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How in-U.S. Chinese college students consume Covid-19 information on social media: examining the relationship between media credibility and media dependency

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**HOW IN-U.S. CHINESE COLLEGE STUDENTS CONSUME
COVID-19 INFORMATION ON SOCIAL MEDIA:
EXAMINING THE RELATIONSHIP BETWEEN
MEDIA CREDIBILITY AND MEDIA DEPENDENCY**

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ABSTRACT

In the 2019/2020 academic year, around 370,000 Chinese students studied at U.S. colleges and universities. During the COVID-19 pandemic, social media serve as an important channel for in-U.S. Chinese college students to learn about the pandemic-related news and information in both China and the United States. However, due to the wide circulation of misinformation on social media and the censored Chinese media system, the question remains whether in-U.S. Chinese students trust the social media platforms and information sources they depend on. This thesis seeks to answer this question by drawing upon the literature about media credibility and the Media System Dependency theory. Specifically, the study examines whether in-U.S. Chinese college students' media dependency level can positively predict their perceived credibility level of different social media platforms and information sources within the platforms when consuming news related to COVID-19. Based on an online survey, this thesis found that in-U.S. Chinese students still depended mostly on WeChat, a Chinese social media platform, and perceived it most credible for consuming both Chinese and U.S. COVID-19 information. Despite their experience staying in the U.S., the Chinese students also largely depended on and trusted Chinese governmental and mainstream news media

sources within the social media. In addition, media dependency levels could positively predict the perceived credibility level of all social media platforms and information sources. That is, in-U.S. Chinese students tend to trust the media and information sources they depend on. Theoretically, this thesis extends the previous literature about media dependency and credibility to social media and public health crisis contexts, further considering the different features and affordances of various social media platforms.

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Introduction

Social media have become important for information activities beyond social networking, including interpersonal communication, group discussions, and mass media content (Kim et al., 2019). Studies have shown the power of social media in transmitting information from different content creators to users, especially in emergencies, such as political uprisings and public health crises. Compared to traditional media and web-based online media, social media enable users to access information from multiple sources on different platforms on-demand without any time or space restrictions (Maxian, 2014). Many studies have been conducted to figure out how and why users consume information from social media. It has been found that the way people consume health-related information online also has changed from web search engines and specialized healthcare platforms to social media platforms (De Choudhury et al., 2014; Li et al., 2018).

COVID-19, also known as coronavirus disease, is a fatal pandemic and is an ongoing public health crisis concerning people from West to East. According to the World Health Organization, until October 28 in 2020, there have already been more than 44 million confirmed cases worldwide, and about 1.17 million people have died from it (World Health Organization, n.d.). The pandemic initially broke out in Wuhan, China in December 2019, and it then spread worldwide, especially in the U.S. There is a famous saying on the Chinese internet, that “Chinese fight in the first half of battling against the pandemic, the Western people fight in the second half, while Chinese overseas students have to fight in the full court.” This study focuses on in-U.S. Chinese students. In 2019, nearly 400,000 Chinese overseas students were in the U.S., making up the largest part of

international students in the U.S. (The Institute of International Education, 2020) and more than half among 700,000 Chinese students studying abroad (Ministry of Education of the People's Republic of China, 2020). Far away from their homes and restricted in traveling, most Chinese overseas students in the U.S. are not only concerned about the epidemic situations in their homeland but also have an urgent need to obtain information about the situations in their residential locations in the U.S. COVID-19 information, including but not limited to cases in different countries, the transmitting mechanism of the virus, governmental policies, safety measures, its impacts in individual life and society, and vaccine or medicine development, can be essential to satisfy their various needs for understanding the situation, keep healthy and help their families in China. Social media can be an important channel for Chinese overseas students in the U.S. to learn about domestic and U.S. pandemic information for the following reasons: first, some traditional Chinese media, such as Chinese TV programs and newspapers, are not easily accessible for Chinese overseas students; second, young adults have widely used social media for information consumption in China (China Internet Network Information Center [CNNIC], 2017) and the U.S. (Shearer & Matsa, 2018); third, many Chinese and U.S. government departments and mainstream news media are also using social media platforms to publish COVID-19 information (The State Information Center & Nanjing University Computer-mediated Communication Research Center, 2020).

However, two major problems might influence social media users' trust in some information sources or social media platforms. First, some vital information in such public health crises is controlled by very few people, who are authorities and experts in

Chinese society (Tai & Sun, 2007; Wang et al., 2020; Zhang & Zhang, 2020). The public's attitudes to these information sources may vary. In the Chinese media system, structural barriers, such as information censorship and lack of transparency, may hinder the free information flow and cause delay, ambiguity, and confusion (Tai & Sun, 2007). It has been criticized by Chinese netizens and some U.S. mainstream news media that the unresponsiveness of the local government in the early stages of the crisis by covering up critical information, silencing whistleblowers, keeping the expert groups in the dark, and playing down the threat, has led to the disease becoming an epidemic and pandemic (Chen, 2020; Yang, 2020; Yuan, 2020). Compared to people in mainland China, in-U.S. Chinese students have a higher possibility of being exposed to these blaming opinions due to Chinese governmental information and media regulations. They may not trust the information from government and mainstream media sources. In this condition when people found the vital information sources from the government and mass media were not reliable, some netizens may choose to become information producers and disseminators on social media (Tai & Sun, 2007). This point introduces the second problem, which is the circulation of misinformation in social media. Social media enable and facilitate users to produce and disseminate information at a very low cost, but also bring the risks of relatively low-quality user-generated content and lack of professional gatekeepers to monitor the information (Li & Suh, 2015; Viviani & Pasi, 2017). Some scholars have identified the problem of misinformation and fake news in COVID-19 on Chinese and U.S. social media (Pennycook et al., 2020; Pulido et al., 2020; Rodríguez et al., 2020; Yang et al., 2020).

As a result, the question arises whether the social media users, who depend on social media platforms to consume COVID-19 information from various sources, really trust the platforms or sources? How do China's unique media and information ecology influence their dependency and trust in different Chinese information sources on social media? Are there any differences in their attitudes towards different social media platforms from China and the U.S.?

To answer these questions, the media credibility literature and Media System Dependency (MSD) theory can provide two proper approaches to better understand people's media use in this pandemic. Perceived media credibility can be generally conceptualized as the extent to which users evaluate and judge the information or media as believable or trustworthy (Li & Suh, 2015; Strömbäck et al., 2020). It is a strong predictor of information reader's further actions (McKnight & Kacmar, 2006), and potentially of political engagement or health preventive actions. MSD is a critical theory examining information consumption during social changes, conflicts, or instability (Ball-Rokeach & DeFleur, 1976; Tai & Sun, 2007). The theory investigates the interrelations of social systems, mass media, and individual users. Specifically, it hypothesizes that the more an individual depends on mass media, the more important and impactful mass media are to the individual (Ball-Rokeach & DeFleur, 1976). The relationship between media dependency and perceived media credibility has been widely tested in different media environments (e.g., Deley & Dubois, 2020; Jakob, 2010; T. J. Johnson & Kaye, 2004; T. Johnson & Kaye, 2010). However, it is still waiting to be further investigated in the social media and public health crisis context. The situation of COVID-19

communication in China can well exemplify people's heavy media dependency because of the high confusion and ambiguity of information in the public health crisis in China and people's desperate need for information about the disease (Tai & Sun, 2007). In-U.S. Chinese students, who have more social media platform choices and have more chances to be exposed to different voices about the Chinese government, could be an appropriate group to examine the differences among Chinese and U.S. social media platforms and Chinese information sources.

This thesis uses an online survey to examine the relationship between social media dependency level and credibility level among in-U.S. Chinese college students on different social media and information sources. Five U.S. social media platforms are used most often for news consumption in the U.S.: Facebook, Twitter, Instagram, YouTube, and Reddit (Shearer & Matsu, 2018). Two most widely used Chinese social media platforms are WeChat and Weibo, with 1.15 billion monthly active users in September 2019 (2019 WeChat Data Report, 2020) and 550 million (Weibo 2020 Fiscal First-Quarter Results Published, 2020) in March 2020, respectively. The survey focuses on in-U.S. Chinese students' news consumption from these seven social media platforms. It also investigates how the respondents used information sources on social media platforms, including governmental sources, non-governmental organizations, mainstream news media, local news media, opinion leaders, and friends/connected people.

The main research question is the extent to which in-U.S. Chinese college students' dependency on social media to consume COVID-19 information could positively predict the perceived credibility of different social media platforms and

Chinese information sources. Doing so, this thesis aims to make contributions in three ways. First, it explores the relationship between media dependency and credibility in the social media context. Second, it attempts to explore the differences in dependency levels and credibility levels in various social media platforms and information sources on social media. Third, most other relevant studies have focused on political news and presidential elections (e.g., Johnson & Kaye, 2010; Mackay & Lowrey, 2011; Ognyanova & Ball-Rokeach, 2015), but COVID-19 provides researchers with an important case to examine information consumption about a widely-concerned public health issue.

Media Credibility: From Traditional Media to Social Media

In explicating media credibility, Hovland and his colleagues (1953) empirically examined how different source characteristics could influence media users' attitudes on different issues. Media credibility is closely related to media trust, and in some studies, trust is identified as a dimension of media credibility (Kiousis, 2001; Meyer, 1988; Tsfaty & Ariely, 2014). Go et al. (2016) concluded that regarding a medium as credible is the reason for a user's trust-building. To measure credibility level, Hovland et al. (1953) identified two components of source credibility—expertise and trustworthiness—and more components are complemented by following studies of some other scholars. For example, Gaziano and McGrath (1986) and Meyer (1988) assessed news credibility with five scales: fair, unbiased, telling the whole story, accurate, and trustworthy. Although there is no established unified media credibility measurement, media credibility has been widely used in many articles to measure the extent to which users trust certain information (e.g., Chung et al., 2012; Flanagin & Metzger, 2000; Go et al., 2016; Johnson & Kaye, 2004, 2010, 2014, 2016; Kiousis, 2001).

Medium, Source, and Content Credibility

As media is such a broad concept, scholars have distinguished medium, source, and content/message credibility considering the information diffusion process. Fogg and Tseng (1999) illustrated that the perceived credibility of information receivers is composed of multiple dimensions, and the measurement should involve the source of the message, the structure, and content of the message, and the medium entity, such as newspaper, television, and the internet. Early research on media credibility is about the

influence of source credibility on the interpersonal persuasion process. Later, with more media choices, researchers have also developed interests in message credibility and medium credibility (Metzger et al., 2003). Studies have shown an intricate interaction of source and content of information affecting users' credibility judgments (Metzger & Flanagin, 2013). It is more common in relevant research to distinguish between source and medium credibility (e.g., Kioussis, 2001; Mackay & Lowrey, 2011). This study will also follow this tradition to examine the differences in credibility levels among different social media platforms and information sources.

Medium Credibility

Medium credibility evaluates the overall credibility of certain media entities, such as television and newspapers in the traditional media environment (Gaziano & McGrath, 1986) and different types of internet sites in the digital media environment (Flanagin & Metzger, 2000; Mackay & Lowrey, 2011). Some early studies compared the perceived credibility between the internet and other traditional media (e.g., Flanagin & Metzger, 2000; Johnson & Kaye, 1998, 2000; Kioussis, 2001). However, with the rapid growth of online website and application genres, more studies have turned to research the credibility of different internet platforms, such as news media website, forum, and social networking site (e.g., Johnson & Kaye, 2014, 2015; Metzger et al., 2003; Metzger & Flanagin, 2013). Chung et al. (2012) have empirically demonstrated that users' perceptions of the credibility of online media differ based on media's different technological affordances.

Source Credibility

Source credibility focuses on communicators' expertise and trustworthiness to construct the message, rating their likelihood of providing credible information (Hovland et al., 1953; Li & Suh, 2015). The communicator can be both a person or an organization, and in the traditional media environment, users would usually judge these sources based on the communicator's identity or reputation (Viviani & Pasi, 2017). Although the online information sources cannot always be identified as in traditional media indicators, Sundar (2008) suggested that source credibility is crucial in online information as credibility judgment primarily rests upon the sources. Some scholars have found that source credibility in online media might differ because of its organizational affiliation and users' media use motivations, such as for entertainment and for news consumption purposes (Greer, 2003; Johnson & Kaye, 2015), which will be further discussed in the following sections.

Credibility Change Over Time

In the traditional media environment, the medium and source choices were relatively limited, and the construction and dissemination of information were processed by experts with professional training and experiences as gatekeepers. As such, media credibility could be rated by observable and verifiable credentials of information producers to a large extent (Metzger & Flanagin, 2013). However, traditional media have suffered from declining credibility with the rising number of more new information and communication technologies (ICTs) serving as alternative information sources since mid-1990 (Strömbäck et al., 2020). New ICTs and the internet, without gatekeeping processes

as the traditional media, were found to be at least as credible as traditional media in their early phase at the end of 1990s and the beginning of 2000s in some studies (Flanagin & Metzger, 2000; Johnson & Kaye, 1998, 2000; Pew Research Center, 2005). However, Kiousis (2001) found that people were skeptical of whether the information came from traditional media or the internet. It has also been found that internet credibility dramatically increased from 1996 to 2000 (Abdulla et al., 2004; Bucy, 2003; Johnson & Kaye, 2002). Among all online news sources, many researchers have found that blogs, especially non-journalist blogs, were judged more credible than traditional news sources and other online sources, as blogs are often lack-attach with mainstream media or institutions, which allow bloggers to write more in-depth and unbiased messages transparently (Banning & Sweetser, 2007; Johnson & Kaye, 2004; Mackay & Lowrey, 2011; Scoble & Israel, 2006).

However, general internet credibility decreased in the mid-2000s after the internet developed rapidly for several years (Flanagin & Metzger, 2000; Johnson & Kaye, 2004). With the growing popularity of the internet and ICTs, the multiplicity of information sources and the proliferation of information load have caused information abundance or overload, as well as lowering the cost of information production and dissemination (Metzger & Flanagin, 2013). Some characteristics of the internet, including anonymity, the lack of clarity of the context, and the lack of professional gatekeeping, enable anyone to post information to the internet with no need of considering about the information being complete, accurate, or unbiased (Johnson & Kaye, 2004; Viviani & Pasi, 2017). This could lead to the problem that fake news, disinformation, and misinformation have

been rife in the public media sphere than ever (Johnson & Kaye, 2004; Strömbäck et al., 2020). In the Digital Future report by the Center for the Digital Future in 2011, only 40 percent of U.S. internet users said that most or all of information online is reliable, compared to 58 percent in 2001.

Credibility on Social Media

In the Web 2.0 era, social media have become a major channel for information consumption. Based on mobile devices and the internet, social media take the form of blogs, social networking sites, forums, microblogs, video-sharing, review sites, and so on (Viviani & Pasi, 2017). Social media are designed to be a highly interactive platform for harnessing collective intelligence (Westerman et al., 2012), and it gives users unprecedented capacity to co-create, share, and discuss user-generated content (Li & Suh, 2015). Social media users also share news and information links to external content except for their personal expressions more often. Pew research center has indicated that around two-thirds of American adults got news on social media in 2018 (Shearer & Matsu, 2018). Research by CNNIC also reports that around half of social media users consume information from social media platforms in China in 2016 (CNNIC, 2017).

The prevalence of social media as an information source has prompted more researchers to examine the credibility of information from social media. Like other online sources in Web 1.0, social media also lacks professional gatekeeping. More than that, users are able to exchange information more easily and directly, and they are facing more diverse and unfamiliar sources. Besides, information on social media appears in many formats, such as status updates, photo posts, videos, and links to other individuals or

organizations, influencing the way people evaluate the information (Johnson & Kaye, 2014; Schmierbach & Oeldorf-Hirsch, 2012). These features make the credibility judgment to information on social media different from traditional media and Web 1.0 (Li & Suh, 2015; Viviani & Pasi, 2017). The flood of unverified or falsified information on social media also makes it crucial to understand how users are making assessments of credibility when using social media to consume information (Yang et al., 2013), which deals with both the characteristics of content creators and the intrinsic nature of social media platforms.

First, social media do not have only one unified agenda. They curate a diverse range of information sources, and traditional news organizations and governments have used social media to influence and reach out to audiences more directly (Zhang & Guo, 2019). Considering the social nature of social media, users can choose to be exposed to information from connected people who have similar interests and ideas with them. Studies have shown that users are more likely to trust information from peer networks who hold similar views and whom they have already trust (Johnson & Kaye, 2014; Metzger & Flanagin, 2013). An experiment on Facebook has found that social media recommendations can improve credibility (Turcotte et al., 2015). These findings suggest that the credibility level of different information sources on social media may vary.

Second, different social media platforms possess different characteristics and provide different affordances, such as interactivity, synchronicity, and information retrieval (Johnson & Kaye, 2014). For example, scholars have found that Facebook and Twitter (Halpern et al., 2017; Johnson & Kaye, 2015) and Weibo and WeChat (Zhang &

Guo, 2019) have different information dissemination processes. However, although some studies have mapped out what social media characteristics may influence credibility, they mainly focus only on a specific social media platform, like Twitter or Facebook (Kang et al., 2015; Li & Suh, 2015; Morris et al., 2012). Little literature has been found to assess the credibility of different social media platforms so far. This study will distinguish the medium credibility of the most popular social media platforms used for news consumption in the U.S. and China, attempting to answer the following research question:

RQ1: Which social media platform do in-U.S. Chinese college students perceive as the most credible to consume a) Chinese COVID-19 information and b) US COVID-19 information?

Media Dependency and Its Relationship with Media Credibility

Media credibility has been proved to be a strong predictor of media users' further actions (McKnight & Kacmar, 2006), and the problem of misinformation is pervasive on social media. For these reasons, many previous studies have been conducted to explore why people assign different media with different levels of credibility. Most researchers analyzed media's technological design factors (e.g., Fogg et al., 2003; Johnson & Kaye, 2016; Sundar, 2008; Westerman et al., 2012) and users' motivations (e.g., Johnson & Kaye, 2014; Metzger et al., 2010). They mostly used theories like the information-processing models (Johnson & Kaye, 2015; Sundar, 2008) and the uses and gratifications (U&G) theory (Greer, 2003; Johnson & Kaye, 2002) to match these factors with different credibility levels. The relationship between media credibility and media dependency, or media reliance used in some studies, has also been researched in some studies. Media dependency is especially crucial in this article's case, which will be further discussed in this section.

The Media System Dependency (MSD) theory was proposed and developed by Ball-Rokeach and his colleagues (1976) to explain the mutual relationships between mass media, social systems, and individuals. Ball-Rokeach (1985) defined dependency in the MSD theory as "a relation between individuals' goals and the extent to which these goals are contingent upon the resources of the media system" (pp. 494–495), and those resources have the capacity to create, gather, process and disseminate information. When individuals cannot solely rely on interpersonal sources to obtain the information they need and mass media can provide the information, they would depend on mass media as

an essential source (Ball-Rokeach, 1985; Ball-Rokeach & DeFleur, 1976). Individuals' dependency on the media will be stronger when there are fewer alternative information sources and when their society is more complicated. MSD contains two levels of relationships: first, the macro-level deals with individuals' dependency on media systems and different social systems. Second, the micro-level considers an individual's relationship with specific media to achieve personal goals (Ball-Rokeach, 1985).

This study focuses on the micro-level to examine which specific media are perceived to have the capacity to satisfy users' needs for information rather than other alternatives (Jackob, 2010). It can be measured as the intensity of dependency (Ball-Rokeach, 1998), which means the perceived exclusivity of resources for goal attainment (Jackob, 2010), by asking users how helpful they find a medium, rather than other alternatives, to attain certain goals. The goals include social understanding, self-understanding, interaction orientation, action orientation, social play, and solitary play (Ball-Rokeach, 1985). In this study, to examine how people consume COVID-19 information on different media platforms and sources, social understanding goals and action orientation goals are the major concerns. According to Ball-Rokeach and DeFleur (1976), the social understanding goal refers to the need to have a basic understanding of the world around them, and the action orientation goal is the need to effectively direct personal actions. COVID-19 is a newly emerged and unfamiliar issue for the public, but it severely concerns public health. Therefore, it requires people to seek information from the media to better understand this pandemic and find ways to protect themselves. In this kind of threatening situation, individuals' dependency on media should be more intense.

With the growth and prevalence of the internet and social media, the powerful role of traditional mass media has declined from its exclusiveness of information (Jackob, 2010), as people have more alternative digital channels to attain knowledge. Social media are increasingly important for users to fulfill the social understanding goals and the action orientation goals (Kim & Jung, 2017). Some studies have compared social media dependency with other media (Kim & Jung, 2017; Lyu, 2012), but the dependency intensity level of different sources on social media and various social media platforms may also vary. In terms of information sources on social media, social media provide users with access to diverse information sources—from the governments, mainstream news media, local news media, opinion leaders to friends—while the government and mainstream news media still control more information than the public on some occasions, including public health crises. In terms of social media platforms, different social media have different characteristics related to information production and dissemination. For example, compared to Twitter, Facebook connections are more based on real-life friends, and the social connections are bidirectional, while on Twitter, people can follow whomever they want, and they do not need to reveal their true identities (Johnson & Kaye, 2015). It can be deduced that information flow on Twitter is more public, with less consideration of real-life social connections, which may cause different dependency levels on Twitter and Facebook. Considering the differences in social media dependency levels, this research proposes the following research question:

RQ2: Which social media platform do in-U.S. Chinese college students depend mostly on to consume a) Chinese COVID-19 information and b) US COVID-19 information?

The Relationship Between Media Dependency and Media Credibility

Compared to media use, such as frequencies and time length, media dependency is a more critical predictor of media credibility. The media dependency level considers alternatives. When there are fewer alternatives choices to achieve the users' goals, which means users have to consume information from certain media, the trust in this media is more important (Jackob, 2010). Especially in cases like the COVID-19 pandemic, some vital information can only be obtained from certain authorities and experts, so the public may have no other choice but to depend on these information sources. If the public can not verify or trust these information sources or media platforms because of the circulation of misinformation, the unresponsiveness of the government and other reasons, they will be caught in an "infodemic" (Alam et al., 2020; Pulido et al., 2020), without directions for social understanding or actions orientation.

Several researchers have mapped the relationship between media dependency and media credibility in different contexts previously. Two scholars, Johnson and Kaye, have used "reliance" instead of "dependency" in many of their studies (e.g., Johnson & Kaye, 2000, 2002, 2004, 2010, 2016). They define media reliance as "how much consumers psychologically depend on information to learn about their social, cultural, and political worlds" (Johnson & Kaye, 2016, p. 138). From this definition, media reliance is generally interchangeable with media dependency. To measure "media reliance," they simply asked

the respondents to what extent they rely on different media, while a more comprehensive scale has been established in media dependency. For these reasons, this study will still use media dependency instead of media reliance to investigate the relationship with media credibility.

In some studies, researchers found that higher media dependency can predict higher media credibility. When comparing the internet and other traditional media, some studies have found that the more people rely on the internet, the more they consider the internet credible than other media (Flanagin & Metzger, 2000; Greer, 2003; Johnson & Kaye, 1998; Kioussis, 2001). Johnson and Kaye conducted three online surveys among political-interested internet users to test their online media reliance and credibility in political news and presidential election cases. These three studies all prove that the reliance on online sources, including blogs, online newspapers, and SNSs, is the strongest predictor of credibility (Johnson & Kaye, 2010, 2014, 2016). Using media dependency as the independent variable, Li and Suh (2015) applied the Elaboration Likelihood Model, and they tested the relationship between five factors and medium and message credibility on Facebook during the Umbrella Movement in Hong Kong in 2014. They found that medium dependency is the main determinant of medium credibility. These results can be well explained that the relationship between reliance and credibility is sometimes circular. People usually tend to depend on the media sources and platforms they trust, and the more people rely on and accept a source, the more they assign these sources with high perceived credibility (Johnson & Kaye, 2014, 2016; Stavrositu & Sundar, 2008).

However, some studies have found the opposite result. Johnson and Kaye (2000)

found reliance on the internet could positively predict the credibility of online media during the 1996 U.S. presidential election, but they did not find the same relationship in 2000. In the research Mackay and Lowrey (2011) conducted to compare the perceived credibility of online newspapers, journalist blogs, and non-journalist blogs, media dependency had no statistically significant relationship with credibility. Due to the unclear relationship between dependency level and perceived credibility level in various contexts, this thesis asks two research questions to explore whether the dependency level can positively predict the perceived credibility level regarding social media platforms and information sources. As for the research question about information sources, this study focuses more on the in-U.S. students' attitudes towards Chinese information sources, especially the Chinese government and mainstream news media. Therefore, the question only asks about the Chinese condition.

RQ3: Does the dependency level positively predict the perceived credibility level regarding the different social media platforms when in-U.S. Chinese college students consume a) Chinese COVID-19 information b) U.S. COVID-19 information?

RQ4: Does the dependency level positively predict the perceived credibility level regarding the different Chinese information sources on social media when in-U.S. Chinese college students consume Chinese COVID-19 information?

The reviewed studies were conducted in different countries, time periods, which focused on different topics, and used different measuring scales. Given the influence of context variances on the research results, it is important to scrutinize the context of this

study, COVID-19, and the Chinese media environment.

Context Matters: Public Health Crisis and Chinese Media Environment

Public Health Crisis

Research has pointed out that the nature of crisis partially influences the importance of certain media (Kim et al., 2004). Most relevant studies focused on political issues and considered media users' political interests using online media (e.g., Johnson & Kaye, 2010; Mackay & Lowrey, 2011; Ognyanova & Ball-Rokeach, 2015). However, in recent years more users have also moved to social media platforms for health-related information from traditional media, as the users can get more information from various sources, and it is easier for them to exchange personal experiences with each other (De Choudhury et al., 2014; Li et al., 2018).

Cultural Differences in Media Credibility and Dependency

Some cross-cultural studies have demonstrated that cultural differences and other contextual factors can influence credibility perceptions. In Fletcher and Park's (2017) study with the data across 11 countries, northern European countries present the most robust relationship between low levels of trust and preference in non-mainstream news sources than other areas. Using data from 44 diverse countries, Tsfati and Ariely (2014) found that state ownership of television has a positive association with media trust in democratic countries but a negative association in nondemocratic countries. Yang et al. (2013) compared the situations in China and the United States by examining the users' ratings of the credibility of tweets using a survey and an experiment, and they found that Chinese users view microblogs more credible as a source of information than U.S. users for a large selection of topics. The significant differences between the West and East Asia

can be analyzed from the analytics and holistic cognitive patterns, individualism and collectivism social orientations, political systems, economic ideology, industrialization, and so on (Yang et al., 2013)

Although no literature has been found comparing media dependency in different cultures or countries, the social system itself is a variable in the MSD theory, meaning that the dependency levels should vary in different social contexts. Some literature has examined media dependency in the Chinese society during emergencies or threatening situations (e.g., Jiang & Ouyang, 2008; Lyu, 2012, 2019; Sun et al., 2001; Tai & Sun, 2007), demonstrating the increasing dependency on the internet and social media, as well as the influences of Chinese unique media environment, which are discussed below.

Chinese Media Environment and in-U.S. Chinese Student

As a nondemocratic society, China is known to have a highly censored and controlled media environment, both in traditional media and on the internet. The culture of government censorship can be an influential factor in Chinese netizens' perceived media credibility (Yang et al., 2013). Due to its unique political system, some critical information is also highly controlled and not available from the mainstream news media. Tai and Sun (2007) have analyzed the Chinese public's media dependency in the SARS epidemic in 2003. They concluded that the government's inattention to the outbreak of the SARS epidemic and the covering up of traditional media information in the early stage made the government and mainstream news media not dependable for ordinary citizens in that crisis. Many individuals had to turn to some informal information sources and become information creators and disseminators themselves through short message

service, internet chat rooms, bulletin boards, and forums to cope with their “infodemic” (Tai & Sun, 2007). The situation in the early stage of COVID-19 is quite similar to the SARS, that the Chinese government and mainstream media are criticized for covering up the virus’ outbreaking and severity information, silencing whistleblowers, keeping the expert groups in the dark, and playing down the threat (Chen, 2020; Yang, 2020; Yuan, 2020). Unlike seventeen years ago, social media have been viewed as a virtual channel for information that empowers the Chinese public and liberates them from tight governmental control (Lyu, 2012). However, to what extent Chinese users can depend on, trust, and benefit from COVID-19 information on social media remains to be answered.

This thesis focuses on a special population — in-U.S. Chinese students, who are not only savvier in Chinese and U.S. social media platforms but also have a strong need to attain COVID-19 information about both countries. According to the annual census release from The Institute of International Education (2020), in around 1 million international students in the U.S. in 2019/2020, Chinese students take 34.5% of them and make up the largest part, with the number of around 370,000. This no small group has aroused increasing concern from the communication and media studies academics in the US. Scholars have found that social media have served as an important channel to fulfill diverse information needs (Hamid et al., 2016), reduce uncertainty in the new environments (Rui & Wang, 2015), and alleviate sociocultural stressors in acculturation for international students (Forbush & Foucault-Welles, 2016). Considering that authorities and experts master more COVID-19 information, especially the case numbers and prevention methods (Tai & Sun, 2007; Wang et al., 2020; Zhang & Zhang, 2020),

they might be the major sources for in-U.S. Chinese students to consume COVID-19 information on social media. However, due to government censorship, in-U.S. Chinese students might have a higher possibility of being exposed to criticizing opinions of the Chinese government's unresponsiveness than people in Mainland China. Taken the previous research results and the context into consideration, the hypotheses are deducted as follows:

H1: In-U.S. Chinese college students depend more on the Chinese government and mainstream news media sources on social media than other sources to consume Chinese COVID-19 information.

H2: In-U.S. Chinese college students perceive the Chinese government and mainstream news media sources on social media as less credible than other sources to consume Chinese COVID-19 information.

Method

Data Collection and Respondents

This thesis uses an online survey to investigate in-U.S. Chinese college students' attitudes toward different social media platforms and information sources on social media when they consumed COVID-19 information. The survey was conducted between November 14 to December 10 in 2020. The questionnaire was constructed with online survey tools on Qualtrics and Wenjuanwang, a Chinese online questionnaire management platform. The questionnaire was composed of Chinese, both for filtering out non-Chinese students and for the respondents' accurate understanding of the questions and options. The URLs of the questionnaire were promoted both on the SONA system, a cloud-based research participant management software, of a college in one northeastern U.S. university and on a major Chinese overseas students' BBS (Bulletin Board System) 1point3acres. To increase the response rate, monetary incentives sent through WeChat were provided for survey respondents on Wenjuanwang. Course credits were granted for students who completed the survey through the SONA system. Screening questions were included to filter out the respondents who were not in-U.S. college students with Chinese nationality, who did not use social media to consume information and were younger than 18 years old. Only the results from the completed questionnaires were recorded. After removing unqualified responses that are incomplete or have outlying dependency or credibility scores, this convenience sample of in-U.S. Chinese college students who used social media yielded 195 completed survey responses.

Research has shown that some demographic information can influence media use

and credibility level, including age, gender, ethnicity, and education (Bucy, 2003; Ognyanova & Ball-Rokeach, 2015). The respondents were asked to indicate their gender, age, and education level in the survey. Among the 195 valid participants, 60.00% were aged between 23 to 30 ($n = 117$), 35.90% were 18–22 years old ($n = 70$), and 4.10% were between 31 to 40 ($n = 8$). The survey also asked them the degree program they were working on, and 26.67% of them were in bachelor's programs ($n = 52$), 55.90% were in master's programs ($n = 109$), and 17.44% were in doctoral programs ($n = 34$). Female respondents outnumber males (58.97% and 40.51%, respectively), and one respondent chose “Other” in the gender question (0.51%). The number of years the respondents have stayed in the U.S. ranges from 1 to 14, with a mean of 3.45 ($M = 3.45$, $SD = 2.55$). The respondents were asked to rate on a five-point Likert scale (1 = not at all, 5 = very much) for the extent to which they were concerned about “U.S. COVID-19 information” ($M = 4.00$, $SD = .98$), “Chinese COVID-19 information” ($M = 3.86$, $SD = 1.16$) and “global COVID-19 information” ($M = 3.20$, $SD = 1.12$). Apart from social media, most respondents had used news websites or smart device applications to consume COVID-19 information ($n = 168$, 86.15%), and some had also used other online sources ($n = 84$, 43.08%). Only about one-third of the respondents had consumed COVID-19 information on television or radio ($n = 69$, 35.38%) and only one-tenth on newspapers or magazines ($n = 19$, 9.74%).

Social Media Platforms

Five U.S. social media platforms and two Chinese social media are provided in the questionnaire. The five U.S. social media platforms—Facebook, Twitter, Instagram,

YouTube, and Reddit—are used most in the U.S. for news consumption according to a Pew survey (Shearer & Matsu, 2018), and they vary in their main functions. Facebook is regarded as a social networking site, Twitter is a microblog, Reddit is more like a forum, Instagram is for photo sharing, and YouTube is for video sharing. The two most widely used social media platforms in China, WeChat and Weibo, are designed as a social networking site and a microblog, respectively. The respondents were asked the frequency of using different social media platforms to consume the U.S. and Chinese COVID-19 information on a 5-point scale (1 = several times a day, 2 = once a day, 3 = few times a week, 4 = every few weeks, 5 = almost never). When consuming the U.S. COVID-19 information, the respondents used WeChat most frequently than other social media platforms ($M = 3.03$, $SD = 1.45$), followed by Weibo ($M = 3.59$, $SD = 1.51$), Twitter ($M = 4.16$, $SD = 1.15$), YouTube ($M = 4.24$, $SD = 1.10$), Instagram ($M = 4.44$, $SD = 1.04$), Facebook ($M = 4.54$, $SD = .96$) and Reddit ($M = 4.78$, $SD = .70$). For Chinese COVID-19 information, WeChat ($M = 2.95$, $SD = 1.49$) and Weibo ($M = 3.38$, $SD = 1.58$) were also the most frequently used, while more than 170 respondents “almost never” used the five U.S. social media platforms. The respondents were only asked to rate the dependency and credibility levels of the social media platforms if they did not choose the “almost never” of the question about the frequency of using each social media.

Information Sources on Social Media

To distinguish between different information sources on social media, six categories are identified: governmental sources, non-governmental organizations or companies, mainstream news media, local news media, opinion leaders, and

friends/connected people. Examples of each source are given in the questions to help respondents recall the information sources they had used.

The respondents were asked to answer “yes” or “no” regarding whether they had consumed COVID-19 information from each source. More than half of the respondents had consumed the U.S. COVID-19 information from the U.S. government (e.g., the White House, CDC, $n = 112$, 57.44%) and mainstream news media (e.g., CNN, $n = 100$, 51.28%) sources on social media, followed by the U.S. non-governmental organization/company sources (e.g., John Hopkins University, $n = 86$, 44.10%). Around 30% of the respondents had obtained U.S. COVID-19 information from U.S. opinion leaders ($n = 60$, 30.77%) and U.S. friends/connected people ($n = 62$, 31.79%) on social media, and only 28 respondents (14.36%) had used U.S. local news media.

When consuming Chinese COVID-19 information, most of the respondents had used Chinese governmental sources (e.g., the Health Department, $n = 120$, 61.54%) and Chinese mainstream news media (e.g., People’s Daily, $n = 112$, 57.44%), which is similar with the sources they used for consuming the U.S. COVID-19 information. Fewer respondents had consumed COVID-19 information from Chinese non-governmental organization/company sources ($n = 54$, 27.69%), Chinese local news media ($n = 36$, 18.46%) and Chinese opinion leaders on social media ($n = 44$, 22.56%). However, 115 respondents (58.97%) reported that they had obtained Chinese COVID-19 information from Chinese friends and people they are connected to on social media. The respondents were only asked to rate the dependency and credibility level of the information sources if they choose “yes” to the question of whether they have consumed COVID-19

information from that source. Table 1 presents all the descriptive information.

Table 1
Descriptive Overview (N = 195)

Age	n (%)
18–22	70 (35.90%)
23 to 30	117 (60.00%)
31 to 40	8 (4.10%)
Degree	n (%)
Bachelor's programs	52 (26.67%)
Master's programs	109 (55.90%)
Doctoral programs	34 (17.44%)
Gender	n (%)
Female	115 (58.97%)
Male	78 (40.51%)
Other	1 (0.51%)
Years stayed in the U.S.	M = 3.45, SD = 2.55
Media used for COVID-19 information	M (SD)
Social media	195 (100.00%)
News websites or smart device applications	168 (86.15%)
Other online sources	84 (43.08%)
Television or radio	69 (35.38%)
Newspapers or magazines	19 (9.74%)
Information sources for Chinese COVID-19 information	M (SD)
Chinese governmental sources	120 (61.54%)
Chinese non-governmental organization/company	54 (27.69%)
Chinese mainstream media	112 (57.44%)
Chinese local media	36 (18.46%)
Chinese opinion leaders	44 (22.56%)
Chinese friends/connected people	115 (58.97%)
Concerning level to COVID-19 information (1–5, low to high)	M (SD)
U.S. COVID-19 information	M = 4.00, SD = .98
Chinese COVID-19 information	M = 3.86, SD = 1.16
Global COVID-19 information	M = 3.20, SD = 1.12

Social media use frequencies for U.S. COVID-19 information	M (SD)
WeChat	M = 3.03 (1.45)
Weibo	M = 3.59 (1.51)
Twitter	M = 4.16 (1.15)
YouTube	M = 4.24 (1.10)
Instagram	M = 4.44 (1.04)
Facebook	M = 4.54 (.96)
Reddit	M = 4.78 (.70)
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Social media use frequencies for Chinese COVID-19	M (SD)
WeChat	M = 2.95 (1.49)
Weibo	M = 3.38 (1.58)
YouTube	M = 4.79 (.60)
Facebook	M = 4.85 (.61)
Twitter	M = 4.85 (.52)
Instagram	M = 4.85 (.55)
Reddit	M = 4.96 (.31)

Measurements

Social Media Credibility

A five-item scale, including fairness, accuracy, unbiased/balance, comprehensiveness /depth of information, and reliability/believability, has been widely used in credibility research (Flanagin & Metzger, 2000; Go et al., 2016; Meyer, 1988). However, in their most recent studies, Johnson and Kaye (2015, 2016, 2017) used a three-item scale examining credibility on social media, including believability, fairness, and accuracy. Unbiased/balanced and comprehensiveness/depth of information were removed as producers cannot avoid bias and the word limit on social media (Johnson & Kaye, 2015, 2016; Kaye & Johnson, 2017). This study follows this measurement using

the three-item scale, and the respondents were asked to rate the believability, fairness, and accuracy of each social media platform and source they had used for consuming COVID-19 information on a five-point Likert scale (1 = very disagree, 5 = very agree). An overall credibility index was created by combining the three measures (scale 3–15).

Social Media Dependency for Information

To measure media dependency, this study uses three questions adapted from the questions used in four previous studies from social understanding and actions orientation goals (Jackob, 2010; Kim & Jung, 2017; Li & Suh, 2015; Lyu, 2012) measuring on a five-point Likert scale (1 = very disagree, 5 = very agree). The respondents were asked to rate the extent that they thought the social media platform or the information source “was helpful for me to figure out what is happening about COVID-19”, “was helpful for me to deepen my understanding in COVID-19,” and “was dependable if I want to get information and make up my mind in action about COVID-19 issues.” An overall dependency index was created by combining the three measures (scale 3–15).

Control Variables

In addition to the demographics, another two sets of variables are controlled in the tests.

Frequency of Using Chinese Social Media. To examine the relationship between dependency and perceived credibility levels among different Chinese information sources on Chinese social media when the respondents consume Chinese COVID-19 information, the frequency of using Chinese social media platform, WeChat

and Weibo, should be controlled. This variable is measured by the average of WeChat using frequency and Weibo using frequency, respectively, ranging from 1 to 5, from high to low frequency.

Other Media Usage. The study also controls the influence of other media usage other than social media when examining the relationship between dependency and perceived credibility levels among different social media platforms. The respondents were asked whether they had used the listed five media they have used for consuming COVID-19 information, and each media use was measured as a binary variable with the code 0 (not used) and 1 (used). The value of the four media platforms – news websites or smartphone applications, other online sources, television or radio, newspapers or magazine – were summed up to create the new variable “other media usage” ranging from 0 to 4. For example, 3 in this variable indicates the respondent has used three media other than social media to consume COVID-19 information.

Data Analysis

The data collected were analyzed using SPSS. This study used paired-sample t-tests to compare the dependency and credibility scores of social media platforms and information sources dealing with different sample sizes. To examine the relationship between dependency and credibility scores and answer RQ3 and RQ4, this study employed hierarchical regressions with three blocks. For both RQ3 and RQ4, the first block includes demographics and other control variables (gender, degree, years stayed in the U.S., level of concern regarding the Chinese/U.S. COVID-19 situation). In addressing RQ3, which asks the relationship between dependency and credibility on

social media platforms, the second block includes “other media usage” and the frequencies of using each social media. In RQ4, to explore the relationship between dependency and credibility levels of Chinese information sources, the second block includes two variables, which are “other media usage” and “frequency of using Chinese social media.” Dependency score of each social media platform and information source was added to the third block separately to analyze the change in the effect size of dependency caused to credibility in the Model 3 for both RQ3 and RQ4.

Results

Dependency and Credibility Levels of Social Media Platforms

The first research question asks the social media platform that in-U.S. Chinese college students perceive as the most credible to consume the U.S. and Chinese COVID-19 information, respectively. The results in Table 2 and Table 3 show that WeChat has the highest credibility score for consuming both the U.S. (9.55) and Chinese (10.54) information. Weibo is not more credible than U.S. social media platforms for U.S. information, but it has much higher credibility scores than U.S. social media platforms when consuming Chinese information.

Table 2

Credibility Measurements of Social Media Platforms for U.S. COVID-19 Information Mean Scores (Scale 1–5)

	<i>Believable</i>	<i>Fair</i>	<i>Accurate</i>	<i>Credibility Index (3–15)</i>
U.S. Social Media				
Facebook (n = 47)	3.17	3.17	2.94	9.28, $\alpha = .85$
Twitter (n= 84)	3.15	3.06	2.81	9.02, $\alpha = .90$
Instagram (n = 54)	3.04	3.06	2.72	8.82, $\alpha = .88$
YouTube (n = 82)	3.24	3.17	2.98	9.39, $\alpha = .87$
Reddit (n = 21)	3.14	3.10	2.90	9.14, $\alpha = .96$
Chinese Social Media				
Weibo (n = 109)	3.17	3.04	2.96	9.17, $\alpha = .90$
WeChat (n = 145)	3.28	3.16	3.11	9.55, $\alpha = .91$

Table 3***Credibility Measurements of Social Media Platforms for Chinese COVID-19 Information Mean Scores (Scale 1–5)***

	<i>Believable</i>	<i>Fair</i>	<i>Accurate</i>	<i>Credibility Index (3–15)</i>
Chinese Social Media				
Weibo (n = 118)	3.65	3.53	3.36	10.54, $\alpha = .90$
WeChat (n = 148)	3.68	3.60	3.49	10.77, $\alpha = .91$
U.S. Social Media				
Facebook (n = 16)	2.94	3.00	2.88	8.82, $\alpha = .51$
Twitter (n= 20)	3.00	3.05	2.85	8.90, $\alpha = .81$
Instagram (n = 16)	3.25	3.19	3.19	9.63, $\alpha = .96$
YouTube (n = 25)	3.12	2.96	2.76	8.84, $\alpha = .90$
Reddit (n = 4)	3.00	3.00	3.00	9.00

Because the sample sizes of using each U.S. social media platform for consuming Chinese information are too small and the differences between the sample size of WeChat and the sample sizes of U.S. social media platforms are too large, the means of credibility scores are not appropriate to be compared in the situation of consuming Chinese information situation. This study only compares the credibility scores of WeChat and other social media platforms for consuming U.S. information. Following Johnson and Kaye's (2014) study to compare the means of media dependency scores with various sample sizes, the two-tailed paired sample t-tests were conducted to compare WeChat and other social media platforms for consuming U.S. information. The results indicate that the credibility level of WeChat is not significantly higher than other social media platforms other than Instagram (Table 4).

Table 4
Credibility of WeChat Versus other Social Media Platforms for U.S. COVID-19 Information

<i>Means and Paired Samples t-scores</i>	<i>n</i>	<i>Credibility</i>
WeChat	92	9.62
Weibo	92	9.33
t-score		1.23
WeChat	33	9.48
Facebook	33	9.12
t-score		0.75
WeChat	63	9.10
Twitter	63	8.84
t-score		0.69
WeChat	47	9.66
Instagram	47	8.83
t-score		2.03*
WeChat	68	9.76
YouTube	68	9.37
t-score		1.18
WeChat	18	9.50
Reddit	18	9.17
t-score		0.60

* $p < .05$; ** $p < .01$; *** $p < .001$

The second research question asks the social media platform that in-U.S. Chinese college students mostly depend on when consuming the U.S. and Chinese COVID-19 information. In general, WeChat and Weibo are found to have been used mostly to consume both the U.S. and Chinese COVID-19 information and have higher dependency

indexes than Facebook, Twitter, Instagram, and YouTube (Table 5 and Table 6). The dependency index (scale 3–15) of WeChat is 10.74 for U.S. information and 11.84 for Chinese information, and Weibo is 9.91 for U.S. information and 11.78 for Chinese information. In the U.S. social media platforms, YouTube is depended most by the respondents for consuming U.S. information (9.83), and Instagram is depended most for consuming Chinese information (9.26).

Table 5

Dependency Measurements of Social Media Platforms for U.S. COVID-19 Information Mean Scores (Scale 1–5)

	<i>Figuring out what is happening</i>	<i>Deepening understanding</i>	<i>Making action decisions</i>	<i>Dependency Index (3–15)</i>
U.S. Social Media				
Facebook (n = 47)	3.04	3.02	2.74	8.80, $\alpha = .77$
Twitter (n= 84)	3.32	3.45	2.79	9.56, $\alpha = .78$
Instagram (n = 54)	2.96	3.09	2.70	8.75, $\alpha = .77$
YouTube (n = 82)	3.44	3.40	2.99	9.83, $\alpha = .72$
Reddit (n = 21)	3.05	3.14	3.00	9.19, $\alpha = .94$
Chinese Social Media				
Weibo (n = 109)	3.47	3.38	3.06	9.91, $\alpha = .85$
WeChat (n = 145)	3.70	3.63	3.41	10.74, $\alpha = .86$

Table 6***Dependency Measurements of Social Media Platforms for Chinese COVID-19 Information Mean Scores (Scale 1–5)***

	<i>Figuring out what is happening</i>	<i>Deepening understanding</i>	<i>Making action decisions</i>	<i>Dependency Index (3–15)</i>
Chinese Social Media				
Weibo (n = 118)	4.02	3.93	3.83	11.78, $\alpha = .92$
WeChat (n = 148)	4.00	4.02	3.82	11.84, $\alpha = .90$
U.S. Social Media				
Facebook (n = 16)	3.00	3.06	2.94	9.00, $\alpha = .65$
Twitter (n= 20)	2.95	3.10	2.85	8.90, $\alpha = .78$
Instagram (n = 16)	3.13	3.13	3.00	9.26, $\alpha = .75$
YouTube (n = 25)	3.16	3.16	2.84	9.16, $\alpha = .79$
Reddit (n = 4)	3.00	3.00	3.00	9.00

Two-tailed paired sample t-tests were conducted to compare WeChat and other social media platforms in terms of media dependency scores for consuming U.S. information (Table 7). The results indicate that WeChat is depended more than all other social media platforms significantly when in-U.S. Chinese students consume U.S. COVID-19 information.

Table 7***Dependency of WeChat Versus other Social Media Platforms for U.S. COVID-19 Information***

<i>Means and Paired Samples t-scores</i>	<i>n</i>	<i>Dependency</i>
WeChat	90	10.94
Weibo	90	10.09
t-score		3.58***
WeChat	32	10.72
Facebook	32	8.78
t-score		3.08**
WeChat	60	10.52
Twitter	60	9.47
t-score		2.78**
WeChat	46	11.28
Instagram	46	8.87
t-score		6.41***
WeChat	68	11.13
YouTube	68	10
t-score		3.53***
WeChat	18	11.11
Reddit	18	9.22
t-score		2.34*

* $p < .05$; ** $p < .01$; *** $p < .001$

Dependency and Credibility Levels of Information Sources

The paper hypothesizes that in-U.S. Chinese college students depend more on the government and mainstream news media sources on social media than on other sources to consume Chinese COVID-19 information. The results show that Chinese governmental sources (12.63) and mainstream news media (12.52) have higher media dependency

scores than other sources (Table 8). The two-tailed paired sample t-tests confirm that Chinese governmental sources are depended more by the respondents than mainstream news media ($t = 2.61, p < .05$), opinion leaders ($t = 2.54, p < .05$), and friends or connected people ($t = 2.99, p < .01$) significantly on social media (Table 9). Chinese mainstream news media is significantly more dependent than friends or connected people ($t = 3.32, p < .01$) (Table 10). H1 is supported.

Table 8

***Dependency Measurements of Information Sources for Chinese COVID-19
Information Mean Scores (Scale 1–5)***

	<i>Figuring out what is happening</i>	<i>Deepening understanding</i>	<i>Making action decisions</i>	<i>Dependency Index (3–15)</i>
Chinese governmental sources (n = 120)	4.23	4.22	4.18	12.63, $\alpha = .90$
Chinese non-governmental organization/company sources (n = 54)	4.11	4.19	3.89	12.19, $\alpha = .87$
Chinese mainstream news media (n = 112)	4.23	4.23	4.06	12.52, $\alpha = .94$
Chinese local news media (n = 36)	4.08	4.17	3.86	12.11, $\alpha = .82$
Chinese opinion leaders (n = 44)	3.91	3.86	3.55	11.32, $\alpha = .91$
Chinese friends/connected people (n = 115)	3.95	3.97	3.76	11.68, $\alpha = .88$

Table 9***Dependency of Chinese Governmental Sources Versus Other Information Sources on Social Media for Chinese COVID-19 Information***

<i>Means and Paired Samples t-scores</i>	<i>n</i>	<i>Dependency</i>
Chinese governmental sources	43	12.44
Chinese non-governmental organization/company sources	43	12.44
t-score		1.05
Chinese governmental sources	88	12.86
Chinese mainstream news media	88	12.50
t-score		2.61*
Chinese governmental sources	28	12.46
Chinese local news media	28	12.25
t-score		1.06
Chinese governmental sources	32	12.38
Chinese opinion leaders	32	10.94
t-score		2.54*
Chinese governmental sources	85	12.58
Chinese friends/connected people	85	11.76
t-score		2.99**

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 10***Dependency of Chinese Mainstream News Media Versus Other Information Sources on Social Media for Chinese COVID-19 Information***

<i>Means and Paired Samples t-scores</i>	<i>n</i>	<i>Dependency</i>
Chinese mainstream news media	88	9.62
Chinese governmental sources	88	9.33
t-score		-2.61**
Chinese mainstream news media	43	9.48
Chinese non-governmental organization/company sources	43	9.12
t-score		0.59
Chinese mainstream news media	32	9.10
Chinese local news media	32	8.84
t-score		0.63
Chinese mainstream news media	38	9.66
Chinese opinion leaders	38	8.83
t-score		1.91
Chinese mainstream news media	87	9.76
Chinese friends/connected people	87	9.37
t-score		3.32**

* $p < .05$; ** $p < .01$; *** $p < .001$

H2 hypothesizes that in-U.S. Chinese college students have lower perceived credibility on the government and mainstream news media sources than other sources when consuming Chinese COVID-19 information. Contrary to the expectation, the results in Table 11 indicate that Chinese mainstream news media (11.99) and Chinese governmental sources (11.92) have the highest credibility scores among all sources. In addition, the two-tailed paired sample t-tests show that Chinese governmental sources and mainstream news media are significantly more credible than friends or connected people on social media (Table 12 and Table 13). H2 is not supported.

Table 11***Credibility Measurements of Information Sources for Chinese COVID-19
Information Mean Scores (Scale 1–5)***

	<i>Believable</i>	<i>Fair</i>	<i>Accurate</i>	<i>Credibility Index (3–15)</i>
Chinese governmental sources (n = 120)	4.10	3.99	3.83	11.92, $\alpha = .92$
Chinese non-governmental organization/company sources (n = 54)	4.00	3.93	3.69	11.62, $\alpha = .91$
Chinese mainstream news media (n = 112)	4.09	4.01	3.89	11.99, $\alpha = .91$
Chinese local news media (n = 36)	4.00	3.86	3.72	11.58, $\alpha = .95$
Chinese opinion leaders (n = 44)	3.80	3.75	3.48	11.03, $\alpha = .93$
Chinese friends/connected people (n = 115)	3.78	3.56	3.33	10.67, $\alpha = .86$

Table 12***Credibility of Chinese Governmental Sources Versus Other Information Sources on Social Media for Chinese COVID-19 Information***

<i>Means and Paired Samples t-scores</i>	<i>n</i>	<i>Credibility</i>
Chinese governmental sources	43	11.79
Chinese non-governmental organization/company sources	43	11.65
t-score		0.34
Chinese governmental sources	88	12.20
Chinese mainstream news media	88	12.15
t-score		0.35
Chinese governmental sources	28	12.07
Chinese local news media	28	11.82
t-score		1.10
Chinese governmental sources	32	11.53
Chinese opinion leaders	32	10.69
t-score		1.35
Chinese governmental sources	85	11.86
Chinese friends/connected people	85	10.75
t-score		3.52***

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 13***Credibility of Chinese Mainstream News Media Versus Other Information Sources on Social Media for Chinese COVID-19 Information***

<i>Means and Paired Samples t-scores</i>	<i>n</i>	<i>Credibility</i>
Chinese mainstream news media	88	12.15
Chinese governmental sources	88	12.20
t-score		-0.35
Chinese mainstream news media	43	11.88
Chinese non-governmental organization/company sources	43	11.53
t-score		1.04
Chinese mainstream news media	32	12.16
Chinese local news media	32	11.75
t-score		1.68
Chinese mainstream news media	38	11.63
Chinese opinion leaders	38	10.89
t-score		1.26
Chinese mainstream news media	87	11.98
Chinese friends/connected people	87	10.69
t-score		5.41***

* $p < .05$; ** $p < .01$; *** $p < .001$

Relationship between Dependency and Credibility Levels

To answer the research questions RQ3 and RQ4 that examine the relationship between dependency and credibility levels of social media platforms and information sources, hierarchical regressions were conducted. In each analysis, three blocks of independent variables and control variables were entered: (1) demographics, including gender, degree, the years lived in the U.S., and the extent that the respondents were concerned about the Chinese or U.S. COVID-19 situation, (2) social media and other media use, (3) the dependency levels. The dependent variable is the respondents'

perceived media credibility. The results from the regression models are reported in Table 14 and Table 15.

RQ3 asks whether the dependency level positively predicts the perceived credibility level of different social media platforms for consuming a) Chinese and b) U.S. COVID-19 information. Considering the inadequate sample sizes of using U.S. social media platforms for consuming Chinese COVID-19 information, only the use of WeChat and Weibo for consuming Chinese COVID-19 information were tested. After controlling for the demographics, the participants' level of concern regarding the Chinese COVID-19 situation, social media and other media use, the results show that the dependency levels positively predict credibility levels in terms of both WeChat ($\beta = .73, p < .001$) and Weibo ($\beta = .65, p < .001$).

For the U.S. COVID-19 information, the results show that dependency is positively associated with the credibility level for all the social media platforms significantly, though the prediction power varies (Table 15). Specifically, the coefficients for Weibo dependency ($\beta = .64, p < .001$) and WeChat dependency ($\beta = .69, p < .001$) to predict the two platforms' credibility are higher than other social media platforms, and Facebook dependency has the lowest prediction power ($\beta = .45, p < .01$).

Table 14***Hierarchical Regressions of Predictors of Social Media Credibility for Chinese COVID-19 Information***

	Model I	Model II	Model III	Model I	Model II	Model III
	WeChat			Weibo		
Gender	.16*	.13	.09	.08	.12	.08
Degree	.12	.11	.05	.10	.12	.09
Years in the U.S.	-.04	.00	.02	-.05	-.07	-.07
Level of concern regarding the Chinese situation	.28***	.17*	.05	.27**	.14	.04
Other media usage		.03	.07		.18	.13
Frequency of WeChat use		-.34***	-.05		.09	.05
Frequency of Weibo use		.11	.04		-.23**	.01
Frequency of Facebook use		.04	.05		-.08	-.05
Frequency of Twitter use		.07	.00		.06	-.12
Frequency of Instagram use		-.09	-.08		-.17	-.06
Frequency of YouTube use		.10	-.04		.16	.13
Dependency			.73***			.65***
ΔR^2	.12***	.11**	.39***	.09*	.09	.31***
Adjusted R ²	.09	.16	.59	.06	.10	.44

* p < .05; ** p < .01; *** p < .001

Table 15***Hierarchical Regressions of Predictors of Social Media Credibility for U.S. COVID-19 Information***

	Model I	Model II	Model III	Model I	Model II	Model III
	Facebook			Twitter		
Gender	.08	.17	.15	.08	.02	-.01
Degree	.25	.13	-.02	.11	.06	.19
Years in the U.S.	-.14	-.06	.09	-.11	-.04	-.01
Level of concern regarding the U.S. situation	.29	.16	.12	.22*	.25*	.15
Other media usage		.17	.22		-.09	-.06
Frequency of Facebook use		-.21	-.12		-.06	-.12
Frequency of Twitter use		-.22	-.16		-.35	.01**
Frequency of Instagram use		.16	.33		.05	.02
Frequency of YouTube use		.29	.23		.19	.05
Frequency of Weibo use		-.15	-.20		-.14	.02
Frequency of WeChat use		-.04	-.02		.18	.11
Dependency			.45**			.58***
ΔR^2	.16	.20	.12**	.08	.18*	.19***
Adjusted R ²	.07	.15	.29	.03	.14	.35
	Model I	Model II	Model III	Model I	Model II	Model III
	Instagram			YouTube		
Gender	.19	.15	.11	-.14	-.22	-.17
Degree	.14	.15	.11	.30**	.35**	.32**
Years in the U.S.	.09	.16	.08	.12	.07	.01
Level of concern regarding the U.S. situation	.08	.07	-.03	.25*	.21	.17

Other media usage		-.14	-.16		.06	.10	
Frequency of Facebook use		.14	.14		-.05	-.18	
Frequency of Twitter use		-.21	-.17		.10	.15	
Frequency of Instagram use		-.18	.12		-.12	-.16	
Frequency of YouTube use		.15	.04		-.18	-.06	
Frequency of Weibo use		-.01	-.14		.15	.16	
Frequency of WeChat use		.07	.12		.03	.08	
Dependency			.61***			.50***	
ΔR^2	.10	.10	.24***	.17**	.06	.21***	
Adjusted R ²	.02	-.01	.27	.13	.11	.35	
		Model I	Model II	Model III	Model I	Model II	Model III
		Weibo			WeChat		
Gender	.01	.10	.11	.04	.06	-.04	
Degree	.11	.17	.18*	.07	.14	.16*	
Years in the U.S.	.07	.08	.02	-.08	-.10	-.09	
Level of concern regarding to the U.S. situation	.09	.02	.01	.09	.04	.05	
Other media usage		.07	.04		.10	.09	
Frequency of Facebook use		-.05	-.09		.01	-.09	
Frequency of Twitter use		.05	-.02		.13	.09	
Frequency of Instagram use		-.18	-.09		-.06	.02	
Frequency of YouTube use		.07	.08		-.03	.03	
Frequency of Weibo use		-.23*	-.08		-.04	.00	
Frequency of WeChat use		-.01	.03		-.21*	-.01	

Dependency			.64***			.69***
ΔR^2	.03	.08	.36***	.02	.07	.40***
Adjusted R^2	-.01	.01	.40	-.01	.02	.44

* $p < .05$; ** $p < .01$; *** $p < .001$

RQ4 asks whether the dependency level positively predicts the perceived credibility level of different Chinese information sources. It was expected that the in-U.S. Chinese students might depend on but not trust governmental and mainstream news media sources, but the results turned out to be the opposite (Table 15). The results show that the dependency levels of all the information sources, including the governmental and mainstream news media, are positively associated with the credibility levels. The coefficients regarding the Chinese governmental sources ($\beta = .85, p < .001$) and mainstream news media ($\beta = .72, p < .001$) are both relatively high. The relationship between dependency and credibility in terms of local news media ($\beta = .76, p < .001$) and opinion leaders ($\beta = .94, p < .001$) is stronger than that of mainstream news media ($\beta = .72, p < .001$).

Table 16***Hierarchical Regressions of Predictors of Information Sources Credibility for Chinese COVID-19 Information***

	Model I	Model II	Model III	Model I	Model II	Model III
	Chinese governmental sources			Chinese non-governmental organization/company sources		
Gender	.21*	.23*	.04	.10	.20	.10
Degree	.08	.09	.03	.12	.20	-.02
Years in the U.S.	.05	.03	-.01	.11	.11	.15
Level of concern regarding to the Chinese situation	.21*	.17	-.08	.54***	.47***	.34***
Other media usage		.06	.07		.17	.05
Frequency of using Chinese social media		-.09	-.04		-.23	-.14
Dependency			.85***			.69***
ΔR^2	.09*	.01	.62***	.31**	.06	.41***
Adjusted R ²	.06	.06	.71***	.25	.28	.74
	Model I	Model II	Model III	Model I	Model II	Model III
	Chinese mainstream news media			Chinese local news media		
Gender	.20*	.22*	.05	.36*	.40*	.17*
Degree	-.01	.02	-.04	.01	.02	.06
Years in the U.S.	-.01	-.03	-.03	.11	.15	.06
Level of concern regarding to the Chinese situation	.28**	.22*	.13	.40*	.29	.13
Other media usage		.06	.06		.11	.04
Frequency of using Chinese social media		-.13	.01		-.31*	-.06

Dependency			.72***			.76***
ΔR^2	.11**	.02**	.47***	.35**	.10*	.40***
Adjusted R ²	.08	.08	.57	.27	.34	.82
	Model I	Model II	Model III	Model I	Model II	Model III
	Chinese opinion leaders			Chinese friends/connected people		
Gender	-.01	.02	-.04	.14	.16	.02
Degree	.07	.11	-.09	.00	.04	.10
Years in the U.S.	-.30	-.26	-.03	.12	.09	.02
Level of concern regarding to the Chinese situation	.09	.04	.05	.25**	.19	.11
Other media usage		.01	.09		.15	.05
Frequency of using Chinese social media		-.16	.07		-.08	-.03
Dependency			.94***			.72***
ΔR^2	.09	.02	.75***	.09**	.02	.46***
Adjusted R ²	-.00	-.04	.82	.06	.07	.55

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

Social media are widely used for information consumption, especially among the younger generation, including college students. Users can curate information from different sources and actively seek and choose what they are interested in. Facing so many different choices of social media platforms and information sources, how and why users choose to consume information from certain platforms and sources has provoked researchers' thinking and investigation. Previous studies have found the differences between social media and other online platforms or traditional media in terms of both dependency and credibility levels (e.g., Kim & Jung, 2017; Li & Suh, 2015; Lyu, 2012; Yang et al., 2013), but there is a lack of exploration of the differences among different social media platforms and information sources on social media. In addition, many studies have focused on political communication in democratic countries, whereas only a few studies have examined other contexts such as public health crises (e.g., Lyu, 2012; Tai & Sun, 2007; Viviani & Pasi, 2017).

Based on an online survey among in-U.S. Chinese college students, this study attempts to answer whether there are differences in the dependency and credibility levels of social media platforms and information sources when in-U.S. Chinese college students consume COVID-19 information. It also investigates the relationship between media dependency and credibility levels, which varies in different contexts (Flanagin & Metzger, 2000; Greer, 2003; Jakob, 2010; Johnson & Kaye, 1998, 2000, 2002, 2010, 2014, 2016; Kioussis, 2001; Mackay & Lowrey, 2011). This paper extends this line of research to the Chinese media environment and to the context of health communication.

Several research findings are noteworthy. First, when examining the differences in terms of the dependency level on different social media platforms, the research found that in-U.S. Chinese college students depended mostly on WeChat for consuming both Chinese and U.S. COVID-19 information, rather than on Weibo or the U.S. social media platforms. In other words, while in the U.S., the respondents still depend mostly on WeChat to know what is happening, deepen their understanding of the pandemic, and make up their minds when they take action in both Chinese and U.S. COVID-19 situations. This is not an unexpected finding, as the Chinese government has blocked all five U.S. social media platforms within China, and WeChat has its dominant status among the Chinese public. Even for in-U.S. Chinese students, WeChat could still be essential for connecting with their motherland and obtaining Chinese information. As for their dependency on WeChat for U.S. information, it can be explained by the relatively short time the respondents have spent in the U.S., with a mean of 3.45 in the range from 1 to 14 years. The respondents may still have a strong familiarity and habituation with Chinese social media platforms. Language and culture barriers might also be the reason why they do not or depend much on U.S. social media for U.S. COVID-19 information.

Comparing the media dependency scores among U.S. social media platforms for consuming U.S. COVID-19 information, the research found that Twitter and YouTube were used by more respondents and had higher media dependency scores than Facebook, Instagram, and Reddit. This can be explained by the fact that Twitter and YouTube are considered by their users to be the platforms for consuming and sharing new information (Shearer & Matsa, 2018; Stocking et al., 2020). The Twitter Search page and YouTube

Trending page provide users the opportunity to be exposed to new information from news outlets and cope with this new situation. Although, according to a survey by Pew Research Center in 2019 (Shearer & Grieco, 2019), Facebook is the social medium Americans used most commonly for news, the survey also found that nonwhite people aged between 18 and 29 with higher than college education experiences, which are similar with the group in this thesis, are the least among Facebook's news consumers. On Facebook, people tend to connect with people they already know and share their personal life experiences. In-U.S. Chinese students who have only lived in the U.S. for several years, may not have many friends to connect with on Facebook, which further decreases their use of Facebook. As Instagram is designed to be a photo-sharing social media platform and Reddit centers around interest-based communities, they are not as popular as the other three social media platforms for news consumption (Shearer & Grieco, 2019).

When comparing the credibility levels among different social media platforms, WeChat also has the highest credibility score for consuming both Chinese and U.S. information compared to all other social media. Compared to Weibo—the other Chinese social media platform that is similar to Twitter, WeChat affords more covert communication amongst people disclosing their real identities (Zhang & Guo, 2019), which could increase its perceived credibility level. On WeChat, which provides homogenized information from friend circles, similar to Facebook, users generally consume information from the sources they want to consume from in an echo chamber (Passe et al., 2018). By managing the contacts, the Moments feature (similar to

Facebook's News Feed from friends), and the Subscriptions feature (similar to Facebook's News Feed from organizational accounts), users could create a media platform curating information based on their interests and their trusted sources. However, the credibility level of WeChat is not significantly higher than that of other social media for consuming U.S. information. This may be due to the circulation of misinformation about U.S. COVID-19 on WeChat, untimely U.S. information updates, and the biased attitudes of Chinese media reports of U.S. news, due to the ongoing conflicts between the two countries (Wong et al., 2020; Zhou, 2020). Nevertheless, as of now, WeChat does not offer any features to help solve these problems. One notable finding in the hierarchical regressions of social media platforms for consuming U.S. COVID-19 information is that the more often the respondents use WeChat and Weibo, the less likely they are to perceive them as credible. This may also indicate the problems surrounding the reporting of U.S. information on Chinese social media discussed above. It is possible that the more in-U.S. Chinese students use Chinese social media to consume U.S. information, the more they find the information is not in conformity with the real U.S. situation they experience. Further research is required to validate this relationship and support this reasoning.

Among the U.S. social media platforms, Twitter and YouTube are viewed as the most credible for consuming U.S. COVID-19 information, and this is consistent with the findings regarding the dependency levels. Instagram has the lowest credibility scores as well as media dependency scores, which can be explained by its priority in photo sharing, rather than the distribution of serious news. The finding that Facebook is not among the

most credible media platforms among the respondents contradicts previous studies, which argue that people tend to place more confidence in bidirectional connected and familiar people on social networking sites like Facebook (Johnson & Kaye, 2015). This can probably be explained by the fact that the respondents are in-U.S. Chinese students who do not have deep connections with U.S. native friends on Facebook.

Meanwhile, it is interesting to note that Instagram has the highest credibility score among U.S. social media for consuming Chinese information. This may be due to the sampling error and the inadequate sample size ($n = 16$), but on the other hand, there may be several reasons related to the affordances of Instagram. First, Instagram posts cannot be forwarded, which makes it hard to spread misinformation about the Chinese COVID-19 situation. Secondly, Instagram mainly targets people who are interested in the lifestyle and fashion rather than serious news, let alone Chinese news. In this sense, the respondents who choose to consume Chinese COVID-19 information on Instagram might have found some credible sources on it, such as Chinese official news media accounts like China Daily (@chinadailynews) and China Central Television(@cctv).

In addition, the study also compares Chinese information sources in terms of their differences in dependency and credibility levels for consuming Chinese COVID-19 information. As expected, the study found that in-U.S. Chinese students depend most heavily on the Chinese government and mainstream news media sources on social media than on other sources to consume Chinese COVID-19 information. In situations like this pandemic, the government and mainstream news media are the major information outlets, as they have the ability to count case numbers and connect with experts. In this, they are

uniquely positioned to release authoritative information. However, contrary to the hypothesis, in-U.S. Chinese college students considered the Chinese government and mainstream news media sources as the most credible for consuming Chinese COVID-19 information. The source of friends and connected people on Chinese social media, on the other hand, was considered the least credible, which may be explained by the fact that rumors about the pandemic are usually spread among close contacts (Alam et al., 2020; Pulido et al., 2020). The high credibility of Chinese official sources can be derived from their high reputation among Chinese students, as previous studies have found source reputation to be a key determinant of credibility (Sundar, 2008). The relatively short time they have stayed in the U.S. could also help to explain this finding. As the respondents still frequently use and depend on Chinese social media – WeChat and Weibo – they have for the most part, avoided exposure to the critical tone of U.S. media towards the Chinese government’s handling of the pandemic. The comparison between the worsening U.S. COVID-19 situation and the better Chinese COVID-19 situation may also increase the respondents’ perception of the credibility of the Chinese government source. This may be especially true for in-U.S. Chinese students who are suffering from the uncontrollable spread of the epidemic in the U.S. Furthermore, as people have the freedom to choose the information sources they prefer on social media, the respondents who choose to obtain information from the Chinese government and mainstream news media sources are highly likely the ones who already perceive these sources to be credible.

Thirdly, in examining the relationship between dependency and credibility levels,

two groups of hierarchical regressions significantly indicate that media dependency scores are positively associated with and are the strongest predictors of credibility levels across both social media platforms and information sources. This result is in line with previous studies on social media and other online platforms and sources (Johnson & Kaye, 2004, 2014). Despite the spread of misinformation on social media and the government's unresponsiveness at the beginning stage of the pandemic, users still have the freedom to choose to depend on the platforms and sources they regard as credible. With the consistency of dependency and perceived credibility levels, in-U.S. Chinese students obtain the information they trust and try to avoid the “infodemic.” High perceived credibility levels of media and information sources could help users understand the situation and direct further actions (McKnight & Kacmar, 2006), which is particularly important in this kind of public health crisis (Lyu, 2012; Pulido et al., 2020). In-U.S. Chinese students could be armed with the information and knowledge about disease prevention measures to keep healthy and make reasonable decisions about their further studying and working plans. This can reflect one strength of social media, which is the freedom for people to choose the information sources they want. However, the possible problem is that users tend to seek out attitude-consistent information so that they are exposed to homogenized information, as indicated by the selective exposure theory (Stroud, 2008). Actively avoiding attitude-challenging information and being presented with homogenized information by social media algorithms, users have only a slim chance to hear from sources they labeled “uncredible.”

Theoretically, this study extends the Media-System Dependency theory to the

social media environment. With so many alternative sources to choose from, Chinese students still depend more on Chinese mainstream news media sources on social media when society is undergoing instability and information is strongly needed (Ball-Rokeach, 1985; Jakob, 2010). This study also contributes to the operationalization of dependency on social media by adapting from previous studies. Due to the limit of information depth and the purpose of information consumption on social media, the dependency level can be measured by the three items used in this study, including figuring out what is happening, deepening the understanding, and making decisions for action. These three items can establish good inter-item reliability for calculating the overall dependency index on almost all the social platforms and information sources on social media.

In studies exploring why users choose to consume information from different media platforms and news sources and assign them different credibility levels, most studies have employed the uses and gratifications theory (e.g., Abdulla et al., 2004; Go et al., 2016). In the online environment, users have greater control over what they would like to see, so that their motivations are important for understanding their using behaviors. Compared with general media use, which is measured in terms of time and frequency, media dependency level can also be a strong predictor of perceived credibility levels. This study has piloted in comparing the discrepancies of dependency and credibility levels among different social media platforms. For further investigation, some other perspectives can be explored to explain the differences, such as media repertoire theory (Yuan, 2011) and media affordances (Chung et al., 2012). For example, Fogg et al. (2003) and Sundar (2008) have found that the visual design elements and structural

features of websites can influence consumers' credibility assessment of information due to their selected attention and interpretation.

This study also has some practical implications for media outlets for both the current COVID-19 pandemic and other public health crises. With a large and growing number of overseas students in the U.S. (Institute of International Education, 2020), the institutions, such as schools and the Centers for Disease Control, should pay more attention to properly inform and convince overseas students to learn more about the virus and take the corresponding action. These U.S. institutions would be advised to spend more effort on WeChat, Weibo, and YouTube, which have higher dependency and perceived credibility levels, to provide in-U.S. Chinese students with U.S. information and help them manage their living problems in the U.S. They could also cooperate more with the social media accounts of the Chinese government and mainstream news media, based on the results of this study. The Chinese government and mainstream news media should take advantage of their social media counterparts' high dependency and credibility levels to inform in-U.S. Chinese students about the Chinese situation, especially on WeChat. Although it would also be useful to advocate and promote pandemic information across all U.S. platforms, Instagram, with high dependency and credibility levels for Chinese information, could be considered to be a better platform to inform in-U.S. Chinese students of Chinese information.

This study has several limitations. In particular, the sample size of this study is small, and the sample sizes of each information source and social media platform are different. This results in the impossibility of testing whether dependence on another

medium or source can influence the perceived credibility of a certain medium or source. The convenience sample also lacks in its representativeness for all in-U.S. Chinese college students. Although online surveys have been widely used to investigate internet users' intentions and behaviors, it still suffers from the risk of self-reported and recall errors. In the following studies, the sample size should be increased to gain a more comprehensive understanding of media dependency and media credibility. The respondents should be asked about their more recent social media use and attitudes to strengthen the survey results.

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CURRICULUM VITAE







