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Information Credibility on Social Media Platforms during COVID-19 Pandemic: The Case of Kuwait

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Abstract

Due to changes in the information environment since the last global pandemic, the World Health Organization spoke about the need to fight not only the COVID-19 pandemic but also the related incredibility of information. Therefore, this study explored the factors that affect information credibility on social media platforms according to individuals' perception during the COVID-19 pandemic in Kuwait. The study adopted the persuasion theory the Elaboration Likelihood Model (ELM) to investigate four crucial factors: Trustworthiness, (Interactivity, Transparency), and information quality. These factors are derived from three information credibility dimensions which are, source credibility, medium credibility, and message credibility. This was implemented using a quantitative research method whereby an online questionnaire was used to collect primary data from social media users in Kuwait. The proposed model was tested and validated with empirical data from 474 participants of social media users. The findings revealed that all suggested factors were significantly correlated and influenced the information credibility significantly. Yet, trustworthiness has the highest impact on user perception of IC. The majority of social media users trust the information shared on social media platforms if they believe the source is reliable and fair.

Keywords: Information credibility, Covid-19, social media, misinformation, trustworthiness, Elaboration Likelihood Model.

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Chapter 1: Introduction

The proliferation of social media platforms has created a vast array of information sources, particularly during crises, pandemics, and health communication (Westerman, Spence & Van Der Heide, 2014). User-generated content that is widely shared among users on these platforms poses a challenge for online information processing (Duffy & Thorson, 2009; Lin, 2016). While social media is known for misinformation and the spread of fake news, it becomes an important communication tool during crises when people turn to it for support and breaking news (Apuke & Tunka, 2018). However, the lack of professional gatekeepers to monitor online content means that information accuracy and credibility on social media are questionable (Li & Suh, 2015). By and large, the openness and timeliness of social media allow for misinformation, the spread of fake news, complicating the issue of finding credible information.

Indeed, not everything published on social media platforms is accurate or credible. Users do not always check the source validity, making them vulnerable to believing fake news, rumors, and inaccurate health information, especially pandemics. COVID-19, for instance, not only resulted in significant challenges for global health systems, but it also fed an enormous number of social media rumors and misinformation about the origin, the set of causes, outcomes, prevention, and cures of diseases. Such propagation of misinformation masks healthy behaviors and aggrandizes incorrect practices that increase the viral spread, which results in dismal health outcomes both physically and mentally. A previous study reported

that 47% of people independently searching for health information indicated that their findings affected their treatment decisions (Cline & Haynes, 2001). As a result, Countless globally reported incidents stem from rumors (Tasnim et al., 2020), with 3.196 billion social media users as of January 2018 (Chaffey, 2018). While social media usage is high in Europe (90%) and the US (88%), it's low in middle Africa (12%) and Southern Asia (36%) (Kemp, 2018). In China, 93.5% of the public relied on the internet for COVID-19 healthcare information in 2020, despite up to 26% of COVID-19 related YouTube videos being misleading (Barua et al., 2020).

1.1 Problem Statement

Despite the large number of studies on social media examining how people use and explore information (Lachlan et al., 2014; Lachlan et al., 2016; Barua et al., 2020), very few investigate how the perception of information credibility develops while no criteria or scale exists to evaluate existing data on the platforms. Moreover, few research studies have empirically explored what factors decisively affected user perception of information credibility. These factors limit our understanding of how online information is evaluated. Also, the majority of research focused on a single social media platform, such as Twitter, which led to fragmented findings and a limited understanding of the aspects of credibility assessment on social media platforms.

1.2 Study Objective and Research Question

This study aims to explore the factors that affect the information credibility on social media platforms according to the individual's

perception during COVID-19 in Kuwait, by adopting the persuasion theory the Elaboration Likelihood Model (ELM). The study is expected to answer the following research question:

- What factors affect user perception of information credibility on social media platforms during the COVID-19 pandemic?

1.3 Significance of the Study

It is critical to understand the factors affecting user perceptions and decisions on what to believe among the enormous number of information circulating on social media, especially during pandemics and health crises. For instance, individual responses to news and information about COVID-19 are affected by the information they receive through different media. The human cost of misinformation, according to the British Broadcasting Corporation, might be enormous since it weakens public health messaging (Barua et al., 2020). For example, misinformation about health on social media might induce people to take harmful substances, causing stress and 'mental morbidity' (Zandifar & Badrfam, 2020). It can also exacerbate racism, fear, or stigma, as well as cause unconstructive, threatening conduct, causing health worry, as evidenced in current anti-Asian activity. Furthermore, the public displayed an unusual pattern of shopping behavior in the purchase of personal protection equipment as a result of their fear and anxiety. Therefore, this paper contributes to the existing literature on decision-making, especially in crises. The identified factors can contribute to promote media literacy among individuals through developing critical thinking skills, and it breaks down media messages to comprehend the underlying basic aspects that make them persuasive and influential (Scull

& Kupersmidt, 2011). Additionally, it helps decision-makers by providing a comprehensive understanding of the context of misinformation exchange on social media and the dynamics involved in the processing of the message can help determine the extent of the problem and suggest appropriate solutions to prevent or reduce it. This can be done by tracking it or developing innovative methods on a broader scale such as natural language processing–assisted data mining, and social network analysis.

Chapter 2: Literature Review

2.1 Social Media during Crises and Information Credibility

Social media platforms, built on the principles of Web 2.0, are interactive, collaborative, and community-based digital systems that allow individuals to share, discuss, and co-create published content (Kaplan & Haenlein, 2010). They have become an essential source of information in daily life, especially during times of high ambiguity, such as crises (Westerman et al., 2014; Lachlan et al., 2014). Social media is as important as traditional media during conflicts and crises, and over 73% of adult Americans use the internet for information, with 80% seeking online health information (Fox, 2011). As evidenced in previous studies, social media has changed the way individuals interact and digest information during infectious disease prevention, hygiene and emergency alerts, and public health and safety control (Ratzan, 2011). Traditional media often rely on social media to identify breaking news in real-time, such as the tweet updates during the 2013 Boston Marathon bombing (Apuke & Tunca, 2018).

Online social media platforms offer an open platform for participation and user-generated content, leading to increased exposure to low-quality messages and misinformation, posing a challenge for users seeking information, especially during uncertain situations and crises (Ratzan, 2011; Westerman et al., 2014). While social media's active updates have been shown to increase perceived credibility compared to traditional media's crisis coverage, there is no assurance that online content

is of higher quality (Guidry et al., 2015). The shift in gatekeeping function from content producers to consumers has made users the gatekeepers of source legitimacy due to the rise of co-created material and mutual responses among internet users (Haas & Wearden, 2003). Studies have shown that social media use during crises presents several challenges such as a lack of credibility and rumors (Zubiaga et al., 2018). While analyzing beneficial and malicious forms of social media participation during conflicts and crises, Reuter et al. (2020) argue that authorities require significant resources to monitor or control these platforms. Similarly, Etter and Vestergaard (2015) found social media's limited role in crisis management due to users' lack of transparency and objectivity, leading to questions about Facebook and Twitter's credibility. Joel et al. (2018) demonstrated the potential of social media in spreading crisis information and alert messages to the general public and alerting future European crises through a prototype system.

Social media remains a key source of information during risk events, even when credibility is questioned (Lachlan, Westerman, & Spence, 2010). Active information-seeking during crises and risk events is critical for users to reduce uncertainty and gain new information (McIntyre, Lachlan, & Spence, 2012; Westerman, Spence, & Van Der Heide, 2014). Users increasingly consume updated information to stay informed about warnings and advice (Ulmer, Sellnow & Seeger, 2007). However, misinformation during social crises amplifies anxiety and fear, leading to impaired judgment and belief in false information instead of objective realities (Kim & Kim, 2020).

Given the high stakes associated with misinformation during risk events, providing evidence-based criteria is crucial for perceived source credibility on social media. Misinformation in different media, including social media platforms, can harm people and, in some cases, may lead to death and life-threatening effects during health crises and pandemics. For example, an investigation into the demise of an American man revealed that he was poisoned by chlorine because he read online that chlorine can protect against COVID-19 infection (Barua et al., 2020). Research in Spain by Fernández-Torres, Almansa-Martínez, and Chamizo-Sánchez (2021) investigated the spread of fake news and misinformation during the pandemic and found a lack of credibility and reliability in media sources. The study identified WhatsApp and Facebook as the main sources of misinformation, with instant messaging channels transmitting the most fake news. In the same vein, several studies have explored social media's impact on belief in misinformation, including research by Lachlan et al. (2014, 2016). A recent study by Kim & Kim (2020) found that risk perception and communication both influence belief in COVID-19 misinformation, with perceived risk and stigma increasing the likelihood of belief in fake news, while trust and perceived benefit have negative effects. The quantity of information and source credibility were found to decrease belief in fake news. Barua et al. (2020) examined the influence of misinformation belief, including religious and conspiracy beliefs, on COVID-19 responses, finding that the spread of misinformation on social media platforms diminishes individual responses and negatively influences believability of misinformation.

However, a persistent lack of comprehensive studies on misinformation and the credibility of information during crises and pandemics remain. Basic ethical questions on social media use during conflict need to be addressed sufficiently due to the increasing spread of wrong information and misuse of social media data. Furthermore, there are few professional gatekeepers to control material on social media networks (Li & Suh, 2015). Evaluating the credibility of information on social media platforms has become a critical issue for the modern information consumer. Although it is an urgent matter, few studies have empirically examined the factors affecting information credibility on social media platforms. Therefore, our knowledge of the variables that influence online information evaluation is limited (Westerman et al., 2014).

2.2 Information Credibility on Social Media Platforms

Information credibility, defined as the degree of belief in the validity and reliability of information (Li & Suh, 2015), is crucial in determining the trustworthiness of data sources, particularly in social media where real and fake information coexist (Keshavarz, 2020). The challenges in verifying the accuracy of information shared on these platforms include the vast number of users who can publish information without fact-checking (Alrubaian et al., 2019) and the potential contradiction of official information by ill-intentioned users, leading to confusion among followers. Nonetheless, investigating individuals' perceptions of information credibility on social media is crucial for informed decision-making (Alrubaian et al., 2018).

Several studies examined the credibility and accuracy of the information available on social networking platforms. Westerman, Spence, and Heide (2012) conducted a study on how available information on Twitter affects perceptions of source credibility. The results indicated that new tweets impacted source credibility, implying that more frequent and fresh updates would result in higher source credibility. Similarly, Safori, Abdul Rahman and Mohammed (2016) investigated the factors that affect the credibility of news from social networking sites and found that variables linked to journalism could affect credibility such as interactive media, technology acceptance, quality of news' source and media exposure. Other studies examined the effect of the number of followers on user perception of credibility with experiments using Facebook (Lee, 2018). Lee (2018) posited that the number of followers influences three dimensions of credibility, namely, believability, trustworthiness, and accuracy. He found that people perceived an answer made by someone with more friends or followers as more credible and trustworthy, but not necessarily more accurate. Samuel-Arzan and Hayat (2019), examined the perceived credibility of posts shared on social networking sites and suggested that the effect of the credibility perception of the news source is moderated by the depth of the social tie between the item's sharer and its recipient. On the other hand, Zhang, Moe, and Gearhart (2020) explored the effects of viewing comments on social media before reading a news story on perceptions of bias and credibility. Their findings reveal that comments in social media news teasers alter credibility views; particularly,

those exposed to congruent opinions reported lower prejudice and higher credibility perceptions than those exposed to incongruent opinions.

2.3 Social Media Information: Evaluating Credibility Based on User Perception

2.3.1 Information Credibility Evaluation Dimensions

Information credibility over the social media networks has been typically analyzed based on, but not limited to, three communication dimensions; source credibility, medium credibility, and message credibility (Balaban & Mustățea, 2019). These three dimensions are based on several determinants. Source credibility, for instance, assesses trustworthiness. Medium credibility, on the other hand, is determined by interactivity and transparency. Message credibility is based on information quality.

2.3.1.1 Source Credibility on Social Media

Source credibility, defined as the desirable features of the communicator that influence message acceptance, rests primarily on the source of information (Andersson, Kreegimae & Niiranen, 2019; Metzger & Flanagin, 2013). Perceived source credibility is particularly important in risk information and crisis contexts, but can be challenging to define due to anonymous and multiple writers (Westerman, Spence & Van Der Heide, 2014; Teng et al., 2017; Balaban & Mustățea, 2019). The degree of source credibility determines the extent of message acceptance and confidence by recipients, with credible sources and greater information reducing belief in misleading information (Kim & Kim, 2020; Li & Suh, 2015; Teng et al., 2017).

Numerous empirical studies described the effect of trustworthiness and attractiveness of the message source on its credibility (Xiao, Wang & Chan-Olmsted 2018; Teng et al., 2017). They argued that these characteristics within the source credibility model have a significant positive impact on the message credibility (Armstrong & Nelson, 2005; Andersson, Kreegimae & Niiranen, 2019; Balaban & Mustățea, 2019). Moreover, Westerman, Spence and Van Der Heide (2014) posited that there is a positive relationship between the number of followers a person has on Twitter and users' perception of the source's credibility in terms of trustworthiness and competence.

Source Trustworthiness. Trustworthiness reflects the perception of goodness and morals in the source (Kim, 2019). It is defined as the level of trust and acceptance developed by the message receiver toward the source (Teng et al., 2014). Trustworthiness is also seen as the source integrity and the individual's confidence in the source to communicate honesty (Xiao, Wang & Chan-Olmsted, 2018). This factor is a crucial for individuals in evaluating the received information. Among the flood of daily information, individuals become less skeptical of the credibility of the received information, and they consider the information source as credible when the source can be trusted, which means the source is trustworthy (Ismagilova et al., 2020; Saldanha, Mulye & Rahman, 2018). Trustworthiness is often measured by two dimensions; honesty and believability (Kreegimäe, Andersson & Niiranen, 2019; Copeland, Gunawan and Hernandez, 2011).

Empirical studies consistently show that individuals' perception of information source is influenced by its trustworthiness, with a highly

trustworthy source leading to greater message acceptance (Kreegimäe et al., 2019; Lis, 2013; Shamhuyenhanzva et al., 2016; Xiao, Wang & Chan-Olmsted, 2018; Levy & Gvili, 2015; Lim & Van Der Heide, 2015; Willemsen et al., 2011). Trustworthiness is crucial to the credibility of online information and affects information sharing on social media (Cheung et al., 2009; Lim, 2017; Xiao, Wang & Chan-Olmsted, 2018). For communication to be effective, the perception of source trustworthiness and information precision is essential (Dedeoglu, 2019) If people believe the sources are trustworthy, they are more inclined to share information on social media. As a result, for the message's content to be effective and compelling, perceptions of the message source as trustworthy, as well as perceptions of the precision of the information conveyed through the communications, are critical**.**

2.3.1.2 Medium Credibility on Social Media

Medium credibility refers to individuals' perceptions of a medium's credibility, such as newspapers, television, or the internet, including social media platforms and blogs (Kang, 2010). Factors such as interactivity and transparency are used to measure it (Li & Suh, 2015; Winarko, Sihabudin & Dua, 2019). The credibility of a communication medium influences audience engagement, with individuals paying more attention to media they consider credible. When relying on a medium for information, individuals are more likely to perceive it as more credible than others (Kang, 2010).

Previous studies found that medium credibility positively affects individual perception of information credibility on social media (Winarko, Sihabudin & Dua, 2019). Li and Suh (2015) posited that the perception of

information credibility on social media is influenced majorly by two key dimensions: medium credibility and message credibility. Their research attempted to examine five characteristics from the two dimensions in order to create a model that determines how users perceive information credibility on social media platforms. The factors are interactivity, dependency, transparency, argument strength, and information quality. Therefore, they tested a proposed model (ELM theory). They found that medium interactivity, dependency of the medium, and the argument and quality of the message enhance the credibility of social media, namely Facebook and its message to users.

Medium Interactivity. It is the degree to which two or more communicating parties can operate on each other, the communication channel, and the message, as well as the degree to which such influences are coordinated (De Silva & Buddhika, 2019). Interactivity could be described in three forms, the tendency to involve in an interaction, the perceived ease of interaction, and the degree of activated rapport (Winarko, Sihabudin & Dua, 2019). It is considered one of the key dimensions of evaluating the quality of information given by an online medium, and it enhances the virtual experience with positive impacts on media perception, such as trusting beliefs (De Silva & Buddhika, 2019).

Interactivity is a major determinant of perceived information credibility, as evidenced by several studies (Kim et al., 2012; Metzger & Flanagin, 2013; Xiao Wang & Chan-Olmsted, 2018). Social media interactivity is particularly significant in determining information credibility (Hajli, 2018). Online content's credibility is determined by the

level of interactivity, such as discussions and interactions with experts and friends (Xiao et al., 2018; Johnson & Kaye, 2016). Trust is strongly associated with interactivity, and higher interactivity levels in social media networks are linked to greater information trust (Kang, 2010; Li & Suh, 2015; De Silva & Buddhika, 2019). Some online mediums, such as blogs, use a "bottom-up" approach to build credibility by linking to reputable information and encouraging user interaction (Thomas & Johnson, 2016). YouTubers' active responsiveness to viewers and followers positively impacts information credibility (Xiao, Wang, & Chan-Olmsted, 2018). To enhance brand credibility, companies should increase interactions on blog sites (Kim et al., 2012). Increasing interactivity is seen as a strategy to increase credibility and user trust (Kang, 2010). In light of the foregoing research suggestions and findings, interactivity is significantly correlated to the medium credibility. A person who finds an increased level of interactivity on a medium is more likely to consider the information as credible from the medium.

Medium Transparency. Characterized by the willingness of individuals to openly share information on a given platform, it is essential for establishing trust and credibility with users (Winarko, Sihabudin, & Dua, 2019). Without sufficient accuracy and information accessibility, social media content may be viewed with skepticism (Hasnat, 2014). Karlsson, Clerwall, and Nord (2014) identified two transparency dimensions: links and user-created content. External links increase user trust, while the context surrounding news content strongly influences perceived credibility.

Previous studies indicate that transparency is an influential factor affecting message credibility on social media. Most online users consider blogs to be more credible than other media due to their independence from corporate controlled and traditional media. This enables bloggers to write "in-depth, opinionated messages in a transparent manner," which makes transparency the key factor driving blog-readers' credibility judgments and audience engagement in blog-mediated messages (Kang, 2010). More importantly, bloggers frequently link their sources within the content of news information, which reflects their transparency (Meier, 2009). Fussell and McCorkindale, (2013) found a relationship between organizations' credibility, transparency, and activity on Twitter and Facebook page, where the organizations that gained more tweets, more likes, and more followers, were seen as more transparent, and credible due to the open communication and thoughtful crafting. Those initiatives increase credibility in social media networks (Hasnat, 2014). Extant literature indicates that transparency could have a positive effect on information credibility.

2.3.1.3 Message Credibility on Social Media

Message credibility is the belief in the truthfulness of a message that is influenced by message characteristics such as authenticity, reliability, and honesty (Kreegimäe, Andersson & Niiranen, 2019). The dimensions of message credibility include content and structure, with well-organized messages being more credible (Metzger et al., 2003). For instance, unorganized messages are regarded as less believable than well-organized messages. Credibility judgments are also influenced by message content characteristics like discrepancy and information quality, which is the most

frequently reported factor in evaluation judgments (Kriscautzky & Ferreiro, 2014).

Information Quality. Information quality is the degree to which consumers believe the information content produced by a corporation on its brand page is of high quality (Dedeoglu, 2019). It is associated with message content and the fitness for use of the information provided (Li & Suh, 2015). However, information quality on social media can be the perceptions resulting from any content generated by any source on social media platforms, like consistency, sufficiency, and accuracy (Sussman & Siegal, 2003). In addition, relevance, understandability, sufficiency, and objectivity (Dedeoglu, 2019). Evaluating online information quality should be the main concern of all users over the network because of the danger of biased or inaccurate online information (Metzgeret et al., 2003).

Positive perception of social media content quality indicates potential benefits for individuals, leading to increased importance attached to the content. Zha et al. (2018) found that higher information quality in social media messages enhances credibility among users. Previous research shows a strong correlation between information quality and message credibility on social media, as evidenced by accuracy and objectivity evaluations on Facebook pages (Li & Suh, 2015) and the greater influence of information credibility than argument strength in social media marketing adoption (Winarko et al., 2019).

2.4 Theoretical Framework

Extant literature argued that credibility is not only a subjective measure, but also it is a perceived quality that other people determine based

on the interaction of several factors (Kreegimäe, Andersson & Niiranen, 2019). Therefore, to explore the factors that affect information credibility on social media platforms according to individuals' perception during COVID-19, this study adopted a theoretical framework that relies on three traditional dimensions of credibility: source, medium, and message credibility. The primary factors to consider are source trustworthiness, medium transparency, medium interactivity, and information quality.

This study used the persuasion theory, the Elaboration Likelihood Model (ELM), to evaluate individual judgment on information credibility. ELM is being used in this study because it helps clarify how individuals become persuaded on the credibility of the received information, giving researchers a solid theoretical ground to explain what factors affect people's perceptions of information credibility.

2.4.1 Elaboration Likelihood Model

Elaboration Likelihood Model (ELM). ELM is a persuasive communication theory, originally proposed by Petty and Cacioppo (1986). It is one of the most dual-process theories that has been used widely in information credibility research, (Li & Suh, 2015; Xiao, Wang & Chan-Olmsted, 2018). According to Pee (2012), ELM has the ability to provide insights into how people perceive content on social media. The opinion of others has also been highlighted by ELM as an essential heuristic for processing information and creating attitudes.

2.4.2 Hypotheses and Research

Drawing on ELM, this model explores the factors that influence information credibility on social media platforms according to individuals'

perception during the COVID-19 pandemic using the following hypotheses:

H1: Trustworthiness positively effects information credibility in social media platforms according to user perception during the COVID-19 pandemic.

H2: Interactivity positively effects information credibility in social media platforms according to user perception during the COVID-19 pandemic.

H3: Transparency positively effects information credibility in social media platforms according to user perception during the COVID-19 pandemic.

H4: Information quality positively effects information credibility in social media platforms according to user perception during the COVID-19 pandemic.

The following research model was developed to shows the different independent variables in the hypotheses and their effect on the dependent variable, information credibility, as shown in Figure 1.
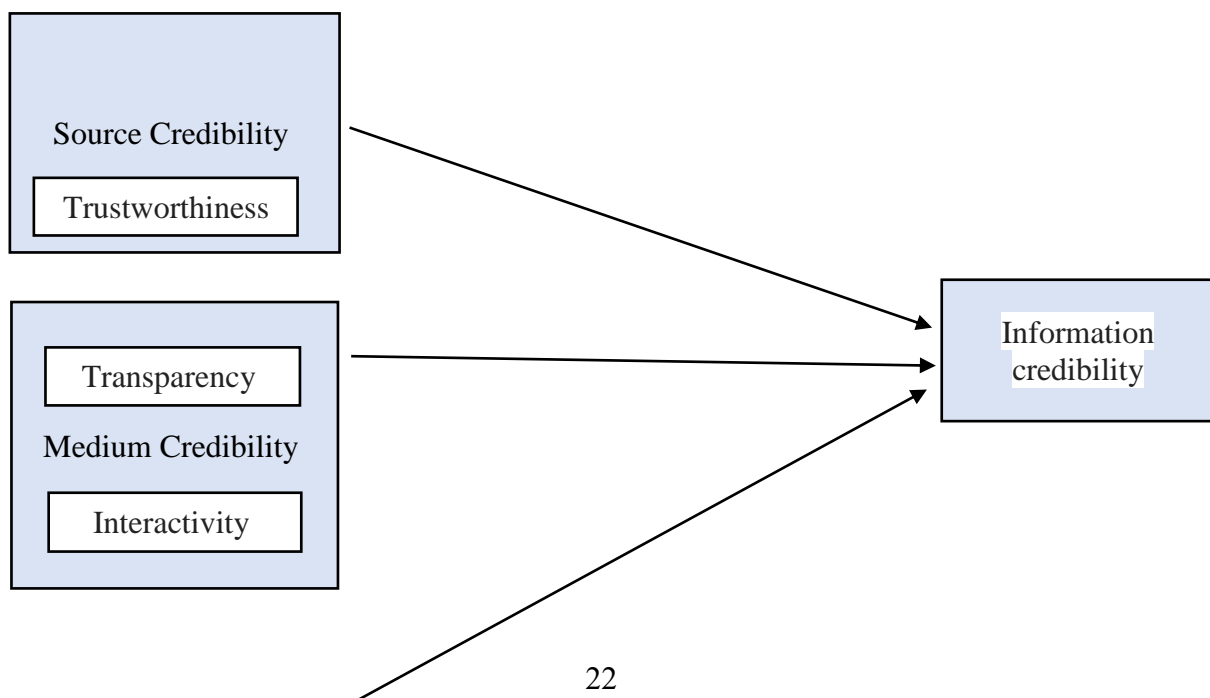
Massage Credibility
Information quality
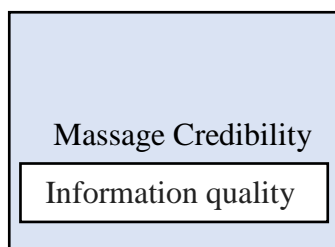
Figure 2. 1. Proposed Research model (adapted from: Li & Suh (2015))

Chapter 3: Methodology

3.1 Research Design

This study is based on a quantitative survey using a structured questionnaire to test predefined hypotheses derived from the ELM theory deductively. Statistical analysis of the data collected will be used to provide an indication of the study's results. The questionnaire is presented in Appendix 1.

3.2 Population and Sample method

The study's target population comprised individuals residing in Kuwait with diverse educational, cultural, and social backgrounds who use online social media applications. A well-defined population ensures the study's findings are representative of the relevant category of items included in the statistical analysis (Sekaran, 2003). As for the sample, to have a clear population frame, a non-probability convenience sampling method was used to draw up a model of participants who provided adequate data for the study. This sampling method is the most convenient, time-saving, and inexpensive option compared to other sampling techniques (Taherdoost, 2016). The participants were selected purposefully as online social media users from diverse backgrounds to get more varied data.

3.3 Questionnaire Design

The questionnaire for the study was designed to be easily understood by individuals from various social classes and educational levels in Kuwait.

It was available in both English and Arabic to accommodate the country's official and spoken language. It targeted media users over 18 and had three sections. The first collected demographic information such as age, gender, and educational attainment. It also included a question to determine whether participants used social media platforms, and those who answered no were thanked and excluded from the survey. The second measured social media usage patterns and criteria for information credibility. The questions in this section aimed to understand how participants evaluate the credibility of information they come across on social media platforms. The third recorded participant statements measuring factors that influence trust in information. These questions were closed-ended, and participants indicated their agreement or disagreement on a five-point Likert scale ranging from "always" to "never. The questionnaire was also reviewed and corrected by a professional supervisor to ensure accuracy.

3.4 Pilot Study

To ensure the questionnaire's suitability and applicability, a pilot study was conducted with a sample of 15 individuals selected from the study population. The pilot test enabled the researcher to identify any problems with the survey questions and gather preliminary support for the reliability, sensitivity, and validity of the social use measure. Participants provided feedback and suggestions to clarify and improve the questionnaire, resulting in a more applicable and readable version for distribution.

3.5 Data Collection

Data for this quantitative study was collected using an online questionnaire built with 'Monkey' survey software and distributed through WhatsApp via hyperlink URL. This approach provided consistency in data collection and advantages over paper surveys, including ease, speed, and cost-effectiveness. The survey went to the participants who were relatives, friends, colleagues, friends of friends, and others. The participants forwarded the questionnaire to their acquaintances after responding. The data collection process lasted for approximately three to four weeks to obtain the most responses. WhatsApp messages and phone calls reminded participants to answer and send or submit the questionnaire. A total of 659 responses were received and omitted the incomplete surveys. A total of 474 responses, 58% male and 42% female, were input into the statistical data analysis.

3.6 Data Analysis

As the first step in data analysis, frequency distribution of the demographic characteristics of the sample has been shown, followed by summary statistics for calculate the mean and standard deviation of the factors/variables information credibility (IC), trustworthiness (SC), transparency (TRANS), interactivity (INT), and information quality (MC) for calculate the mean and standard deviation. Next, the reliability of each item/question under the factor was tested with the help of Cronbach's alpha coefficient. Further, to inspect how the factors IC, SC, TRANS, INT, and MC are related with each other and test the strength of the relation, Pearson's correlation coefficient was computed. Finally, path coefficient

analysis has been employed to validate the hypotheses i.e., it is used to measure the impacts of independent variables SC, INT, TRANS, and MC on the dependent variable IC. Path analysis is a tool that can be used to check the presence of causal relationships between predictor variables and response variable (Saleh et al., 2020).

Chapter 4: Findings

4.1 Descriptive and Summary Statistics

The study's summary statistics included calculating percentages and frequencies for nominal variables, as well as interval and ratio variables. The most common gender category was Male (n = 273, 58%), while the most common age category was 18-24 (n = 219, 46%), and the most common education level was Bachelor (n = 222, 47%). The majority of participants (n = 316, 67%) preferred using social media as their primary news source during the COVID-19 pandemic, followed by news media (n = 76, 16%), as shown in Table 4.1.

Table 4. 1: Demographic characteristics of the research sample

Variable	*n*	*%*
Gender		
Male	273	57.59
Female	201	42.41
Age		
18-24	219	46.20
25-34	105	22.15
35-44	86	18.14
45-54	53	11.18
55 and more	11	2.32
Education		
Middle or lower	14	2.95
Secondary	104	21.94
Diploma	104	21.94
Bachelor's Degree	222	46.84
Master	22	4.64
Doctor	8	1.69

The study found that approximately 60% (n=284) of the participants always used social media platforms during a pandemic, while 32% (n=153) answered very often. About 47% of the participants preferred using Twitter (n=222), while 32% indicated Instagram (n=156) as their preferred social media platform. The most popular feature for news and information on social media was Live coverage of the event, chosen by 53.6% of participants (n=201). In addition, 42.4% of participants believed that Official documents were the most reliable criteria for determining the credibility of information on social media about COVID-19. Frequencies and percentages are presented in Table 4.2.

Table 4.2: Information sources and usage

Variable	*n*	*%*
Source		
Social media	**316**	**66.67**
Internet sites	**42**	**8.86**
News media (TV / Newspaper)	**76**	**16.03**
The work	**4**	**0.84**
Scientific studies	**14**	**2.95**
Doctor / nurse	**8**	**1.69**
Important individuals (family members, friends, elders of religion)	**14**	**2.95**
Usage		
Always	**284**	**59.92**
Very Often	**153**	**32.28**
Sometimes	**34**	**7.17**
Rarely	**2**	**0.42**
Never	**1**	**0.21**
Apps		
Twitter	**222**	**46.84**
Facebook	**7**	**1.48**
Instagram	**156**	**32.91**
Snapchat	**40**	**8.44**

WhatsApp   **49**   **10.34**

Table 4.3 summarizes the mean and standard deviation for the five constructs of the study: Information Credibility (IC), Source Credibility-Trustworthiness (SC), Transparency (TRANS), Interactivity (INT), and Message Credibility (MC). INT had the highest mean value (mean = 3.97, S.D. = 0.78), followed by IC (mean = 3.64, S.D. = 0.73) and TRANS (mean = 3.62, S.D. = 0.74). MC (mean = 3.51, S.D. = 0.73) and SC (mean = 3.40, S.D. = 0.69) had lower mean values. The standard deviation for all constructs was less than 1.00, indicating low variation in responses.

Table 4.3: Summary Statistics: mean and standard deviation

Variable	*M*	*SD*
Information Credibility – (IC)	3.64	0.73
Source Credibility – (Trustworthiness) (SC)	3.40	0.69
Transparency – (TRANS)	3.62	0.74
Interactivity – (INT)	3.97	0.78
Message Credibility (Information Quality) – (MC)	3.51	0.73

Information Credibility - (IC), Source Credibility - (Trustworthiness) (SC), Medium Credibility (Transparency – (TRANS), Interactivity – (INT)), Message Credibility (Information Quality) – (MC).

4.2. Reliability Analysis

Reliability analysis is performed to estimate internal consistency of scales used in research (Ursachi et al., 2015). Cronbach's Alpha is a commonly used indicator, with values above 0.7 considered reliable (Nunnally, 1978). All constructs in this study reported reliability greater

than 0.87 of the Cronbach's alpha coefficient, indicating good reliability (Pallant, 2005; George and Mallery, 2018).

4.3. Pearson's Correlation Analysis

Table 4.4 shows Pearson correlations among the study variables (IC, SC, TRANS, INT, and MC) with effect sizes ranging from small to large, based on Cohen's standards for correlation coefficients.

Significant positive correlations were observed among the study variables IC, SC, TRANS, INT, and MC. The highest correlation was between IC and TRANS ($r_p = 0.599$, $p < .001$), followed by IC and SC ($r_p = 0.566$, $p < .001$), IC and MC ($r_p = 0.552$, $p < .001$), and IC and INT ($r_p = 0.490$, $p < .001$). Similarly, SC had significant positive correlations with TRANS ($r_p = 0.537$, $p < .001$), MC ($r_p = 0.462$, $p < .001$), and INT ($r_p = 0.396$, $p < .001$). Moreover, significant positive correlations were observed among TRANS, INT, and MC. All correlations showed a large or moderate effect size. The correlations were examined based on an alpha value of 0.05.

Table 4.4: Pearson's Correlations among the constructs

Variable	IC	SC	TRANS	INT	MC
1. IC	—				
	—				
2. SC	0.566***	—			
	< .001	—			
3. TRANS	0.599***	0.537***	—		
	< .001	< .001	—		
4. INT	0.490***	0.396***	0.563***	—	
	< .001	< .001	< .001	—	

Variable	IC	SC	TRANS	INT	MC
5. MC	0.552 ***	0.462 ***	0.536 ***	0.517 ***	—
	< .001	< .001	< .001	< .001	—

* p < .05, ** p < .01, *** p < .001

4.4. Path Coefficients

The study found that the path coefficients in the partial least squares and standardized β coefficient in the regression analysis were similar, and the significance of the hypothesis was tested through the β value. The β value represented the predicted variation in the dependent construct for a unit variation in the independent construct(s). The study computed the β values for every path in the hypothesized model, with larger β values indicating greater substantial effect on the endogenous latent construct. The β values were verified for their significance level through a t-statistics test, and the bootstrapping procedure assessed the significance of the hypothesis using 5000 subsamples, which showed no significant changes in Table 4.5.

Table 4. 5: Path Coefficients

Hypothesis	Relationship	Standardized (β) (Original Sample)	T Statistics (|O/STDEV|)	P Values	Conclusion
H_1	SC -> IC	0.314	6.706	0.000	Supported
H_2	INT -> IC	0.143	3.353	0.000	Supported
H_3	TRANS -> IC	0.252	5.166	0.000	Supported
H_4	MC -> IC	0.190	4.376	0.000	Supported

The result of Table 4 shows that the strongest relationship is between SC & IC ($\beta = 0.314$, T = 6.706, $p < 0.000$). Followed by TRAS & IC ($\beta = 0.252$, T = 5.166, $p < 0.000$), MC and IC ($\beta = 0.190$, T = 4.376, $p < 0.000$), and finally INT & IC ($\beta = 0.143$, T = 3.353, $p < 0.000$). Thus, supported all four hypotheses (H1, H2, H3, and H4). Figure 4.1 below illustrates Path Coefficients test, where the study hypothesis was tested and proved.
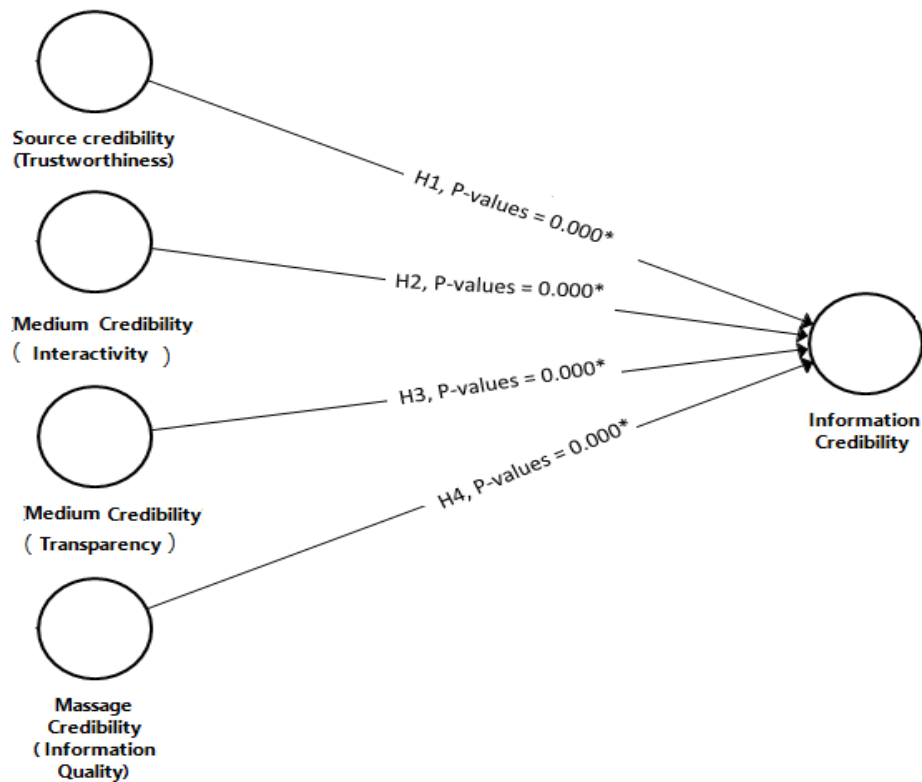
Note: *$p < 0.05$

Figure 4. 1: Final research model

Chapter 5: Discussion

This Capstone project aimed to investigate the factors that influence information credibility (IC) on social media during the COVID-19 pandemic. The study focused on source credibility, medium credibility, and message credibility, examining factors such as source trustworthiness, medium transparency, medium interactivity, and information quality. The findings offer insight into how individuals assess information on social media and determine its credibility based on the most influential factors. The chapter is structured according to the research hypotheses evaluated.

A significant correlation of trustworthiness, transparency, interactivity, and Information quality was found with IC. Besides this, the factors, trustworthiness, transparency, interactivity, and information quality were also significantly associated with each other. To begin with, the findings revealed an association between trustworthiness and user perception of IC. In fact, the findings showed that trustworthiness has the highest impact on user perception of IC. It suggests that the majority of social media users trust the information shared on social media platforms if they believe the source is reliable and honest. Source credibility (trustworthiness) significantly and positively affects IC. This finding aligns with several previous studies (see Kreegimäe, Andersson & Niiranen, 2019; Shamhuyenhanzva et al., 2016; Xiao, Wang & Chan-Olmsted, 2018; Levy and Gvili, 2015). It means that when study participants encounter news on social media platforms, they decide whether the information is credible or not depending on the media source and who shared it. It also

means that participants look for information on the source to determine the degree they can have confidence in it and accept the messages it disseminates.

Moreover, the results showed that interactivity on a medium is positively and significantly associated with IC. Therefore, interactivity, where users communicate and interact easily with other users, increases IC. This finding aligns with past studies that found that social media interactivity significantly influences IC (Hajli, 2018 and Xiao et al., 2018). Specifically, participants in this study showed a tendency to believe the shared information provided they could interact and communicate easily on a particular medium.

As for transparency, this study also found that medium transparency and user perception of IC in social media platforms are positively and significantly associated. It indicates that during the COVID-19 pandemic, participants gave more credit to the information obtained from social media that was open and independent from corporate-controlled media, as users are allowed to add their opinion to the news message in a transparent manner. This finding is consistent with the results of past studies (Fussell & McCorkindale, 2013; Li & Suh, 2015), which posited that information through a medium is more reliable when there is transparency in the medium.

One of the most important findings of this study, as hypothesized, is that information quality and IC are positively associated. High-quality messages or posts may seem more truthful or believable to study participants, which in its turn leads to increased credibility. This theory

aligns with Zha et al. (2018) and Winarko, Sihabudin, and Dua (2019), who stated that the credibility given to any information depends upon its quality.

Chapter 6: Conclusion and Recommendations

Generally, this study offers more in-depth research on IC on social media platforms. Its implications revolve around broadening our understanding of the factors from the three dimensions (i.e., source credibility, medium credibility, and message credibility). Our findings help us to rethink the role of online social media in participatory and collaborative information dissemination. Due to increased digitization, many people rely in full upon some social media platforms. The incidence of the COVID-19 pandemic has also increased the need to use social media platforms for getting the required information. Although social media platforms have become more popular among people, there is still a need for public awareness about the misuse of these social media platforms. This study, thus, provides insight on users and information providers. It also suggests that users need to pay more attention to all the factors that affect the IC. Nevertheless, they should focus on the source that is used by the people to interchange or convey the messages/information. In the same vein, users should give some attention to the medium they are using as a social media platform. The findings suggest that interactivity is an important factor of information credibility on social media. As for message quality, the increased sophistication of fake news and misinformation on social media platforms is prevalent which makes them potentially harmful to individuals and society. Therefore, verifying the information's credibility is a critical task. Understanding the factors that affect user perception of information credibility can benefit both users and decision

makers. On the one hand, it helps users differentiate between fake information and valid ones which decreases the harms of spreading misinformation. On the other hand, it helps decision makers improve their understanding of how individuals evaluate and internalize a message in order to determine how and when to intervene to prevent the spread of misinformation especially during health crises and pandemics.

These findings should be interpreted in light of the study's limitations. This study has one limitation, which is the nature of data collected from a convenience sample of social media users in Kuwait. Therefore, our findings might not be generalizable to the whole population. Although the results on the impact of trustworthiness, interactivity, transparency, and information quality on IC perception are significant, future studies require a larger sample size that is randomly collected to comprehend the influence of those factors on IC or more factors to investigate the information credibility. Additionally, future research should address how medical, public health, social science, and computer science experts must begin working together via interdisciplinary research to address misinformation on social media especially during pandemics and health crises. There is a need to focus on the motivations of the source of the message to promote a disinformation campaign, endorsing a conspiracy theory, and selling a product, as well as the recipient's social network, sociocultural identity and values, emotions (particularly fear and anger), levels of trust, and concomitant social media use patterns.

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