used social media to obtain information regarding COVID-19. It also looked at how social media organizations review and attempt to verify posted information and what they do when and if they discover fake news

Review of Literature

Although any "infodemic" certainly began with the discovery of COVID-19 and its effect on people, social media accelerated publication of accurate and inaccurate information about the pandemic rapidly to a worldwide audience. These online messages refueled panic and concern among people through business enterprises and the promotion of unproven and false information (Hao & Basu, 2020).Social media played into people's myths, emotions, feelings, and thoughts that influence negative public psychological, mental health, and physical health(Wongkoblap, Vadillo, & Curcin, 2017)

Although social media provides public health messages, testimonials, and best practices associated with the coronavirus, it can also spread anxiety, tension, and panic quicker than the virus itself(Gough et al., 2017). The rate of social media consumption has increased dramatically. As an example, within a specific twenty-four-hour period, there were 19 million

mentions of COVID-19 across social media and news sites worldwide(Molla, 2020)

Some studies have tried to address whether social media is informing or misinforming the public in regards to the COVID-19 pandemic. One of these studies adopted a qualitative methodology of phenomenological study by exploiting in-depth interviews with thirteen active social media users. The World Health Organization is often times following the pandemic updates on completely different social media platforms. The study tried answering whether social media platforms are major sources of information or misinformation during the COID-19 outbreak and whether social media is an effective tool to communicate key information during the COVID-19 pandemic,(Brindha, Jayaseelan, & Kadeswara, 2020)

The results of additional user-generated or user-edited content significantly contributed to the spread of misinformation at a rate heretofore unimaginable. While some messaging clearly and accurately explained the evolution of the COVID-19 pandemic, they were overshadowed by an enormous amount of misinformation. Ironically, some messaging was a combination of both accurate and inaccurate information. It is difficult to spot if the true motive behind this news was to misguide people on a massive scale or if it were simply the result of uninformed individuals trying to share what they believed to be true. Regardless of the motives and intent, the result is that many people who rely on social media for news and information ended up taking an ill-advised approach to the pandemic(*Understanding the infodemic and misinformation in the fight against COVID-19-Digital transformation toolkit knowledge tools*, 2020)

To work out how social media affects self-reported conditions and to stop the spread of panic related to COVID-19 within the Kurdistan Region, an online study was developed and conducted in the countryside. 516 social media users were sampled. This study deployed a content analysis methodology for data analysis. Participants reported that social media choices had a significant impact on spreading concern and panic associated with the COVID-19 eruption in the countryside, with a noticeable negative influence on people's condition and psychological well-being. Facebook was the foremost used social media network for spreading panic relating to the COVID-19 eruption in the republic. The study found a significant positive correlation between self-reported social media use and panic associated with COVID-19 (R=.8701). The results indicated that the bulk of participants aged 18-35 faced psychological anxiety. Throughout the lockdown period, people relied on social media platforms to understand information relating to COVID-19. The character of the impact of social media panic among people varied depending on the person's gender, age, and level of education(Ahmad & Murad, 2020)

Another study investigated how the most read state-owned newspaper in China, *People is Daily*, used an online social networking data processor, Sina Weibo, to craft messages related to COVID-19 and whether this might affect public understanding. Content analysis was utilized to scrutinize 608 COVID-19 posts, and analyses was performed on three main dimensions: content, message voice, and interactive selections. Public engagement was measured at intervals that assessed the number of shares, comments, and likes on the *People's Daily's* Sina Weibo account in early 2020. The analysis revealed an association between different levels of public engagement and communication strategies. Posts associated with news proof and a non-narrative voice were negative predictors of the number of shares. It had been found that choosing acceptable communication ways that could foster active feeling and sharing of posts on social media, that successively, might raise the public's awareness of COVID-19 and encourage them to use preventive measures(Ngai, Singh, Lu, & Koon, 2020)

A group of policymakers, public health professionals, researchers, students, and other stakeholders were joined by representatives of the media, social media platforms, varied non-public sector organizations, and civil society to confer and discuss actions for all parts of society, as well multiple connected scientific disciplines, methods, and technologies. 594 ideas for actions were crowdsourced online throughout the discussions and an analysis team distilled the suggestions into a grouping of 50 projected actions for a framework for managing "infodemics" in public health emergencies. The consultation provided six policy implications to reflect on. First, interventions and messages have to be supported by science and proof. Second, information ought to be translated into unjust-behavior change messages that can be understood by and accessible to all people. Third, governments ought to reach key communities to make positive their issues and concerns are understood. Fourth, strategic partnerships ought to be shared across all sectors. Fifth, health authorities should check that these actions are supported by reliable information. Sixth, "infodemic" management approaches ought to be developed to support readiness and response. Responses to the COVID-19 pandemic and the connected "infodemic" would require swift, regular, systematic, and

coordinated action from multiple sectors of society and government. It remains crucial that we tend to push trustworthy information and fight misinformation, thereby serving to avoid wasting lives(Tangcharoensathien et al., 2020)

After many criticisms directed at social media about false information posted on their platforms, the organizations tried to regain their credibility by eradicating posts containing false information, taking certain steps to verify information and looking at the data being uploaded onto the platforms(Frenkel et al., 2020). Many governments asked social media organizations to commit to social and moral responsibility by stopping the spread of false information relating to COVID-19. For example, it was reported that Russian government-controlled media deployed a disinformation campaign designed to increase the negative outcomes of the COVID-19 pandemic in the West (Emmott, 2020). In many countries, it appeared that shortages of food, toilet paper, and other necessities appeared to be attributed to panic generated in the populace based on posts about shortages in social media (Naeem & Services, 2021). The photos of empty shelves at stores posted on social media created panic associated with food shortages, (Taylor, 2021). So, people rush to malls and supermarkets. In time of crisis like the COVID-19 pandemic, people attempt to relieve their tension and anxiety by sharing information they deem important as quickly as they receive with little regard for the information's accuracy or confirmation of the source's credibility(Islam, Laato, Talukder, Sutinen, & Change, 2020)

Throughout quarantine, people spent significant amounts of time on social media trying to share their experiences as everybody has become more knowledgeable and want to send a message concerning COVID-19(Ouedraogo, 2020). Social media had been remodeled into a source of panic rather than a source of happiness (Dodds, Harris, Kloumann, Bliss, & Danforth, 2011). Fake news, misinformation concerning COVID-19 and information embodying conspiracy theories may or may not have originated on social media but were certainly magnified a thousand-fold by this communication platform(Depoux et al., 2020); (Mian & Khan, 2020)

However, how did the average citizen in the Middle East react to social media messages of information and misinformation about COVID-19? Are there differences based upon whether the social media messages came from official (government, NGOs, health agencies, etc.) or non-official (average individuals, organizations not affiliated with government, NGO, or health agencies, etc.)? Are there differences in perceptions of credibility of mainstream messages vs. social media messages? How does consumption of social medial messages correlate with an individual's fear and anxiety? Does gender or other demographic characteristics play a role?

Research Questions and Hypotheses

The researchers developed the following research questions and hypotheses to address these issues:

RQ 1. Which agencies do residents of Qatar feel are more trustworthy and have more expertise in posting about COVID-19 issues: traditional media, non-official social media sources, and official social media agencies?

RQ 2. Which agencies do residents of Qatar feel are most credible regarding COVID-19 issues: traditional media, non-official social media sources, and official social media agencies?

RQ 3. To what extent do Qatari residents trust the information about COVID-19 provided on social media platforms?

RQ 4. Do Qatari residents feel about the procedures taken by social media platforms to verify content about COVID-19?

RQ 5. What are the respondents' suggestions to improve social media content about COVID-19?

RQ 6. Does gender play a role in preferred social media platform?

RQ 7. Does gender play a role in the perception of how social media covered the COVID-19 pandemic?

RQ 8. Does gender play a role in the perception of a relationship between distribution of COVID-19 news via social media and increased public fear?

RQ 9. Does gender play a role in the perceived importance of various topics related to COVID-19?

RQ 10. Do feelings of threat, anxiety, and fear related to COVID-19 differ based on demographics?

RQ 11. Does gender play a role in the perception of physical vs. psychological threat, anxiety, and fear resulting from the COVID-19 pandemic?

Hypothesis

H 1. Respondents will find traditional mass media to be more credible regarding COVID-19 information than official social media agencies.

H 2. Respondents will find traditional mass media to be more credible regarding COVID-19 information than non-official social media posters.

H 3. There is a positive relationship between browsing COVID-19 social media posts and feelings of threat, anxiety, and fear.

Methodology

The research design adopted for the study is a descriptive survey. This design is considered apt because it enabled the researchers to generate data through standardized collection procedures based on highly structured research instruments, well-defined study concepts, and related variables.

The population in this research was male and female respondents, 18-60 years old, encompassing Qataris, Expat Arabs, and Expat non-Arab (foreigners) living in Qatar. The study depended on a stratified random sample to get the data from citizens and ex-pats in Qatar using a confidence interval of five and a confidence level of 95% (0.05) from the total population. The researchers collected the needed data via a personal interview with the selected sample. 440 copies of the questionnaire were distributed to elicit responses from the respondents and retrieved on the spot by the researchers. 12 questionnaires were missing while 18 were wrongly filled out leaving the researchers with 400 valid questionnaires.

The questionnaire was divided into two sections. The first section collected demographic information about the respondents and the second section consisted of questions that elicited responses from the respondents with response options: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The questionnaire also includes closed, open, and semi-open questions.

The designed questionnaire was submitted to some media and practitioners' referees for vetting, correction, and approval before distributing it to the respondents. The referees asked for the deletion of some statements and replacement of some phrases in the scale referring to using social media and the scale of feedback to COVID-19 social media content. A pretest had been applied for 40 respondents and results indicated that the questionnaire is easy, simple, and applicable. The reliability of the research instrument was determined using a split-half test using the odd and even-numbered items to form the two halves. The two halves were administered to a sample of respondents. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.85 indicated that the research instrument was reliable; hence, it was adopted for collection of the desired information of the study.

Near the end of 2020, the researchers collected the needed data by personal interview with selected sample. The researchers carried out the administration of the questionnaire. 440 copies of the questionnaire were distributed to elicit responses from the respondents and retrieved on the spot by the researchers. 12 questionnaires were missing while 18 were incorrectly filled leaving the researchers with 400 valid questionnaires. The data collection was completed in parallel to the fourth stage of precautionary measures for resuming regular life after the coronavirus pandemic within Qatari society. The questionnaire was developed in both Arabic and English languages.

A descriptive and explanatory analysis was used to analyze the data. SPSS Version 26 was used to categorize and answer the study questions and test the study hypothesis. Responses from the questionnaire were analyzed using the descriptive statistics of frequency counts and percentage, and inferential statistics of Chi-square(x2). Descriptive statistics of frequency counts and percentages were used in analyzing demographic variables and research questions while the inferential statistics of Chi-square(x2) was also used to test the stated hypotheses at 0.05 and 0.01 levels of significance.

Results

The researchers feel that it is important to emphasize that the respondents – and the rest of the world – had been struggling with the COVID-19 pandemic for about nine months at the time the survey was administered. Although demographic information would not change, the respondent's perceptions about how traditional and social media

information was handled regarding the virus, as well as their feelings of fear and anxiety, would be different now as opposed to earlier or later in the pandemic.

Descriptive Information

Demographics of Respondents: The researches ended up with 400 viable survey responses. Fifty-six percent (n = 224) were male and 44% (n= 176) female. About one third (n = 126, 31.5%) were Qatari nationals, one-third Arab expats (n = 132, 33.0%), and one-third expats from outside the Middle East and North Africa (MENA) region (n = 142, 35.5%). The majority (n = 251, 62.7%) had received a bachelor's degree. About one quarter of the sample (n = 105, 26.3%) had a high school education and about one tenth of the sample (n = 44, 11.0%) had postgraduate education. About half the sample was between 18 and 35 years old (n = 203, 50.7%) and half was 36 or older (n = 197, 49.3%)

Respondents' Self-Reported Impact of Fear about COVID-19: It is believed that fear and anxiety may drive people to utilize information sources like social media a certain way. In addition, of course, the consumption of certain social media messages may affect a person's fear and anxiety. Therefore, respondents were asked how much fear and anxiety about the COVID-19 crisis has affected them. Sixty-four percent (n = 256) of the sample reported that their fear over the issue was psychological, while only six percent (n = 24) found it to be physical in nature. Twelve percent (n = 48) felt that their fear resulted in both psychological and physical effects.

Preferred Social Media Platform for COVID-19 Information: The different social media platforms have taken different approaches to moderating the information about COVID-19 on their sites. The researchers asked respondents which social media site was their primary choice for information about COVID-19. More than two thirds of the sample preferred either Twitter (n = 145, 36.3%) or Facebook (n = 132, 33.0%) as their primary source of social media information about COVID-19. WhatsApp was preferred by 17.3% (n = 69) of the sample. Instagram (n = 33, 8.3%) and YouTube (n = 21, 5.3%) were each preferred by less than 10% of respondents.

COVID-19 Topics Most Commonly Found on Social Media: Respondents were also asked what COVID-19 topic they had found the most on social media. The highest proportion of participants (n = 155, 38.8%) had found stories about preventive measures for COVID-19. This was closely followed by information about lockdown measures (n = 136, 34.0%). Only 13.8% (n = 55) of respondents found primarily stories about deaths and infections. At the time of this survey, less than 10% of responds found that the primary type of social media information on the topic related to strengthening immunity (n = 32, 8.0%) or development of COVID-19 vaccines (n = 22, 5.5%).

Perceptions of How Well Social Media have Covered COVID-19: When respondents were asked about their perceptions of the impact of publishing COVID-19 information social media and whether it spreads fear and panic among the people, they generally felt that this does happen. However, they pointed out their belief that official Qatari social media accounts, pages, and groups online provided solid, fact-based information about COVID-19. Respondents believed that, like the universal trend all over the world, the average person in Qatar would repost on social media any information that they have received even though they do not know about the source's credibility. Respondents generally felt that filters need to be set up for social media and a specific policy should be followed during humanitarian crises such as the spread of COVID-19.

Research Questions

With a better understanding of respondents' demographic information and beliefs about social media and COVID-19, the research next focused on the following research questions.

RQ 1. Which agencies do residents of Qatar feel are more trustworthy and have more expertise in posting about COVID-19 issues: traditional media, non-official social media sources, and official social media agencies?

To measure credibility, the researchers adapted the credibility portion of the survey from Ohanian's (1990) credibility fifteen-item 7-point Likert scale, which divide credibility into three sections: trustworthiness, expertise, and attractiveness. The researchers excluded attractiveness, as it did not pertain to a study of media platforms. In addition, the researchers shortened the Likert scale from seven to four points (strongly agree- agree- disagree- and strongly disagree). The five items for the trust construct asked respondents if social media appeared dependable, honest, reliable, sincere and trustworthy

(Cronbach's alpha= .88). The expertise construct asked participants to agree with the following statement: "The content in social media is produced by individuals who are "experts, experienced, knowledgeable, qualified and skilled" (Cronbach's alpha= .87).

A one-way analysis of variance showed respondents found the official social media platforms (M = .85) were significantly more trustworthy than non-official social media (M = .65) or mass media (M = .173) -- F (2, 397) = 1603, p < .001. Respondents also felt that official social media sites (M = .72) had greater expertise than non-official social media (M = .64) or mass media (M = .67) -- F (2, 397) = 557, p < .001.

RQ 2. Which agencies do residents of Qatar feel are most credible regarding COVID-19 issues: traditional media, non-official social media sources, and official social media agencies?

Although respondents found official social media sites to be more trustworthy and have more expertise than both unofficial social media and traditional mass media, they appear to find the traditional mass media more credible overall. A one-way analysis of variance revealed that the mass media (M = 2.41) were considered significantly more credible than official social media sites (M = 1.93) or non-official sites (M = 1.05) – F (2, 397) = 259.3, p < .001.

RQ 3. To what extent do Qatari residents trust the information about COVID-19 provided on social media platforms?

After nine months of experience the COVID-19 pandemic as well as information about it provided on social media, more than half the respondents either didn't trust (n = 111, 27.5%) or trusted very little (n = 121, 30.3%) the information they found online. A quarter of the respondents (n = 101, 25.3%) felt moderate trust in the information they found in social media. Less than 20% found the information very trustworthy (n = 36, 9.0%) or fully trusted (n = 32, 8.0%) the information.

RQ 4. How do Qatari residents feel about the procedures taken by social media platforms to verify content about COVID-19?

Respondents were asked whether they felt that social media platforms in general had used enough methods to verify data about COVID-19 and that these procedures were efficient. Only 7.5% of the sample (n = 30) felt that efforts were both enough and efficient. About one fifth of the sample felt that efforts were efficient, but that not enough of them had been put into place (n = 86, 21.5%); while 28.2% (n = 113) considered there to be enough efforts, but that they were not very efficient. One quarter of the sample (n = 100, 25.0%) that efforts were not efficient and there were not enough of them. Seventy-one respondent (17.8%) stated that they did not know.

RQ 5. What are the respondents' suggestions to improve social media content about COVID-19?

Respondents were asked to select from a series of suggested ways that social media outlets might improve the accuracy of the information they provide regarding COVID-19. Forty-eight (12.0%) of the 400 respondents selected the option that they "don't know" how social media site information could be improved. Eighty-eight percent (n = 352) of the 400 respondents selected 451 options.Nearly one third of the selected suggestions (n = 132, 29.3%) were that more procedures should be put into place to check the quality of content. Another 27.3% (n = 123) felt that social media sites should depend exclusively on trusted sources of information. One quarter of the responses (n = 115, 25.5%) agreed that doubtful content should be removed immediately. Less than 10% of the selections insisted that social media sites should refer only to official sources (n = 42, 9.3%) or that social media sites should track source content credibility (n = 39, 8.6%).

RQ 6. Does gender play a role in preferred social media platform?

A contingency table was created to cross-tabulate gender by preferred social media platform. (See Table 1.) A chi-square analysis was run to see if there were any significant differences in preferences based on gender. The results indicated that the calculated chi-square value of 2.855 was smaller than the critical chi-square value of 5.991; thus, it was determined that there was no difference in preference based on gender.

Table 1: Crosstabulation of Gender and Social Media Platform Preference

			Gender		Total
			Male	**Female**	
Preferred Social Media Platform	Twitter	Count	88	57	145
		% within Gender	39.3%	32.4%	36.3%
	Facebook	Count	68	64	132
		% within Gender	30.4%	36.4%	33.0%
	WhatsApp	Count	37	32	69
		% within Gender	16.5%	18.2%	17.3%
	Instagram	Count	18	15	33
		% within Gender	8.0%	8.5%	8.3%
	YouTube	Count	13	8	21
		% within Gender	5.8%	4.5%	5.3%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 2.855 critical chi-square value 5.991 Significance 0.582

RQ 7. Does gender play a role in the perception of how social media covered the COVID-19 pandemic?

Contingency tables were created to cross-tabulate gender by various issues involving respondents' perceptions of how social media had generally covered the COVID-19 pandemic. (See Tables 2 – 5.)

Respondents were asked if they felt that publishing more news related to COVID-19 on social media has contributed to the spread of fear and panic among people. The majority of both men and women felt that this was the case (n = 259, 64.8%) while much smaller numbers were neutral on the issue (n = 84, 21.0%). Only 14.2% (n= 57) felt that this information did not negatively affect fear and panic. Although it was clear that most people in the sample felt that coverage had negatively affected peoples' fear and anxiety, results indicate that the calculated chi-square value of 5.368 was smaller than the critical chi-square value of 5.991, hence there were no gender differences in these perceptions. (See Table 2.)

Table 2: Attitude that Social Media Information about COVID-19 Spread Fear and Anxiety among People

			Gender		Total
			Male	**Female**	
Opinion	No	Count	27	30	57
		% within Gender	12.1%	17.0%	14.2%
	Neutral	Count	41	43	84
		% within Gender	18.3%	24.5%	21.0%
	Yes	Count	156	103	259
		% within Gender	69.6%	58.5%	64.8%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 5.368 critical chi-square value 5.991 Significance 0.068

Participants were also asked what their general opinion was regarding social media accounts, webpages, and online discussion groups dedicated to COVID-19 information. The majority of both men and women had a negative attitude about this (n = 198, 49.5%). A somewhat smaller number were neutral on the issue (n = 140, 35.0%). A much smaller 15.5% (n= 62) had a positive attitude about the issue. The calculated chi-square value of 1.024 is smaller than the critical chi-square value of 5.991; there were no gender differences in these attitudes. (See Table 3.)

Table 3: Attitudes toward COVID-19 Social Media Accounts, Pages, and Groups

			Gender		Total
			Male	**Female**	
Opinion	Negative	Count	106	92	198
		% within Gender	47.3%	52.3%	49.5%
	Neutral	Count	81	59	140
		% within Gender	36.2%	33.5%	35.0%
	Positive	Count	37	25	62
		% within Gender	16.5%	14.2%	15.5%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 1.024 critical chi-square value 5.991 Significance 0.599

Additionally, respondents were asked if they thought it was good or bad that COVID-19 information of any kind is being published in social media. About 40% of the respondents felt that this information should be published social media (*n* = 165, 41.2%). Nearly the same number of respondents (*n* = 161, 40.3%) had no opinion. Only 18.5% (*n* = 74) felt that it was a band idea for COVID-19 information to be published on social media. The calculated chi-square value of 2.955 was smaller than the critical chi-square value of 5.991; hence, there were no gender differences in these perceptions. (See Table 4.)

Table 4: Attitudes toward Publishing any Information about COVID-19 on Social Media

			Gender		Total
			Male	**Female**	
Opinion	No	Count	44	30	74
		% within Gender	19.6%	17.0%	18.5%
	Neutral	Count	96	65	161
		% within Gender	42.9%	37.0%	40.3%
	Yes	Count	84	81	165
		% within Gender	37.5%	46.0%	41.2%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 2.955 critical chi-square value 5.991 Significance 0.228

Finally, respondents were asked what their attitude was about social media sites using filters and strict content policies in order to keep false content about COVID-19 (and other humanitarian crises) off their sites. The majority of both men and women felt that this was a good idea (*n* = 272, 68.0%). Much smaller numbers were neutral on the issue (*n* = 75, 18.8%). Only 13.2% (*n*= 53) felt that using filters and a strict content policy were a bad idea. Although it was clear that most people in the sample felt that social media sites should use filters and strict content policies during COVID-19 and other humanitarian crises, results indicate that the calculated chi-square value of 5.536 was smaller than the critical chi-square value of 5.991, thus there were no gender differences in these perceptions. (See Table 5.)

Table 5: Attitude about Social Media Setting up Filters and Following Strict Content Policy during COVID-19 and other Humanitarian Crises

			Gender		Total
			Male	Female	
Opinion	No	Count	26	27	53
		% within Gender	11.6%	15.3%	13.2%
	Neutral	Count	34	41	75
		% within Gender	15.2%	23.3%	18.8%
	Yes	Count	164	108	272
		% within Gender	73.2%	61.4%	68.0%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 5.536 critical chi-square value 5.991 Significance 0.58

Ultimately, in reviewing the results of Research Question 7, it was found that respondents had strong opinions regarding these issues, but gender did not play a role in these perceptions.

RQ 8. Does gender play a role in the perceived importance of various topics related to COVID-19?

A contingency table was created to cross-tabulate gender by respondents' perception of the most important topics about COVID-19 posted on social media. (See Table 6). About 40% of respondents (n = 155, 38.9%) felt that stories about preventative measures were most important. Stories about lockdown measures were a close second (n = 136, 34.0%). Only 13.8% (n = 55) of respondents felt that information about deaths and infections were most important. Less than 10% of respondents felt that both strengthening natural immunity to the virus (n = 32, 8.0%), and COVID-19 vaccines (n = 22, 5.5%) were the most important COVID information on social media. The calculated chi-square value of 0.894 was smaller than the critical chi-square value of 5.991, thus there were no gender differences as to what were the most important issues.

Table 6: Most Important COVID-19 Topic on Social Media

			Gender		Total
			Male	Female	
Most Important COVID-19 Topic	Preventative Measures	Count	85	70	155
		% within Gender	37.8%	39.8%	38.9%
	Lockdown Measures	Count	80	56	136
		% within Gender	35.7%	31.8%	34.0%
	Number of Deaths and Infections	Count	30	25	55
		% within Genderv	13.3%	14.2%	13.8%
	Strengthening Natural Immunity	Count	18	14	32
		% within Gender	15.2%	7.9%	8.0%
	COVID-19 Vaccine	Count	11	11	22
		% within Gender	8.0%	6.3%	5.5%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 0.894 critical chi-square value 5.991 Significance 0.925

RQ 9. Do feelings of threat, anxiety, and fear related to COVID-19 differ based on demographics?

Anova and T-test analyses were performed to determine whether feelings of threat, anxiety, and fear related to COVID-19 information on social media varied by respondent demographics. There was no significant difference between male and female where (M =.2.98, SD =1.01, T (398) = 1.570, p > .05). A one-way analysis of variance found no significant differences among different nationalities where (M =2.04 SD =0.819, F (3, 396) = 2.144, p > .05). In addition, there is no significant differences among different ages where (M = .164, SD =.0726, F (3, 396) = 491, p > .05). In addition, there is no significant differences among different educational levels where (M =1.85 SD =0.592, F (3, 396) = 1.989, p > .05).

RQ 10. Does gender play a role in the perception of physical vs. psychological threat, anxiety, and fear resulting from the COVID-19 pandemic?

A contingency table was created to cross-tabulate gender by respondents' perception of physical and psychological threat from the COVID-19 pandemic. (See Table 7). The vast majority of respondents (*n* = 256, 64.0%) feared psychological pain from the pandemic. Eighteen percent (*n* = 72) were concerned with physical pain and only six percent (*n* = 24) feared both. Twelve percent (*n* = 48) stated that they were in no fear of pain due to the pandemic.

The calculated chi-square value of 3.203 was smaller than the critical chi-square value of 5.991, thus there were no gender differences in these perceptions.

Table 7: Gender and Perception of Physical vs. Psychological Threat, Anxiety, and Fear Resulting from the COVID-19 Pandemic

			Gender		
			Male	**Female**	**Total**
Perceptions of Threat, Anxiety, and Fear	Psychological	Count	148	108	256
		% within Gender	66.1%	61.4%	64.0%
	Physical	Count	36	36	72
		% within Gender	16.1%	20.5%	18.0%
	Both	Count	16	8	24
		% within Gender	7.1%	4.5%	6.0%
	Not Afraid	Count	24	24	48
		% within Gender	10.7%	13.6%	12.0%
Total		Count	224	176	400
		% within Gender	100.0%	100.0%	100.0%

Chi-Square value 3.203 critical chi-square value 5.991 Significance 0.361

The calculated chi-square value of 1.106 was smaller than the critical chi-square value of 5.991, thus there were no differences in these perceptions based on a respondent's nationality. (See Table 8.)

Table 8: Nationality and Perception of Physical vs. Psychological Threat, Anxiety, and Fear Resulting from the COVID-19 Pandemic

		Nationality			Total
		Qatari	**Arab Expats**	**Non-Arab Expats**	
Perceptions of Threat, Anxiety, and Fear	Psychological Count % within Nationality	81 64.3%	85 64.4%	90 63.4%	256 64.0%
	Physical Count % within Nationality	21 16.7%	24 18.2%	27 19.0%	72 18.0%
	Both Count % within Nationality	7 5.6%	7 5.3%	10 7.0%	24 6.0%
	Not Afraid Count % within Nationality	17 13.4%	16 12.1%	15 10.6%	48 12.0%
Total	Count % within Nationality	126 100.0%	132 100.0%	142 100.0%	400 100.0%

Chi-Square value 1.106 critical chi-square value 5.991 Significance 0. 981

A contingency table was created to cross-tabulate education level by respondents' perception of physical and psychological threat from the COVID-19 pandemic. (See Table 9). The calculated chi-square value of 4067 was smaller than the critical chi-square value of 5.991, thus there were no differences in these perceptions based on education level.

Table 9: Education Level and Perception of Physical vs. Psychological Threat, Anxiety, and Fear Resulting from the COVID-19 Pandemic

		Education Level			Total
		High School	**Graduate**	**Postgraduate**	
Perceptions of Threat, Anxiety, and Fear	Psychological Count % within Education Level	69 65.7%	162 64.5%	25 56.8%	256 64.0%
	Physical Count % within Education Level	14 13.3%	47 18.7%	11 25.0%	72 18.0%
	Both Count % within Education Level	7 6.7%	15 6.0%	2 4.5%	24 6.0%
	Not Afraid Count % within Education Level	15 14.3%	27 10.8%	6 13.7%	48 12.0%
Total	Count % within Education Level	105 100.0%	251 100.0%	44 100.0%	400 100.0%

Chi-Square value 4.067 critical chi-square value 5.991 Significance 0.668

A contingency table was created to cross-tabulate age by respondents' perception of physical and psychological threat from the COVID-19 pandemic. (See Table 10). The calculated chi-square value of 2.208 was smaller than the critical chi-square value of 5.991, thus there were no differences in these perceptions based on respondent age.

Table 10: Age and Perception of Physical vs. Psychological Threat, Anxiety, and Fear Resulting from the COVID-19 Pandemic

		Age Range			
		18 – 35	**36 – 50**	**51 +**	**Total**
Perceptions of Threat, Anxiety, and Fear	Psychological Count % within Age Group	131 64.5%	89 64.5%	36 61.0%	256 64.0%
	Physical Count % within Age Group	39 19.3%	24 17.4%	9 15.3%	72 18.0%
	Both Count % within Age Group	10 4.9%	9 6.5%	5 8.4%	24 6.0%
	Not Afraid Count % within Age Group	23 11.3%	16 11.6%	9 15.3%	48 12.0%
Total	Count % within Age Group	203 100.0%	138 100.0%	59 100.0%	400 100.0%

Chi-Square value 2.208 critical chi-square value 5.991 Significance 0.900

Hypotheses

Understanding more thoroughly how demographics played a role in responses, as well as respondent beliefs about traditional media versus social media coverage of COVID-19, the researchers then considered the following hypotheses.

H 1. Respondents will find traditional mass media to be more credible regarding COVID-19 information than official social media agencies.

A one-way analysis of variance found significant differences in trustworthiness of the mass media versus social media. Subjects found mass media significantly more credible (M = .173, SD =.0747) than official social media (M =.85, SD =.304, F (2, 397) = 1603.5, $p < .01$). A one-way analysis of variance revealed that subjects found mass media significantly more credible (M = .67, SD = 1.01) than official social media (M =.72, SD = .23, F (2, 397), =557.6 $p < .001$). The results support the first hypothesis, confirming that mass media ranked higher in credibility than official social media.

H 2. Respondents will find traditional mass media to be more credible regarding COVID-19 information than non-official social media posters.

A one-way analysis of variance revealed that respondents found the mass media significantly more trustworthy (M = .173, SD =.0747) than non-official social media (M = .65, SD = .36, F (2, 397) = 573, $p < .001$). Furthermore, a one-way analysis of variance for expertise indicated respondents found mass media significantly more credible (M = .67, SD = 1.01) than non-official social media (M =.64, SD = .26, F(2, 397) = 262, $p < .001$). The results support the second hypothesis confirming participant's perceived mass media more credible than non-official social media.

H 3. There is a positive relationship between browsing COVID-19 social media posts and feelings of threat, anxiety, and fear.

To measure browsing, a cumulative scale was created including browsing habits such as platform name and numbers,

duration, browsing interest and interaction. Feeling of threat, anxiety and fear was measured by Likert scale including the following statements. After browsing social media, "I am most afraid of coronavirus". "It makes me uncomfortable to think about coronavirus "My hands become clammy when I think about coronavirus", "I am afraid of losing my life because of coronavirus", "I become nervous or anxious", "I cannot sleep because I'm worrying about getting coronavirus", and "my heart races or palpitates when I think about getting coronavirus". Results were grouped into ordinal-level categories. For browsing social media for information about COVID-19, respondents were categorized has having low, medium, or high exposure. For feelings of fear, threat, and anxiety about the pandemic, respondents were grouped in the following categories: none, low, medium, and high.

Table 11 shows a cross tabulation of these two variables. Observation suggests that amount of social media browsing for COVID-19 information is positively related to a respondent's level of fear, threat, and anxiety. The calculated chi-square value of 183.877 is greater than the Critical chi-square value of 16.812; hence, the hypothesis is supported.

This implies that respondents' browsing of social media is extremely significantly related to their feeling of fear, threat and anxiety. However, one cannot tell if the fear drives the social media usage or if the social media usage raises the fear – or if it is a circular relationship.

Table 11: Amount of Social Media Browsing for COVID-19 Information and Respondent Feelings of Fear, Threat, and Anxiety.

		Amount of Social Media Browsing for COVID-19 Information			**Total**
		Low	**Medium**	**High**	
Level of Feelings of Fear, Threat, and Anxiety	High Count % within Browsing Level	7 21.9%	21 21.4%	140 51.9%	168 42.0%
	Medium Count % within Browsing Level	6 18.8%	18 18.4%	93 34.4%	117 29.3%
	Low Count % within Browsing Level	2 6.3%	53 54.1%	27 10.0%	82 20.5%
	Not Afraid Count % within Browsing Level	17 53.1%	6 6.1%	10 3.7%	33 8.2%
Total	Count % within Browsing Level	32 100.0%	98 100.0%	270 100.0%	400 100.0%

Chi-Square value 183.877 critical chi-square value 16.812 Significance 0.01

Discussion& Conclusion

Responsibly used, social media can quickly disseminate important, accurate information to people during a pandemic or other humanitarian crisis. However, it also has the potential to spread incorrect data, myths, and disinformation. In many cases, social media users may have difficulty telling the difference between information and disinformation. This inability for users to distinguish between helpful and harmful information – along with the sheer glut of messages that they can consume – can contribute to increased fear, anxiety, and stress. This relationship appears to be clear, and cuts across all demographic lines. What is unclear is whether fear drives people to increase their social media searching for COVID-19 information, or if increased consumption increases fear? It is quite possible that it is a circular relationship where each increase in one result in an increase in the other. If this is the case, it can be extremely difficult to break this cycle of fear

and anxiety – and the result is an "infodemic".

The COVID-19 pandemic has indicated the extraordinary impact information can have on people and society, even directly threatening the rights to health of the people who believe the data and impact of it, and indirectly, by undermining public health initiatives. The "infodemic" raises an imperative to establish measures that allow for the providing of useful information and the restriction of disinformation, while still respecting the right of freedom of speech for people.

Although this study is limited by sampling biases, analysis of predictive variables, and lower representation of the elderly and underprivileged, the research provided an early quantification of the effects of the spread of both correct and misinformation about COVID-19 and highlighted some of the characteristics that might be associated with it.

Interventions from multiple stakeholders are essential in order to curb this phenomenon and harness the power of social media to disseminate reliable information. The suggestions provided by respondents indicated that the COVID-19 crisis generated a critical eye among audiences.

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