Research article

The effect of fear and situational motivation on online information avoidance: The case of COVID-19

Tahmina Sultana [a,b,*], Gurpreet Dhillon [b,c], Tiago Oliveira [d]

[a] *Information Systems and Supply Chain Management, University of North Carolina Greensboro, Greensboro, United States*
[b] *Information Technology and Decision Sciences, University of North Texas, Denton, United States*
[c] *University of KwaZulu-Natal, Durban, South Africa*
[d] *NOVA Information Management School, Universidade NOVA de Lisboa, Lisbon, Portugal*

A B S T R A C T

During the COVID-19 pandemic, a plethora of online sources for information and news dissemination have emerged. Extant research suggests that very quickly, individuals become disinterested and begin avoiding the information. In this study, we investigate how an individual's fear and situational motivation impact Online Information Avoidance. Using the self-determination theory and information avoidance theories, we argue that fear and external regulation are associated with increased Online Information Avoidance. We also argue that intrinsic motivation and identified regulation are associated with a decrease in Online Information Avoidance. Our findings suggest that fear, intrinsic motivation, and external regulation drive Online Information Avoidance, where intrinsic motivation is the most significant driver. We also found that identified regulation is a crucial inhibitor of Online Information Avoidance. While focusing on COVID-19, our study contributes to the broader information systems research literature and specifically to the information avoidance literature during a pandemic or a prolonged crisis. Our study's findings will be useful for governments, health organizations, and communities that utilize online platforms, forums, and related outlets to reach larger audiences for disseminating pertinent information and recommendations during a crisis.

1. Introduction

Ever since the start of the COVID-19 pandemic, many online information sources have emerged. Individuals often get overwhelmed with the available information and in some cases, there is a consequent ill effect. In extreme cases, excessive information has a negative effect on individuals. Swar et al. (2017), for instance, found a negative correlation between information overload and the psychological well-being of individuals. Similarly, Bunker (2020) notes "alarming levels of digital destruction which in turn undermines social cohesion" thus inhibiting shared situational awareness and an appropriate crisis response. While information overload does have negative consequences, there is another phenomenon that takes hold – information avoidance. We define information avoidance as a behavior of delaying or rejecting information consumption from online sources. As Savage (2020) notes, during COVID-19, over-consumption of news made people avoid information so that they could curtail anxiety and manage other psychological stimuli. Another report released by Pew Research Center suggests that seven out

of ten Americans confessed they stopped looking at COVID-19 news to avoid emotional stress (Mitchell et al., 2020). Another survey in the United Kingdom found that 66% of the respondents intentionally avoided information as they were worried about the psychological ill effects (Kalogeropoulos, 2020). These reports find that people are making tradeoffs between direct health consequences and emotional well-being by engaging in information avoidance, and as a result, the health information campaigns are not delivering the intended results (Kalogeropoulos, 2020). It is thus important for us to understand how positive and negative psychological stimuli impact information avoidance. While COVID-19 presents an ideal context for this study, the findings can be applied to any crisis situation.

Several scholars have considered information avoidance from uniquely different perspectives. Economists have argued that rational agents will avoid information if it is detrimental to the economic outcome (Golman et al., 2017; Gul, 1991). Psychologists have presented models to predict information avoidance behavior using different motivations, individual differences, and situational factors (Sweeny et al.,

---

2010). Health information scholars have identified psychological variables as predictors of health information avoidance, particularly in the context of terminal diseases such as cancer (Miles et al., 2008). While prior studies provide an extensive explanation about individual information avoidance, there is not much attempt to identify how these findings relate to online information avoidance. As in the case of the COVID-19 pandemic, people are getting necessary information and recommendations via internet sources; hence, we must find what leads to online information avoidance. To understand the phenomenon, we also reviewed COVID-19-related online communication literature. The literature suggests that different sources of online information provide different psychological stimuli. These psychological stimuli shape people's perception and behavior during the pandemic regarding information consumption (Savage, 2020). Online information impacts individual's psychological safety and sometimes induces fear and anxiety among users, leading to maladaptive behaviors (Ahmad & Murad, 2020; Basch et al., 2020; Rao, Vemprala, Akello, & Valecha, 2020; Rouleau, Hallgren, & de Rond, 2020).

Our study contributes to the literature by introducing online information avoidance as an important outcome behavior after people are exposed to a myriad of information. In our study we use COVID-19 as a case in point to understand why people refrain from consuming online information. To develop a testable research model that can provide us with enhanced knowledge about online information avoidance, we integrate the psychological and health information avoidance theories (Miles et al., 2008; Sweeny et al., 2010). We particularly use the health information avoidance literature since we use COVID-19 as a case and the health literature states information avoidance is influenced by antecedents, such as fear and response efficacy (Miles et al., 2008).

Fear is an adaptive emotion in the presence of a perceived danger such as COVID-19, whereas response efficacy measures information effectiveness (Lewis et al., 2010). Howell and Shepperd (2016) identify that individuals' coping self-efficacy and optimism negatively associate with information avoidance behavior. Coping self-efficacy refers to an individual's ability to cope effectively in a situation (Chesney et al., 2006). Optimism refers to an expectation of positive life outcomes (Howell & Shepperd, 2016). Moreover, Sweeny et al. (2010) propose a framework for information seeking or avoidance that uses both individual differences and different motivations (self-regulation, obligation to act, and threats to belief) as antecedents for the avoidance behavior. These different motivations are also connected to how individuals assess their involvement with a current commitment such as experiencing a crisis. COVID-19 crisis brings different challenges and threats, therefore, response to the crisis depends upon an individual's self-determination and coping strategy (Chesney et al., 2006; Guay et al., 2000; Moneta & Spada, 2009). We argue that during the COVID-19 crisis, people's self-determination in the form of situational motivation can explain the online information avoidance behavior through crisis coping mechanisms. Situational motivation, derived from self-determination theory, is the individual's motivation in a specific situation or activity (Vallerand, 1997). This situational motivation includes - a) intrinsic motivation, b) identified regulation, and c) external regulation. Intrinsic motivation is the behavior driven by internal joy and satisfaction without the intervention of self-regulation, identified regulation is an individual's self-realization about the importance of an action with self-regulation, and external regulation occurs when an individual is obliged to perform an act (Deci, 1971).

Combining the psychological and health information avoidance theories (Miles et al., 2008; Sweeny et al., 2010) with the self-determination theory (Deci & Ryan, 1985), we also argue that an individual's sense of fear and situational motivation during COVID-19 can impact online information avoidance through crisis psychological factors such as response efficacy, optimism, and coping self-efficacy. Thus, the objective of this research is to find how an individual's sense of fear and situational motivation impact online information avoidance behavior through the mediation of pandemic-related psychological factors. Specifically, this research addresses two research questions.

(1) How fear is associated with online information avoidance through the mediation of an individual's response efficacy, optimism, and coping self-efficacy during COVID-19? and (2) How intrinsic motivation, identified regulation, and external regulation is associated with online information avoidance through the mediation of response efficacy, optimism, and coping self-efficacy during COVID-19?

2. Literature review

2.1. Online communication during crisis

Extant literature before COVID-19 has focused on the role of online communication during a crisis. Online communication fosters the dissemination of information among people using digital means. Several studies investigate the impact of different sources and perceptions of online information on crisis management (Al-Omoush et al., 2020; Austin et al., 2012; Gruber et al., 2015; Hagar, 2013; Kahlor et al., 2020; Roy et al., 2020). With the advent of the internet and social media, much of the crisis information is disseminated and consumed through online means, may it be online news, blogs, social media, and different interactive dashboards (Procopio & Procopio, 2007; Ristvej & Zagorecki, 2011; Sweetser & Metzgar, 2007). For instance, Tran and Lee (2016) found that in any severe outbreak such as bird flu, Ebola, and SARS, people get information and share information using social media. There is no doubt that social media and online forums and interactions play a vital role in crisis information sharing.

During a crisis such as COVID-19 as people are getting information from many online sources, it is important for the government and health agencies to find a suitable mechanism to disseminate the information for better effectiveness. Research has found that people prefer interactive online platforms over static media for information dissemination, particularly during a crisis or disaster (Procopio & Procopio, 2007). Schultz et al., (2011) report that using certain technologies influences crisis communication because of the technology itself and user experiences and interpretation of that media technology. In line with the importance of online information during a crisis, Househ (2016) suggests that governments and health organizations should take advantage of the electronic news media and social media for disseminating preventive information in a health and environmental crisis.

Even though online information has beneficial impact on managing a crisis, several studies have found that information recipients' psychological state and perception play a significant role in whether that information will be utilized. A study on hurricane Rita suggests that, although people get preventive information, they will act upon the information to perceive the crisis's risk as high (Zhang et al., 2007). Moreover, people's perception of their information sufficiency also impacts their information seeking and information avoidance behavior. Kahlor et al. (2020), in a study on earthquakes, report that people who perceive themselves as sufficient with crisis information will avoid further details. Therefore, an individual's psychological factors play an essential role in responding to disasters after receiving online information.

Qazi et al. (2020) argue that the source of information impacts an individual's situational awareness and protective behaviors. Farooq et al., (2020) found that online information can positively impact an individual's self-isolation intention through perceived severity and self-efficacy. Similarly, Park et al., (2020) suggest that online information highlights the complimentary items and gets more attention from people. However, excessive consumption of information may increase people's concern and worry about the crisis (Bunker, 2020; Kirk & Rifkin, 2020; Lau et al., 2020). Ahmad and Murad (2020) suggest that sometimes information shared on social media triggers fear and panic

among the users. This fear and anxiety induce maladaptive behaviors (Basch et al., 2020). An Individual's psychological well-being is also affected by fearful news and information over different social media (Ko et al., 2020).

2.2. Information avoidance behavior

According to Sweeny et al. (2010), information avoidance is any preventive or delaying behavior regarding the acquisition and consumption of potentially unwanted information. In line with this conceptualization, we define information avoidance as a behavior of delaying or rejecting information consumption from online sources. Information avoidance has extensively been studied in behavioral economics, psychology, and health information fields. Table 1 summarizes the current information avoidance behavior literature. In behavioral economics, information avoidance is explained by an individual's extrinsic motivation to maximize benefit and minimize cost at the time of economic decision-making (Golman et al., 2017). Golman et al. (2017) show that information can directly enter a person's utility function that can create an incentive to avoid or seek information. However, even if the information is useful and free, sometimes people tend to avoid it. From the economic perspective, perceived threat or risk can also influence information avoidance. Gul (1991) suggests that risk aversion implies disappointment aversion, and recursive disappointment aversion in a dynamic setting necessarily leads to information avoidance until all uncertainty can be resolved at once.

Extant literature in psychology shows that motivation and individual differences are significant factors to consider while explaining online information avoidance behavior. Popova (2012) studies information acceptance or avoidance using protection motivation and defensive motivation as antecedents. Moreover, these motivations can vary from person to person. Research also incorporates individual differences to explain information avoidance behavior. Howell and Shepperd (2016) investigate information-seeking or avoidance behavior by using individual differences (uncertainty orientation, curiosity, monitoring, blunting, etc.) as antecedents. Sweeny et al. (2010) propose a framework for information seeking or avoidance that uses individual differences and motivations (self-regulation, obligation to act, and threats to belief) as predictors.

Extant research also uses self-determination theory constructs as antecedents of information acquisition behavior (Dubnjakovic, 2017). The concepts of situational motivation such as intrinsic motivation, identified regulation, and external regulation have emerged from self-determination theory (Guay et al., 2000). Dubnjakovic (2018) and Wang (2016) find that intrinsic motivation and identified regulation result in lower information avoidance. Sweeny et al. (2010) posit external regulation in the form of higher obligation to increase information avoidance. Information avoidance is also studied in health information literature. People can avoid health-related information for different reasons such as to avoid fear, anxiety, change in certain beliefs, or change in lifestyle (Ajekigbe, 1991; Miles et al., 2008; Sweeny et al., 2010; Varga, 2001). Miles et al. (2008) investigated the predictors of information avoidance in cancer patients. Their study identified that people's negative perception about cancer, such as fear, fatalism, and perceived severity, leads them to avoid cancer-related information. Similarly, Gullatte et al. (2010) found that an individuals' cancer fatalistic belief leads them to avoid or delay health-related information. In one study, Ajekigbe (1991) identified that women in Nigeria were reluctant to test for breast cancer, even if they had symptoms, in fear of mastectomy. Extant literature on information avoidance in the context of COVID-19 focuses on Infodemic (Kim et al., 2020; Siebenhaar et al., 2020), information overload, and anxiety (Soroya et al., 2021).

2.3. Response efficacy, optimism, and coping self-efficacy in information behavior

The three constructs of response efficacy, optimism, and coping self-efficacy are established antecedents of information avoidance and are used in literature to explain the causes of information behaviors (Howell & Shepperd, 2016). Response efficacy measures information effectiveness (Lewis et al., 2010), optimism refers to an expectation of positive life outcomes (Howell & Shepperd, 2016), and coping self-efficacy refers to an individual's ability to cope effectively in a situation (Chesney et al., 2006).

Extant literature finds response efficacy as a signification predictor of information behavior in the contexts of public health and pandemic health recommendations, vaccine recommendation in both general and pandemic cases, and information avoidance. Research finds response efficacy's negative association with smoking-related message forgoing behavior (Thrasher et al., 2016), and positive association with maintaining and catalyzing food habit change (Meijers et al., 2022), health recommendations effectiveness (Han et al., 2016) and persuasion capability (Cismaru et al., 2009). Yu et al., (2022) identifies perceived response efficacy causes social distancing compliance during COVID-19 pandemic. Response efficacy also affects vaccination rates in diseases such as Human Papillomavirus (Myhre et al., 2020) and COVID-19 (Lammers-van der Holst et al., 2022). Information avoidance literature shows response efficacy as an inhibitor of avoiding fatal health-related information (Miles et al., 2008), stress-related information (Shi, 2019), and crisis information (Gutteling & de Vries 2017).

Literature identifies optimism as a significant factor for information behavior in the contexts of personality traits, health information, pandemic management, and information avoidance. Icekson et al. (2014) argues optimism reduces negative effect of avoidance motivation when the respondents exercise creativity. Health literature finds optimism is associated with superior well-being in people with chronic health problems (Bedi & Brown, 2005), increasing task-oriented coping and decreasing emotion-oriented coping in health counselling cases (Hatchett & Park, 2004), and reducing health threats (Fowler & Geers, 2015). The H1N1 and COVID-19 pandemic management research identifies the importance of optimism in increasing compliance behavior (Rudisill, 2013), reducing information fatigue (Cleofas & Oducado, 2021), and facilitating positive online discourse (Blanco & Lourenço, 2022). Howell and Shepperd (2016) finds optimism as a predictor of information avoidance.

Current research shows that how coping self-efficacy impacts information behavior in the contexts of health, psychology, and crisis. Health researchers identify coping self-efficacy is useful for assessment and monitoring of treatments (Sklar & Turner, 1999), for positive dietary behavior (Matthews, Doerr, & Dworatzek, 2016; Schwarzer & Renner, 2000), and for reducing post-traumatic behavior (Cieslak et al., 2008). Luberto et al., (2014) and Midkiff et al. (2018) find coping self-efficacy impacts emotion control and mindfulness. In the case of crisis management, optimism reduces stress (Benight & Harper, 2002; Benight et al., 1999). Research also finds association between coping self-efficacy and health information avoidance (Howell & Shepperd, 2016; Hua & Howell, 2022).

2.4. Situational motivation and information behavior

Situational motivation originated from self-determination theory that posits that an individual's motivation and personality depend on their determination and growth tendencies (Deci & Ryan, 1985; Ryan et al., 1991). Situational motivation construct namely intrinsic motivation, identified regulation, and external regulation are being used to describe various information behaviors. Intrinsic motivation refers to the behavior that a person engaged in for their own sake of interest (Deci, 1971). Extrinsic motivation on the other hand goes beyond one's inherent interest or satisfaction. According to the self-determination

Table 1

Literature Summary of Information Avoidance Behavior.

Category	Author and Year	Context	Role of Information Avoidance Construct	Key Finding
Economics and Finance	Frey (1982)	Decision-making under cognitive dissonance	Dependent variable	Under all experimental conditions, irrelevant information is avoided more than relevant information when proper incentives are in place.
	Poulsen and Roos (2010)	Strategic decision	Dependent variable	A game-theoretic player avoids information unless the competitor shows or signals strategic commitment.
	Van der Weele (2012)	Ethical decision	Dependent variable	People avoid moral information when pro-social actions become costly.
	Feiler (2014)	Social choice decision	Dependent variable	People avoid information if the self-serving choice does not hurt them.
	Huck, Szech, & Wenner, 2015	Effort in workplace	Dependent variable	Workplace information avoidance does not depend upon incentive rather depends on information's instrumental value.
	Blajer-Gołębiewska et al., (2018)	Financial risk	Dependent variable	Financial decision-makers risk coping style, locus of risk control, and risk-relevant emotional responses are significant predictor of financial risk information avoidance.
	Momsen and Ohndorf (2020)	Green market	Dependent variable	Carbon offset information avoidance depends on price and externalities.
	Golman et al., (2021)	Decision-making under information gap	Dependent variable	Information avoidance decreases with more importance, more salience, and higher valence.
Information Science and Systems	Narayan et al., (2011)	Routine information maintenance	Dependent variable	Long-term information avoidance is caused by exposure to information that are trivial for possessed worldviews and short-term information avoidance is caused by exposure to higher perceived risk of knowing a fact.
	Webb et al., (2013)	Goal progress	Dependent variable	Lower motives regarding self-enhancement, self-verification, self-assessment, and self-improvement leads to information avoidance.
	Neben (2015)	Information use	Dependent variable	Defensive motivation decreases information exposure and increases absorption avoidance and use avoidance.
	Dai et al., (2020)	Social media use	Dependent variable	Social media fatigue, dissatisfaction, and frustration positively affects information avoidance intention.
	Guo et al., (2020)	Social networking sites	Dependent variable	Social network fatigue positively affects information avoidance behavior with the moderation of time pressure.
Medical and Public Health	Case et al., (2005)	Cancer information	Dependent variable	Mental discomfort and dissonance cause information avoidance.
	Howell and Shepperd (2012)	Health decision-making	Dependent variable	People's self-worth reduces information avoidance.
	Howell & Shepperd (2013a)	Medication	Dependent variable	People avoid information that forces undesirable behavior.
	Howell & Shepperd (2013b)	Health decision-making	Dependent variable	People's contemplation reduces information avoidance.
	Howell et al., (2014)	Health decision-making	Dependent variable	People who lack personal and interpersonal resources avoid learning potentially life-threatening information.
	Persoskie et al., (2014)	Health maintenance	Dependent variable	Fear increases information avoidance.
	Chae (2015)	Cancer information	Dependent variable	Cancer worry and cancer risk perception are negatively associated with cancer information avoidance.
	Taber et al. (2015)	Genetics	Independent variable	Information avoidance corresponds with the intention to learn about unpreventable genetical disease.
	Chae (2016)	Cancer information	Dependent variable	Cancer information overload is positively associated with cancer information avoidance.
	Howell, Ratliff et al. (2016)	Health outcome	Dependent variable	Self-reported and implicitly measured attitudes independently predict information avoidance decision.
	Howell and Shepperd (2016)	Personal health	Dependent variable	Social rejection prompts information avoidance.
	St. Jean et al., (2017)	Cancer information	Independent variable	Information avoidance, health literacy, and health justice are interrelated concepts.
	McCloud et al., (2017)	Smoking	Mediator variable	Information avoidance mediates the relationship between personal characteristics and non-compliance of health warning.
	Orom et al. (2018)	Health risk information	Independent variable	Information avoidance predicts lower health protection behavior.
	Heck and Meyer (2019)	Genetics	Independent variable	Information avoidance impacts health well-being.
	Chae et al., (2020)	Cancer information	Dependent variable	Cancer information overload and cancer fatalism predict information avoidance.
	Yang et al. (2021)	Smoking	Dependent variable	Information that conflicts with beliefs increases health recommendation avoidance.
	Link and Baumann (2022)	Cancer information	Dependent variable	Prior cancer experience in family increases cancer information avoidance.
	Hua and Howell (2022)	Personal health	Dependent variable	Coping self-efficacy decreases information avoidance.
	Peterson et al., (2022)	Genetics	Independent variable	Information avoidance is negatively associated with receiving health test results through the moderation of race.
COVID-19	Kim et al., (2020)	Misinformation	Dependent variable	Misinformation exposure increases information avoidance through the mediation of information insufficiency and moderation of country culture.
	Siebenhaar et al., (2020)	Infodemic	Mediator variable	Information avoidance mediates the relationship between information distress, trust, and anxiety with compliance behavior.
	Soroya et al., (2021)	Online information	Dependent variable	Information anxiety increases information avoidance.
Others	Sweeny and Miller (2012)	Romantic relationship	Dependent variable	Perceived benefit and anticipated regret predict information avoidance decision.
	Yang and Kahlor (2013)	Climate change	Dependent variable	Attitude towards information seeking is negatively associated with information avoidance.
	Kahlor et al. (2020)	Environmental risk	Dependent variable	Attitude towards avoidance, avoidance-related subjective norms, and affective risk response increases information avoidance intent and

Table 1 (*continued*)

Category	Author and Year	Context	Role of Information Avoidance Construct	Key Finding
				perceived knowledge insufficiency decreases information avoidance intent.
	Deline and Kahlor (2019)	Risk information	Dependent variable	Subjective norm, attitude towards avoidance, affective risk response, and risk information avoidance intentions are posited to be predictors of information avoidance behavior.
	Lallement et al., (2020)	Consumer reputation building	Dependent variable	Consumers with no opinion avoid less information when exposed to reputation building messaging.
	Deng et al., (2022)	Consumer decisions	Dependent variable	Older consumers deliberately involve in information avoidance behavior.

theory, extrinsic motivation has different levels in the self-determination continuum of human behavior. External regulation and identified regulation are two different levels of extrinsic motivation in the continuum from lower to higher self-determination (Deci, 1971; Guay et al., 2000). Externally regulated behaviors are beyond self-interest and occurs when there is external reward and/or there is a need to avoid negative consequences. Identified regulation is a more conscious behavior where the behavior is valued and chosen consciously by oneself (Guay et al., 2000). Extant literature identifies these motivations behind different behaviors in different contexts.

First, intrinsic motivation has been studied in the context of goal planning, use of technology, knowledge sharing behavior (Crow, 2009; David et al., 2007; de Almeida et al., 2016; Fagan et al., 2008; Hwang & Yi, 2002). According to David et al. (2007) intrinsic motivation moderates the relationship between self-efficacy and successful goal planning. Hwang and Yi (2002) suggests that intrinsic motivation such as enjoyment plays an important role in influencing the decision to use new technology. In another study by de Almeida et al. (2016) confirms that employees intrinsic motivation is an important factor in influencing tacit knowledge sharing behavior. Moreover, Crow (2009) finds that to foster certain behavior individuals intrinsic motivation needs to be triggered. However, in a study on the use of technology Fagan et al. (2008) finds a contradictory result that intrinsic motivation does not impact behavioral intention to use technology positively in an workplace.

Second, extant literature investigates identified regulation in the contexts of knowledge sharing, information search, and the use of technology (Gagné et al., 2019; Li et al., 2011; Stenius et al., 2017; von der Trenck et al., 2014; Wang & Hou, 2015). According to Wang and Hou (2015) identified regulation as an autonomy oriented motivation influence knowledge sharing behavior positively. von der Trenck et al. (2014) finds that individuals identified regulation as a part of self-determination plays a significant role in behavioral intention such as information search. Confirming the findings of extant literature, Gagné et al. (2019) identify that individual's intrinsic motivation and identified regulation impact the behavior of IT usage. Also, Stenius et al. (2017) report that identified regulation as a form of autonomous motivation influences knowledge sharing intention that in turn results in knowledge sharing behavior. Moreover, in the context of technology use, Li et al. (2011) finds that identified regulation is the most important extrinsic motivation that impacts new technology use behavior.

Third, literature suggests that external regulation being part of the extrinsic motivation impacts different behavioral outcomes in the contexts of knowledge sharing and technology use (Gagné et al., 2019; Mitchell et al., 2012; Rahi et al., 2021; Rezvani et al., 2017; Zimmer et al., 2018). According to Rezvani et al. (2017) external regulation does not necessarily impact positive behavioral intention in a technology use context. People sometimes feel pressured because of the external regulation and as a result reject to do certain behavior. In a study by Gagné et al. (2019) report that external regulation to share knowledge influence employees to hide knowledge instead of share knowledge. Another study by Mitchell et al. (2012) finds that low external regulation results in spontaneous use of new technology. However, Rahi et al. (2021) finds a contradictory result that indicates individuals external regulation motivation impacts positive behavioral intension such as new

technology adoption and use.

After reviewing literature streams, we have found three research areas where this research can contribute. First, current literature does not explain how various psychological stimuli can lead to online information avoidance. Second, the information avoidance literature provides enough understanding regarding the behavior under critical health disease context. However, how such understanding can be applied to a crisis is understudied. Third, information avoidance literature is yet to investigate how the fear and situational motivation constructs such as intrinsic motivation, identified regulation, and external regulation lead to online information avoidance during a crisis through the mediation of established psychological antecedents viz. efficacy, optimism, and coping self-efficacy. As our study investigates online information avoidance during a crisis, incorporating situational motivation factors from self-determination theory with psychological and health information avoidance theories (Miles et al., 2008; Sweeny et al., 2010) can provide us with a robust explanation regarding the behavior.

3. Theoretical model and hypotheses

3.1. Fear and online information avoidance

Fear, an emotional stimulus, can emerge from consuming negatively framed online information (Ahmad & Murad, 2020; Basch et al., 2020). Miles et al. (2008) have argued that fear of acute diseases such as cancer is associated with increased information avoidance. In the healthcare context, Ajekigbe (1991), for instance, finds that individuals become reluctant to act upon health recommendations when there is higher chance of negative outcome from prescriptive tests. Moreover, Gullatte et al. (2010) shows individual's cancer fatalistic belief is positively associated with the avoidance of information. People with a higher fear of terminal disease are likely to undermine the importance of health information associated with lower response efficacy (Miles et al., 2008). This research posits these associations among fear, response efficacy, and health information avoidance will hold in the context of fear from online communication and online information avoidance during COVID-19. When online communication is framed negatively and increases fear, people will not see how the received information can tackle health complications.

Additionally, people will likely avoid fear-inducing online information to reduce psychological stress during a crisis. The information avoidance model of psychology shows that fear from received information is associated with a reduction in positive psychological factors such as optimism and coping self-efficacy (Sweeny et al., 2010). When information increases fear, people start facing challenges to lead a life with positivity and doubting the capacity to cope in adverse situations. Similarly, fear emerging from online communication will negatively impact the optimism and coping self-efficacy during the COVID-19 pandemic. All these negative emotions lead to information avoidance behavior. Thus, we hypothesize:

H1. : Individual's fear during pandemic is positively associated with individual's online information avoidance.

3.2. Situational motivation and online information avoidance

Situational motivation constructs, intrinsic motivation, identified regulation, and external regulation, are based on self-determination theory (Deci & Ryan, 1985; Ryan et al., 1991; Standage & Treasure, 2002). Self-determination theory posits that an individual's motivation and personality depend on their determination and growth tendencies. Two significant concepts of self-determination theory are self-determined motivation and non-self-determined motivation (Deci & Ryan, 1985). Self-determined motivation states that individuals engage in an activity when they realize the benefit of performing the task with their evaluation and are not forced to complete it. Non-self-determined motivation describes the opposite. Individuals engage less if they are forced to perform a task or cannot evaluate the benefit of independently performing the task. Moreover, self-determined motivation and non-self-determined motivation are related to positive psychological factors and ability. Intrinsic motivation and identified regulation constructs represent an individual's self-determined motivation, and external regulation construct represent an individual's non-self-determined motivation (Deci & Ryan, 1985).

Researches find that higher intrinsic motivation and identified regulation lead to lower information avoidance (Dubnjakovic, 2018; Wang, 2016). Sweeny et al. (2010) posit external regulation in the form of higher obligation to act increases information avoidance. Prior research shows intrinsic motivation and identified regulation are associated with more positive outcomes such as optimism and positive coping (Chesney et al., 2006; Guay et al., 2000; Moneta & Spada, 2009). A person with higher intrinsic motivation can enjoy carrying out a task or have a positive psychological state because they evaluate any situation with the lens of enjoyment and do not stress about any material outcome. A higher level of identified regulation means a person can better understand the importance of carrying a task from self-evaluation. A person with identified regulation is self-motivated to perform or have a positive psychological state because they know the task's material and objective importance. According to the information avoidance framework, when the information provides the positive stimulus and encourages a person to follow, then the information acquisition will be higher. If an online communication connects to a person's intrinsic motivation during a crisis such as COVID-19, the person will be optimistic, will have higher confidence on their ability to cope effectively and will be motivated to acquire information. Thus, we hypothesize:

H2. : Individual's intrinsic motivation during pandemic is negatively associated with individual's online information avoidance.

H3. : Individual's identified regulation during pandemic is negatively associated with individual's online information avoidance.

On the other hand, external regulation is associated with negative psychological outcomes (Guay et al., 2000). Individuals with higher external regulation are less engaged to carry a task because they are forced to do so (Sweeny et al., 2010). A higher level of external regulation contradicts a person's self-determination, so the person becomes demotivated. According to the information avoidance framework, when the information provides a negative stimulus or focuses more on what a person ought to follow, then the information avoidance will be higher (Sweeny et al., 2010). If online communication forces people to carry certain health behavior, the person will have less optimism, have lesser confidence in their ability to cope effectively, and be demotivated to acquire information. Thus, we hypothesize:

H4. : Individual's external regulation during pandemic is positively associated with individual's Online Information Avoidance.

3.3. Psychological antecedents of online information avoidance

This research identifies response efficacy, optimism, and coping self-

efficacy as an individual's psychological factors in a pandemic that can affect online information avoidance behavior from the prior information avoidance models. We build on prior research that has identified determinants of information avoidance. Case et. al., (2005), for instance, state that "Avoiding information is closely linked to feelings of anxiety and fear as well as other cognitive and emotional variable like perceptions…" (p. 359). The original formulation of Rogers (1975) protection motivation theory conceptualized fear appeals to initiate cognitive appraisal processes. Later, Maddux and Rogers (1983) in their revised theory of fear appeals note "Throughout the development of fear appeal theories, researchers and theorists have become increasingly aware of the importance of the role of cognitive mediational processes" (p. 470). Therefore, the influence of fear on response efficacy exists.

According to the health information avoidance theory in the context of cancer, people who evaluate the importance of health information positively and who have higher response efficacy are less likely to avoid health information (Miles et al., 2008). The information avoidance framework suggests that an individual's optimism is negatively associated with information avoidance behavior. The relationship between coping self-efficacy and information seeking or avoidance can be explained using adaptive coping strategies. Individual's self-efficacy is negatively associated with information avoidance behavior (Miles et al., 2008). That means individual's high perception of their ability results in less information avoidance. According to (Johnson, 1997), an individual's information avoidance behavior is negatively associated with their perceived control over the situation. Howell and Shepperd (2016), state that coping self-efficacy is negatively correlated with information avoidance. Rippetoe and Rogers (1987), have specifically distinguished between two aspects of coping ability – self-efficacy and response efficacy. The findings from earlier closely related health and information avoidance research and the extant literature explain how an individual's psychological state such as response efficacy, optimism, and coping self-efficacy are associated with online information avoidance behavior during COVID-19 pandemic. When people feel that they received information and recommendation from online sources will lead to better health outcomes, they will be more likely to absorb it. Additionally, when people are optimistic and confident that they will cope with the pandemic, they will positively acquire more online information. Using these arguments alongside the discussions for H1–H4, we hypothesize:

H5. : Individual's response efficacy, optimism, and coping self-efficacy during pandemic mediate the relationship between a) fear, b) intrinsic motivation, c) identified regulation, and d) external regulation with online information avoidance.

Fig. 1 shows our research model that combines the concepts from self-determination theory and information avoidance theories. Appendix A includes a table containing the definitions of each construct in the model.

4. Research method and measurement

4.1. Sample selection and data collection

This explanatory study follows Malhotra and Grover (1998)'s guidelines for conducting a survey research. In line with the Hair et al. (2019) suggestions, this study analyzes the observations and tests the research hypotheses using partial least squares based structured equation modeling (PLS SEM). According to Hair et al. (2019), PLS SEM is suitable to use when the theoretical model is complex with first-order and second-order constructs and that model focuses on prediction perspective. In our study, as we are trying to establish fear and situational motivation as the antecedents of online information avoidance, using PLS SEM is more appropriate for us. After developing the instrument in Qualtrics, we pretest the questionnaire with eight business school doctoral students. They assessed the clarity of the questions and items. Based on the feedback, we modify the wording of a few questions.
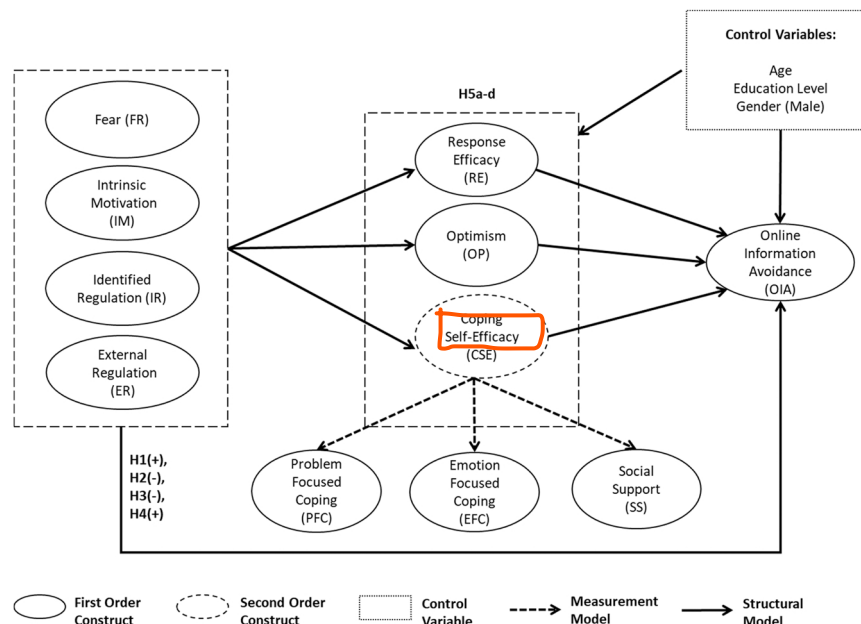
Fig. 1. Research model for online information avoidance.

We used Amazon Mechanical Turk (MTurk) platform because the platform helps us to collect data from multiple locations within the United States. Moreover, using MTurk in survey research has gained popularity because of the quality of the responses and the naiveness of the respondents (Chambers & Nimon, 2018). After finalizing the initial questionnaire, we ran a pilot study using MTurk. The pilot survey results were satisfactory. We then proceeded to the final data collection phase. We collected the data in June 2020, within three months of the pandemic declaration by the World Health Organization. We collect 375 responses from where 23 were removed as those do not pass either the attention or honesty check question. We used the attention check filter following Lowry et al. (2016). Finally, we had 352 usable responses for our analysis. We also examined the common method bias in the responses based on Harman's one-factor test (Fuller et al., 2016; Podsakoff, 2003). The first factor explains 36.80%, which is below the 50% threshold value. This confirms that none of the factors individually explains majority of the variance.

4.2. Operationalization of the constructs

The survey instrument includes thirty-seven items for ten first-order constructs. We have three demographic questions regarding gender, age, and years of education. Fear, intrinsic motivation, identified regulation, and external regulation are the four independent variables. The 8-item fear construct is modified from Champion et al. (2004). The three constructs of situational motivation are drawn from Guay et al. (2000) and Standage and Treasure (2002). Intrinsic motivation, identified regulation, and external regulation are measured using 4 items, 3 items, and 4 items, respectively. The three mediating variables in our model are response efficacy, optimism, and coping self-efficacy. The 3-item response efficacy is adapted from Lewis et al., 2009, and 3-item optimism is adapted from Scheier et al. (1994). Coping self-efficacy is drawn from Chesney et al. (2006). We measure coping self-efficacy as a reflective-reflective second order construct. The first order constructs for coping self-efficacy are: 1) problem-focused coping with 3 items, 2) emotion-focused coping with 3 items, and 3) social support with 2 items. The 4-item dependent variable online information avoidance is taken and modified from Howell and Shepperd (2016). We measure all the constructs using a seven-point scale (ranging from 1 strongly disagree to 7 strongly agree). The details of the items and questions are in Appendix

B. The descriptive statistics of the survey respondents based on the control variables are given in Appendix C.

5. Data analysis and results

5.1. Measurement model

We anlyze the measurement model to assess the construct reliability, convergent validity, indicator reliability, and discriminant validity of the constructs' items. All the first-order constructs in the model are assessed reflectively. Table 2 and Table 3 show the measurement model results.

Construct reliability is tested using the composite reliability (CR) and our desired cut-off value is 0.70. From Table 1, we can see that for each of the constructs the CR is more than the cut-off value. This shows the constructs are appropriate and internally consistent (Henseler et al. 2009; Straub, 1989). The average variance extracted (AVE) is used to identify the convergent validity, and our desired cut-off value is 0.50. Table 1 shows that for each of the constructs the AVE is more than the cut-off value. This establishes the convergent validity of the measurement model (Fornell & Larcker, 1981; Hair et al. 2012). According to (Churchill, 1979), the item loading should be higher than 0.70 to achieve item reliability. From Table 3 we find that all item loadings are more than the desired value. Thus, the reliability of the items is satisfied.

To examine the construct's discriminant validity, we use Fornell-Larcker criteria, cross-loadings, and the Heterotrait-Monotrait ratio (HTMT) (Henseler et al., 2015). The correlation between constructs and the square root of AVE (from Table 2) shows the square root of AVE of each construct (diagonal elements) is more than the correlations between the constructs. This satisfies the first criterion for discriminant validity (Fornell & Larcker, 1981). We also need to check that each construct's loadings are greater than the cross-loadings as the second criterion for discriminant validity (Chin, 1998). From Table 3, we can see that the loadings (in bold) are greater than the cross-loadings in the respective columns. Lastly, Table 4 shows all the HTMT are below the threshold of 0.90. Therefore, the discriminant validity of the constructs is established. From these analyses, we identify that the constructs are fit to be used in testing the structural model.

Table 2

Descriptive Statistics, Correlation, and Average Variance Extracted.

Constructs	Mean	SD	FR	IM	IR	ER	RE	OP	PFC	EFC	SS	OIA
FR	4.539	1.542	**0.846**									
IM	4.386	1.566	0.664	**0.831**								
IR	5.427	1.108	0.312	0.274	**0.844**							
ER	4.511	1.636	0.770	0.727	0.369	**0.869**						
RE	5.404	1.135	0.203	0.219	0.654	0.278	**0.862**					
OP	3.563	1.663	-0.741	-0.644	-0.146	-0.678	-0.104	**0.906**				
PFC	5.111	1.113	0.191	0.357	0.335	0.259	0.392	-0.202	**0.814**			
EFC	5.109	1.201	0.107	0.298	0.154	0.160	0.290	-0.204	0.575	**0.835**		
SS	5.129	1.315	0.261	0.354	0.345	0.286	0.397	-0.231	0.536	0.545	**0.894**	
OIA	4.069	1.783	0.667	0.713	-0.020	0.653	-0.052	-0.734	0.171	0.248	0.224	**0.898**

Notes: SD = Standard Deviation; Diagonal elements are square root of average variance extracted (AVE) and off-diagonal elements are correlations; FR = Fear; IM = Intrinsic Motivation; IR = Identified Regulation; ER = External Regulation; RE = Response Efficacy; OP = Optimism; PFC = Problem Focused Coping; EFC = Emotion Focused Coping; SS = Social Support; OIA = Online Information Avoidance.

Table 3

Loadings and Cross Loadings of Items.

Constructs	Items	FR	IM	IR	ER	RE	OP	PFC	EFC	SS	OIA
Fear (FR)	FR1	**0.787**	0.485	0.389	0.602	0.333	-0.507	0.240	0.072	0.260	0.392
CR = 0.953	FR2	**0.838**	0.447	0.346	0.612	0.264	-0.579	0.170	0.070	0.215	0.458
	FR3	**0.842**	0.586	0.248	0.644	0.201	-0.636	0.223	0.144	0.274	0.529
	FR4	**0.847**	0.577	0.176	0.630	0.068	-0.678	0.094	-0.010	0.153	0.598
	FR5	**0.853**	0.621	0.220	0.704	0.111	-0.685	0.168	0.177	0.266	0.696
	FR6	**0.845**	0.669	0.186	0.705	0.063	-0.690	0.147	0.141	0.210	0.722
	FR7	**0.868**	0.531	0.289	0.629	0.199	-0.607	0.147	0.063	0.180	0.507
	FR8	**0.883**	0.524	0.311	0.660	0.204	-0.590	0.115	0.040	0.205	0.525
Intrinsic Motivation (IM)	IM1	0.449	**0.739**	0.298	0.502	0.263	-0.402	0.402	0.249	0.340	0.395
CR = 0.899	IM2	0.632	**0.906**	0.173	0.667	0.098	-0.646	0.281	0.250	0.288	0.740
	IM3	0.585	**0.894**	0.138	0.639	0.098	-0.625	0.213	0.226	0.266	0.720
	IM4	0.519	**0.772**	0.362	0.599	0.339	-0.418	0.341	0.284	0.308	0.440
Identified Regulation (IR)	IR1	0.283	0.215	**0.860**	0.326	0.547	-0.146	0.293	0.128	0.324	-0.023
CR = 0.881	IR2	0.316	0.326	**0.832**	0.361	0.556	-0.149	0.271	0.142	0.286	0.043
	IR4	0.188	0.149	**0.839**	0.245	0.554	-0.072	0.283	0.119	0.262	-0.074
External Regulation (ER)	ER1	0.667	0.634	0.361	**0.881**	0.332	-0.588	0.243	0.176	0.275	0.521
CR = 0.925	ER2	0.639	0.589	0.367	**0.875**	0.282	-0.522	0.213	0.095	0.214	0.492
	ER3	0.710	0.707	0.180	**0.854**	0.111	-0.653	0.197	0.135	0.253	0.711
	ER4	0.650	0.582	0.396	**0.865**	0.258	-0.579	0.250	0.145	0.247	0.521
Response Efficacy (RE)	RE1	0.175	0.251	0.526	0.267	**0.850**	-0.096	0.400	0.254	0.362	-0.005
CR = 0.896	RE2	0.160	0.143	0.573	0.227	**0.845**	-0.076	0.297	0.226	0.318	-0.073
	RE3	0.190	0.176	0.590	0.226	**0.888**	-0.099	0.320	0.270	0.347	-0.054
Optimism (OP)	OP2	-0.692	-0.624	-0.153	-0.640	-0.104	**0.908**	-0.209	-0.222	-0.244	-0.691
CR = 0.932	OP4	-0.656	-0.567	-0.144	-0.608	-0.122	**0.902**	-0.171	-0.141	-0.208	-0.630
	OP5	-0.667	-0.557	-0.097	-0.595	-0.059	**0.909**	-0.167	-0.188	-0.175	-0.671
Problem Focused Coping (PFC)	PFC1	0.217	0.395	0.272	0.267	0.333	-0.185	**0.804**	0.469	0.426	0.213
CR = 0.855	PFC2	0.080	0.207	0.273	0.155	0.349	-0.130	**0.830**	0.458	0.481	0.082
	PFC5	0.171	0.271	0.273	0.213	0.275	-0.179	**0.808**	0.478	0.399	0.125
Emotion Focused Coping (EFC)	EFC1	0.126	0.274	0.187	0.185	0.281	-0.214	0.482	**0.826**	0.534	0.187
CR = 0.874	EFC3	0.082	0.234	0.071	0.102	0.189	-0.173	0.481	**0.840**	0.414	0.220
	EFC4	0.059	0.237	0.123	0.111	0.255	-0.121	0.477	**0.839**	0.413	0.215
Social Support (SS)	SS1	0.271	0.403	0.299	0.280	0.320	-0.267	0.484	0.491	**0.896**	0.275
CR = 0.889	SS2	0.195	0.228	0.318	0.231	0.390	-0.146	0.474	0.484	**0.893**	0.124
Online Information Avoidance (OIA)	OIA1	0.597	0.672	-0.045	0.607	-0.046	-0.652	0.169	0.223	0.174	**0.911**
CR = 0.943	OIA2	0.614	0.690	0.019	0.619	0.003	-0.695	0.193	0.291	0.255	**0.919**
	OIA4	0.621	0.644	-0.018	0.597	-0.055	-0.695	0.136	0.217	0.202	**0.910**
	OIA6	0.562	0.545	-0.033	0.518	-0.097	-0.586	0.112	0.150	0.170	**0.849**

Note: CR = Composite Reliability

5.2. Structural model

We test the multicollinearity of all constructs before assessing the structural model. For that we use Variance Inflation Factor (VIF). Our results show all the construct VIFs are close to or lower than 3, meaning the absence of multicollinearity among the variables (Hair et al., 2019). The structural model results are presented in Fig. 2. The statistically significance level of path coeficients were performed using bootstraping with 5000 resamples.

Our model explains 43.9% of the variation in response efficacy. We found the association between identified regulation and response efficacy ($\widehat{\beta}=0.646$; p-value<0.01) to be statistically significant. Our model

explains 62.2% of the variation in optimism. We found the associations from fear to optimism ($\widehat{\beta}=-0.502$; p-value <0.01), external regulation to optimism ($\widehat{\beta}=-0.177$; p-value <0.05) and identified regulation to optimism ($\widehat{\beta}=0.137$; p-value <0.01) are statistically significant. We also found the association between intrinsic motivation and optimism to be statistically significant ($\widehat{\beta}=-0.205$; p-value <0.01), however, the path direction is opposite to theoretical intuition. Our model explains 23.3% of the variation in coping self-efficacy. We have found the associations from intrinsic motivation to coping self-efficacy ($\widehat{\beta}=0.448$; p-value <0.01) and identified regulation to coping self-efficacy ($\widehat{\beta}=0.259$; p-value <0.01) are statistically significant.

Table 4
Heterotrait-Monotrait (HTMT) Ratio.

	FR	IM	IR	ER	RE	OP	PFC	EFC	SS	OIA
FR										
IM	0.728									
IR	0.368	0.354								
ER	0.832	0.828	0.444							
RE	0.242	0.289	0.805	0.330						
OP	0.801	0.723	0.172	0.755	0.122					
PFC	0.232	0.470	0.434	0.320	0.501	0.248				
EFC	0.129	0.372	0.193	0.188	0.360	0.241	0.753			
SS	0.310	0.453	0.446	0.348	0.505	0.282	0.715	0.708		
OIA	0.702	0.780	0.072	0.711	0.085	0.808	0.206	0.290	0.267	

Note: FR = Fear, IM = Intrinsic Motivation, IR = Identified Regulation, ER = External Regulation, RE = Response Efficacy, OP = Optimism, PFC = Problem Focused Coping, EFC = Emotion Focused Coping, SS = Social Support, OIA = Online Information Avoidance
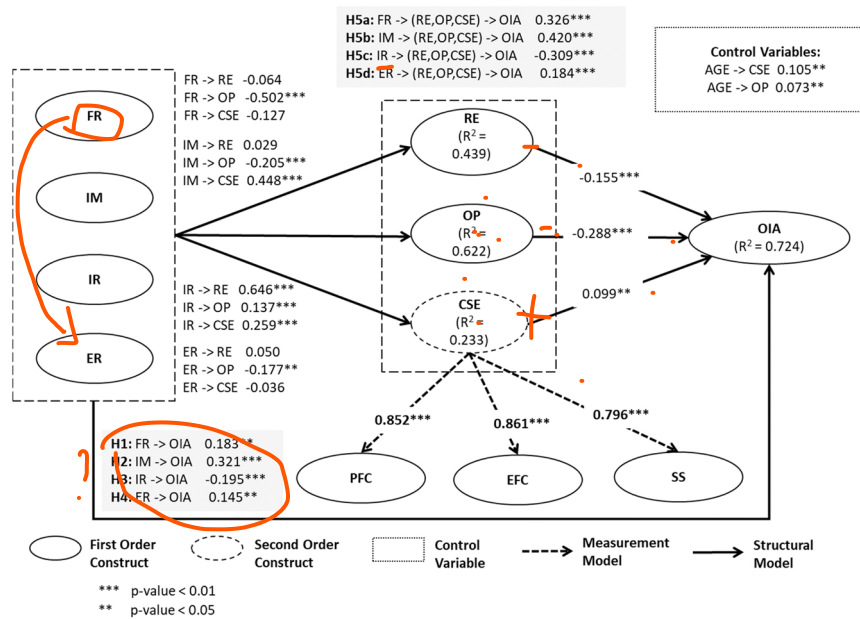

Fig. 2. Path Co-efficients with Bootstrapping Result.

Moreover, our model explains 72.4% of the variation in online information avoidance. We hypothesize fear and external regulation are positively associated with online information avoidance, and intrinsic motivation and identified regulation are negatively associated with online information avoidance. We found the associations from fear to online information avoidance ($\hat{\beta}$=0.183; p-value <0.05), external regulation to online information avoidance ($\hat{\beta}$=0.145; p-value <0.05) and identified regulation to online information avoidance ($\hat{\beta}$=−0.195; p-value <0.01) as statistically significant. We also found the association between intrinsic motivation and online information avoidance ($\hat{\beta}$=0.321; p-value <0.01) as statistically significant, however the path direction is opposite to what we hypothesize. Moreover, we found the associations from response efficacy to online information avoidance ($\hat{\beta}$=−0.155; p-value <0.01), and optimism to online information avoidance ($\hat{\beta}$=−0.288; p-value <0.01) are statistically significant. The association between coping self-efficacy and online information avoidance ($\hat{\beta}$=0.099; p-value <0.05) is statistically significant, but the path direction is opposite to theoretical prediction. By analyzing the total effects when mediated by response efficacy, optimism, and coping self-efficacy, we can see the relationship between fear and online information avoidance becomes 0.326 (p-value <0.01), the relationship between intrinsic motivation and online information avoidance becomes 0.420 (p-value <0.01), the relationship between identified regulation

and online information avoidance becomes − 0.309 (p-value <0.01), and relationship between external regulation and online information avoidance becomes 0.184 (p-value <0.01). All these total effect relationships are stronger than the respective direct effect relationship with stronger statistical significance, thus, supporting our mediation hypothesis.

Table 5 summarize the supported hypotheses with direct and total effects. The results allow us to conclude that the most important driver for online information avoidance is intrinsic motivation, and an important inhibitor is identified regulation.

We also conducted the mediation mechanism analysis to check the significant mediation effect of response efficacy, optimism, and coping self-efficacy between the association of fear, intrinsic motivation, identified regulation, and external regulation towards online information avoidance (see Table 6). Our results suggest partial mediation of response efficacy between identified regulation and online information avoidance. Our results also suggest partial mediation of optimism between fear and online information avoidance, intrinsic motivation and online information avoidance, and identified regulation and online information avoidance. Moreover, we find partial mediation of coping self-efficacy between intrinsic motivation and online information avoidance.

Table 5

Bootstrapping Result for Structural Model (direct and total effects).

#	Path	Hypothesis	Direct effect	Total effect	Conclusion
H1	Fear → Online Information Avoidance	Positive	0.183 * *	–	Supported
H2	Intrinsic Motivation → Online Information Avoidance	Negative	0.321 * **	–	Not Supported
H3	Identified Regulation → Online Information Avoidance	Negative	-0.195 * **	–	Supported
H4	External Regulation → Online Information Avoidance	Positive	0.145 * *	–	Supported
H5a	Fear → (Response Efficacy, Optimism, Coping Self-efficacy) → Online Information Avoidance	Mediation	–	**0.326 * ****	Supported
H5b	Intrinsic Motivation → (Response Efficacy, Optimism, Coping Self-efficacy) → Online Information Avoidance	Mediation	–	**0.420 * ****	Supported
H5c	Identified Regulation → (Response Efficacy, Optimism, Coping Self-efficacy) → Online Information Avoidance	Mediation	–	**-0.309 * ****	Supported
H5d	External Regulation → (Response Efficacy, Optimism, Coping Self-efficacy) → Online Information Avoidance	Mediation	–	**0.184 * ****	Supported

* ** p-value < 0.01 * * p-value < 0.05

6. Discussion

Extant literature has found that intrinsic motivation drives the positive behavioral outcome. Singh (2016) argues that intrinsic motivation is influential in achieving higher employee engagement in a dynamic work environment. Additionally, intrinsic motivation is an essential factor in driving online information sharing on social media (Chen et al., 2019). Based on the total effect of our model, we found an opposite result - that intrinsic motivation increases online information avoidance. This surprising finding makes intuitive sense in the context of a crisis such as COVID-19 pandemic. We discuss this finding below.

Our research found identified regulation, i.e., an individual's self-

Table 6

Summary of Mediation Mechanism Analysis.

Path	Indirect effect	Direct effect	Interpretation
Fear → Response Efficacy → Online Information Avoidance	0.010	0.183 * *	Direct only (no mediation)
Fear → Optimism → Online Information Avoidance	0.145 * **	0.183 * *	Complementary (partial mediation)
Fear → Coping Self-Efficacy → Online Information Avoidance	-0.013	0.183 * *	Direct only (no mediation)
Intrinsic Motivation → Response Efficacy → Online Information Avoidance	-0.004	0.321 * **	Direct only (no mediation)
Intrinsic Motivation → Optimism → Online Information Avoidance	0.059 * **	0.321 * **	Complementary (partial mediation)
Intrinsic Motivation → Coping Self-Efficacy → Online Information Avoidance	0.045 * *	0.321 * **	Complementary (partial mediation)
Identified Regulation → Response Efficacy → Online Information Avoidance	-0.100 * **	-0.195 * **	Complementary (partial mediation)
Identified Regulation → Optimism → Online Information Avoidance	-0.039 * *	-0.195 * **	Complementary (partial mediation)
Identified Regulation → Coping Self-Efficacy → Online Information Avoidance	0.026	-0.195 * **	Direct only (no mediation)
External Regulation → Response Efficacy → Online Information Avoidance	-0.008	0.145 * *	Direct only (no mediation)
External Regulation → Optimism → Online Information Avoidance	0.051	0.145 * *	Direct only (no mediation)
External Regulation → Coping Self-Efficacy → Online Information Avoidance	-0.004	0.145 * *	Direct only (no mediation)

* ** p-value < 0.01 * * p-value < 0.05

determined motivation, as an online information avoidance inhibitor. Extant literature regarding identified regulation and information acquisition behavior indicates when people can assess the importance of the information using self-evaluation and when people have control to decide which information to consume, then information avoidance becomes less (Dubnjakovic, 2017). Dubnjakovic (2018) found identified regulation to negatively influence information avoidance in education and learning contexts. Wang (2016) found identified regulation as a factor for lower information avoidance on the social networking platforms.

Also, our research shows that people avoid online information if they are exposed to the feeling of fear. We find people avoid information during a crisis when the external regulation (i.e., pressure to comply with a policy) increases. People do not like force or coercion. If people feel pressured by online communication during a crisis or are obliged to follow specific recommendations, they will avoid that information (Sweeny et al., 2010). At a practical level, these results suggest that crisis-related online communication needs to focus on reducing fear and compliance pressure for lower information avoidance from the public.

Moreover, extant literature on information avoidance identified response efficacy, optimism, and coping self-efficacy as psychological predictors of information avoidance (Howell & Shepperd, 2016; Miles et al., 2008). In our model, we use these predictors as mediating variables between fear and situational motivation variables. From the Fig. 2, we can see individuals' optimism decreases online information

avoidance during a crisis ($\widehat{\beta}=-0.288$; p-value <0.01), and from the Table 5, we find optimism partially mediates the relation between fear, intrinsic motivation, and identified regulation with online information avoidance. From the Fig. 2, we can also see response efficacy decreases online information avoidance ($\widehat{\beta}=-0.155$; p-value <0.01), and from the Table 5, we find it partially mediates the relationship between identified regulation with online information avoidance. Moreover, from the Fig. 2, we find coping self-efficacy increases online information avoidance ($\widehat{\beta}=0.099$; p-value <0.05), and from the Table 5, we identify it is not a significant mediator variable for fear and situational motivation to online information avoidance.

6.1. Theoretical contributions and implications

Our study has four major theoretical contributions. First, in line with self-determination theory (Vallerand, 2000), we hypothesized that intrinsic motivation would lower online information avoidance. However, our empirical analysis shows the opposite result. A possible explanation for this result can be when individuals are assessing online information without thinking about intended outcome or effectiveness of that information, they tend to classify that piece of information as unimportant and then, they start avoiding that information more. It is already evident that individuals receive a lot of information via online sources and if they do not find any self-regulation or external pressure to consume that information, they would most like avoid that. Our empirical result thus introduces a new debate whether self-imposed or external-imposed information consumption are the only effective way to decrease online information avoidance during a crisis. Second, our findings on identified regulation and online information avoidance during COVID-19 conform to these prior understanding and extend the literature by testing the relationship in the pandemic context. We see that individual's self-regulation in the form of identified regulation decreases online information avoidance during a crisis. Thus, we can conclude that self-regulation is one of the effective components from self-determination theory that can guide a more effective online information campaign. Third, our model also extends existing knowledge and informs policy by finding fear and external regulation as online information avoidance drivers during a crisis. These findings show us that both fear of learning about the crisis and strict regulatory pressure to consume information reduces an individual's appetite to use the online information. Thus, only self-regulation becomes the major driver for effective online communication during a crisis. Last, prior studies find coping self-efficacy decreases information avoidance (Howell & Shepperd, 2016). We found an opposite but significant relationship contrary to our current understanding. We can tell that if people are more confident about their ability to cope, they will avoid information more during COVID-19. Our new finding might indicate a further explanation for how coping self-efficacy can impact online information avoidance during a pandemic.

6.2. Implications for practice

During COVID-19, people are already very stressed with adverse health and socio-economic consequences. Moreover, people suffer a lot because of increased anxiety and uncertainty resulting from the pandemic (Ho et al., 2020). Intrinsic motivation is a positive psychological factor linked to people's feeling of inner joy and enjoyment. Intrinsic motivation is also linked to how people can keep themselves happy without worrying about external to their thinking (Deci & Ryan, 1985). Thus, during COVID-19 pandemic, people with higher intrinsic motivation avoid online information more because they do not want to face any negativity that will reduce their positive well-being. Recent reports on COVID-19 show people avoid information as it induces negative psychological stimuli and emotional stress (Mitchell et al., 2020; Savage, 2020). Thus, we can identify that people are largely considering COVID-19 related online information as a source of negative emotions and will avoid online information to keep their positive emotions intact. The practical implication is that online communications during a crisis such as COVID-19 need to be framed not to induce negativity and decrease positivity. Otherwise, people will avoid that online information. Hence, people cannot realize the intended benefit of online communications.

This finding is practically significant because it indicates how to make sure people do not avoid critical information during a crisis. During the COVID-19 pandemic, a wide range of online sources for information and news dissemination have emerged, and those sources provide a lot of policy and behavioral recommendations. As COVID-19 pandemic manifested in the midst of the age of social internet, people are getting overwhelmed by the volume of online information that they need to process (Savage, 2020). Our findings suggest that people consume online information more if they can evaluate that information's importance from their self-assessment. We see a popular information sharing platform in this crisis is interactive information dashboards such as John Hopkins COVID-19 dashboard and Worldometer. The primary purpose of information dashboards is to provide an avenue through which people can access recent developments. The interactive nature of the dashboards helps a user to modify the information they want to consume. This information dissemination approach can increase an individual's identified regulation by providing people with higher control over what information they wish to acquire. Our findings indicate that information sources that provide higher control to the users can be useful tools to offer more considerable audiences information during a COVID-19 pandemic crisis.

6.3. Limitations and future research

We identified three limitations and corresponding possible research extensions. First, we collected the data from the U.S. population during the midst of the COVID-19 pandemic. The results are exciting and have substantial implications for theory and practice. Further research, however, should extend the findings, not only to other populations but also to other crises. Second, our study uses a survey research method to test the hypotheses. While it is possible to draw causal conclusions in an experimental setting, which is a potential future research direction, it is equally compelling to engage in an in-depth interpretive study. Third, our model does not have any moderating variables. In existing information avoidance literature, we see individual differences such as monitoring and blunting, and uncertainty intolerance constructs predicting information avoidance behavior (Sweeny et al., 2010). Such constructs can be used as a moderating variable in the model. Future research should consider evaluating the moderating effects.

7. Conclusions

This study investigates how an individual's fear, intrinsic motivation, identified regulation, and external regulation impact online information avoidance. Using self-determination and information avoidance theories, we have argued that fear and external regulation are associated with an increase in online information avoidance. We have also found that intrinsic motivation and identified regulation are associated with decreased online information avoidance, mediated by an individual's response efficacy, optimism, and coping self-efficacy. Our findings suggest fear, intrinsic motivation, and external regulation drive online information avoidance, where intrinsic motivation is the most significant driver among the three. Moreover, we find identified regulation as a crucial inhibitor of online information avoidance. Our mediation analysis suggests a partial mediating effect of response efficacy, optimism, and coping self-efficacy. While mainly focusing on COVID-19, our study contributes to the broader information systems research literature and specifically to the information avoidance literature during a crisis. At a practical level, our research suggests that

pandemic-related online communication needs to focus on increasing an individual's sense of self-motivation through identified regulation. Our findings suggest that doing so will decrease online information avoidance and decrease intrinsic motivation, not to induce fear, and not to impose compliance pressure from external regulation. Our findings will be useful for governments, health organizations, and communities that utilize online platforms, forums, and related outlets to correctly reach larger audiences for disseminating pertinent information and recommendations during a pandemic or other such crisis situations.

CRediT authorship contribution statement

Tahmina Sultana: Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Writing – review & editing.

Gurpreet Dhillon: Conceptualization, Formal analysis, Writing – review & editing, Supervision. **Tiago Oliveira:** Methodology, Formal analysis, Writing – review & editing.

Declaration of interest

None

Acknowledgements

Appendix A. Definition of Model Constructs

Construct	Definition	Adapted From
Independent Variable		
Fear	An adaptive emotion in the presence of a perceived danger such as COVID-19.	Lewis et al. (2010)
Intrinsic Motivation	A behavior driven by internal joy and satisfaction without the intervention of self-regulation.	Deci (1971)
Identified Regulation	An individual's self-realization about the importance of an action with self-regulation	Deci (1971)
External Regulation	A response when an individual is obliged to perform an act	Deci (1971)
Mediating Variable		
Response Efficacy	A measure of information effectiveness.	Lewis et al. (2010)
Optimism	An expectation of positive life outcomes.	Howell and Shepperd (2016)
Coping Self-efficacy	An individual's ability to cope effectively in a situation	Chesney et al. (2006)
Dependent Variable		
Online Information Avoidance	A behavior of delaying or rejecting information consumption from online sources	Sweeny et al. (2010)

Appendix B. Survey Instrument

During a crisis situation such as COVID-19, you are getting lots of information from various online sources. These information are provided to you so that you can keep yourself, your family, and your community safe. While answering the below questions consider the COVID-19 pandemic situation and the online information you receive regarding the crisis. Read each item carefully. Using the scale below, please select the number that best describes your response.

Constructs		Changed Items	Source
I look for COVID-19 related information:			
Intrinsic Motivation	**IM1**	Because I think the information are interesting.	Guay et al. (2000);Standage and Treasure
	IM2	Because I think the information are pleasant	(2002)
	IM3	Because the information are fun.	
	IM4	Because I feel good when acting on the information recommendations.	
Identified Regulation	**IR1**	Because I am doing it for my own good	
	IR2	Because I think the information are good for me	
	IR4	Because I believe the information are important for me	
External Regulation	**ER1**	Because I am supposed to do it	
	ER2	Because it is something that I have to do	
	ER3	Because I don't have any choice	
	ER4	Because I feel that I have to do it	
Fear	**FR1**	The thought of COVID-19 scares me	Champion et al. (2004)
	FR2	When I think about COVID-19, I feel nervous	
	FR3	When I think about COVID-19, I get upset	
	FR4	When I think about COVID-19, I get depressed	
	FR5	When I think about COVID-19, I get jittery	
	FR6	When I think about COVID-19, my heart beats faster	
	FR7	When I think about COVID-19, I feel uneasy	
	FR8	When I think about COVID-19, I feel anxious	
During COVID-19 crisis situation, how confident or certain are you that you can do the following:			Chesney et al. (2006)
Problem Focused Coping	**PFC1**	Break the upsetting COVID-19 problem down into smaller parts	
	PFC2	Sort out what can be changed, and what cannot be changed regarding the crisis of COVID-19	
	PFC5	Think about one part of the COVID-19 problem at a time	
Emotion-Focused Coping	**EFC1**	Make unpleasant thoughts of COVID-19 go away	
	EFC3	Stop yourself from being upset by unpleasant thoughts of COVID-19	
	EFC4	Keep from feeling sad about COVID-19	
Social Support	**SS1**	Get friends to help you with the things you need in COVID-19 crisis	

(continued)

Constructs		Changed Items	Source
	SS2	Get emotional support from friends and family in COVID-19 situation	
Response Efficacy	RE1	The information was effective in providing a strategy (or strategies) to reduce the impact of COVID-19	Lewis et al. (2010)
	RE2	Adopting the information recommendations would be effective in reducing the impact of COVID-19	
	RE3	The available information from various outlets is useful about how people can reduce their risk of COVID-19	
Optimism	OP2	If something can go wrong for me regarding COVID-19, it will (R)	Scheier et al. (1994)
	OP4	I hardly ever expect things to go my way in a crisis like COVID-19 (R)	
	OP5	I rarely count on good things happening to me in crisis situation like COVID-19 (R)	
Online Information Avoidance	OIA1	I would rather not know about COVID-19 related information during crisis	Howell and Shepperd (2016)
	OIA2	I would avoid learning about the COVID-19 related information during crisis	
	OIA4	When it comes to knowing more information regarding COVID-19, sometimes ignorance is bliss	
	OIA6	I can think of situations in which I would rather not know COVID-19 related information during crisis	

Appendix C. Descriptive statistics of survey respondents (N = 352)

Characteristic	Number of Respondents	% of Total
Gender		
Female	121	34.38%
Male	230	65.34%
Others	1	0.28%
Age Group		
18–35 years	202	57.39%
Over 35–50 years	96	27.27%
Over 50 years	54	15.34%
Educational Qualification		
Less than an Associate degree	30	8.52%
Associate degree	30	8.52%
Bachelor's degree	202	57.39%
Master's degree	86	24.43%
Doctorate degree and beyond	4	1.14%

References

Ahmad, A. R., & Murad, H. R. (2020). The impact of social media on panic during the COVID-19 pandemic in Iraqi Kurdistan: Online questionnaire study. *Journal of Medical Internet Research, 22*(5), Article e19556.

Ajekigbe, A. (1991). Fear of mastectomy: The most common factor responsible for late presentation of carcinoma of the breast in Nigeria. *Clinical Oncology, 3*(2), 78–80.

Al-Omoush, K. S., Orero-Blat, M., & Ribeiro-Soriano, D. (2020). The role of sense of community in harnessing the wisdom of crowds and creating collaborative knowledge during the COVID-19 pandemic. *Journal of Business Research*.

Austin, L., Fisher Liu, B., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research, 40*(2), 188–207.

Basch, C. H., Hillyer, G. C., Meleo-Erwin, Z. C., Jaime, C., Mohlman, J., & Basch, C. E. (2020). Preventive behaviors conveyed on YouTube to mitigate transmission of COVID-19: cross-sectional study. *JMIR Public Health and Surveillance, 6*(2), Article e18807.

Bedi, G., & Brown, S. L. (2005). Optimism, coping style and emotional well-being in cardiac patients. *British Journal of Health Psychology, 10*(1), 57–70.

Benight, C. C., & Harper, M. L. (2002). Coping self-efficacy perceptions as a mediator between acute stress response and long-term distress following natural disasters. *Journal of Traumatic Stress, 15*(3), 177–186.

Benight, C. C., Swift, E., Sanger, J., Smith, A., & Zeppelin, D. (1999). Coping self-efficacy as a mediator of distress following a natural disaster. *Journal of Applied Social Psychology, 29*(12), 2443–2464.

Blajer-Gołębiewska, A., Wach, D., & Kos, M. (2018). Financial risk information avoidance. *Economic Research-Ekonomska istraživanja, 31*(1), 521–536.

Blanco, G., & Lourenço, A. (2022). Optimism and pessimism analysis using deep learning on COVID-19 related twitter conversations. *Information Processing & Management, 59*(3), Article 102918.

Bunker, D. (2020). Who do you trust? The digital destruction of shared situational awareness and the COVID-19 infodemic. *International Journal of Information Management, 55*, Article 102201.

Case, D. O., Andrews, J. E., Johnson, J. D., & Allard, S. L. (2005). Avoiding versus seeking: the relationship of information seeking to avoidance, blunting, coping, dissonance, and related concepts. *Journal of the Medical Library Association, 93*(3), 353.

Chae, J. (2015). A three-factor cancer-related mental condition model and its relationship with cancer information use, cancer information avoidance, and screening intention. *Journal of Health Communication, 20*(10), 1133–1142.

Chae, J. (2016). Who avoids cancer information? Examining a psychological process leading to cancer information avoidance. *Journal of Health Communication, 21*(7), 837–844.

Chae, J., Lee, C.-J., & Kim, K. (2020). Prevalence, predictors, and psychosocial mechanism of cancer information avoidance: Findings from a national survey of US adults. *Health Communication, 35*(3), 322–330.

Chambers, S., & Nimon, K. (2018). Conducting survey research using MTurk. In Handbook of research on innovative techniques, trends, and analysis for optimized research methods (pp. 258–288). IGI Global.

Champion, V. L., Skinner, C. S., Menon, U., Rawl, S., Giesler, R. B., Monahan, P., & Daggy, J. (2004). A breast cancer fear scale: psychometric development. *Journal of Health Psychology, 9*(6), 753–762.

Chen, X., Sun, M., Wu, D., & Song, X. Y. (2019). Information-sharing behavior on WeChat moments: the role of anonymity, familiarity, and intrinsic motivation. *Frontiers in Psychology, 10*, 2540.

Chesney, M. A., Neilands, T. B., Chambers, D. B., Taylor, J. M., & Folkman, S. (2006). A validity and reliability study of the coping self-efficacy scale. *British Journal of Health Psychology, 11*(3), 421–437.

Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modeling. *MIS Quarterly, 22*(1), vii–xvi.

Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research, 16*(1), 64–73.

Cieslak, R., Benight, C. C., & Lehman, V. C. (2008). Coping self-efficacy mediates the effects of negative cognitions on posttraumatic distress. *Behaviour Research and Therapy, 46*(7), 788–798.

Cismaru, M., Nagpal, A., & Krishnamurthy, P. (2009). The role of cost and response-efficacy in persuasiveness of health recommendations. *Journal of Health Psychology, 14*(1), 135–141.

Cleofas, J. V., & Oducado, R. M. F. (2021). Optimistic but tired of hearing about COVID: optimism as a predictor of COVID-19 information and behavioral fatigue among Filipino youth. *The Social Science Journal*, 1–11.

Crow, S. (2009). Relationships that foster intrinsic motivation for information seeking. *School Libraries Worldwide*, 91–112.

Dai, B., Ali, A., & Wang, H. (2020). Exploring information avoidance intention of social media users: a cognition–affect–conation perspective. *Internet Research*.

David, P., Song, M., Hayes, A., & Fredin, E. S. (2007). A cyclic model of information seeking in hyperlinked environments: The role of goals, self-efficacy, and intrinsic motivation. *International Journal of Human-Computer Studies, 65*(2), 170–182.

de Almeida, F. C., Lesca, H., & Canton, A. W. (2016). Intrinsic motivation for knowledge sharing–competitive intelligence process in a telecom company. *Journal of Knowledge Management*.

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18*(1), 105–115.

Deci, E. L., & Ryan, R. M. (1985). Conceptualizations of intrinsic motivation and self-determination. *New Media*. Springer Science.

Deline, M. B., & Kahlor, L. A. (2019). Planned risk information avoidance: a proposed theoretical model. *Communication Theory, 29*(3), 360–382.

Deng, S. L., Nolte, J., & Löckenhoff, C. E. (2022). Information avoidance in consumer choice: Do avoidance tendencies and motives vary by age? *Experimental Aging Research*, 1–18.

Dubnjakovic, A. (2017). Information Seeking Motivation Scale development: A self-determination perspective. *Journal of Documentation, 73*(5), 1034–1052.

Dubnjakovic, A. (2018). Antecedents and consequences of autonomous information seeking motivation. *Library & Information Science Research, 40*(1), 9–17.

Fagan, M. H., Neill, S., & Wooldridge, B. R. (2008). Exploring the intention to use computers: An empirical investigation of the role of intrinsic motivation, extrinsic motivation, and perceived ease of use. *Journal of Computer Information Systems, 48* (3), 31–37.

Farooq, A., Laato, S., & Islam, A. N. (2020). Impact of online information on self-isolation intention during the COVID-19 pandemic: Cross-sectional study. *Journal of Medical Internet Research, 22*(5), Article e19128.

Feiler, L. (2014). Testing models of information avoidance with binary choice dictator games. *Journal of Economic Psychology, 45*, 253–267.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Fowler, S. L., & Geers, A. L. (2015). Dispositional and comparative optimism interact to predict avoidance of a looming health threat. *Psychology & Health, 30*(4), 456–474.

Frey, D. (1982). Different levels of cognitive dissonance, information seeking, and information avoidance. *Journal of Personality and Social Psychology, 43*(6), 1175.

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research, 69*(8), 3192–3198.

Gagné, M., Tian, A. W., Soo, C., Zhang, B., Ho, K. S. B., & Hosszu, K. (2019). Different motivations for knowledge sharing and hiding: The role of motivating work design. *Journal of Organizational Behavior, 40*(7), 783–799.

Golman, R., Hagmann, D., & Loewenstein, G. (2017). Information avoidance. *Journal of Economic Literature, 55*(1), 96–135.

Golman, R., Loewenstein, G., Molnar, A., & Saccardo, S. (2021). The demand for, and avoidance of, information. *Management Science, 68*(9), 6355–7064. https://doi.org/10.1287/mnsc.2021.4244

Gruber, D. A., Smerek, R. E., Thomas-Hunt, M. C., & James, E. H. (2015). The real-time power of Twitter: Crisis management and leadership in an age of social media. *Business Horizons, 58*(2), 163–172.

Guay, F., Vallerand, R. J., & Blanchard, C. (2000). On the assessment of situational intrinsic and extrinsic motivation: The Situational Motivation Scale (SIMS). *Motivation and Emotion, 24*(3), 175–213.

Gul, F. (1991). A theory of disappointment aversion. *Econometrica: Journal of the Econometric Society, 59*(3), 667–686.

Gullatte, M. M., Brawley, O., Kinney, A., Powe, B., & Mooney, K. (2010). Religiosity, spirituality, and cancer fatalism beliefs on delay in breast cancer diagnosis in African American women. *Journal of Religion and Health, 49*(1), 62–72.

Guo, Y., Lu, Z., Kuang, H., & Wang, C. (2020). Information avoidance behavior on social network sites: Information irrelevance, overload, and the moderating role of time pressure. *International Journal of Information Management, 52*, Article 102067.

Gutteling, J. M., & de Vries, P. W. (2017). Determinants of seeking and avoiding risk-related information in times of crisis. *Risk Analysis, 37*(1), 27–39.

Hagar, C. (2013). Crisis informatics: Perspectives of trust–is social media a mixed blessing? *School of Information Student Research Journal, 2*(2), 1–5.

Hair, J., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24.

Hair, J., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science, 40*(3), 414–433.

Han, D., Duhachek, A., & Agrawal, N. (2016). Coping and construal level matching drives health message effectiveness via response efficacy or self-efficacy enhancement. *Journal of Consumer Research, 43*(3), 429–447.

Hatchett, G. T., & Park, H. L. (2004). Relationships among optimism, coping styles, psychopathology, and counseling outcome. *Personality and Individual Differences, 36* (8), 1755–1769.

Heck, P. R., & Meyer, M. N. (2019). Information avoidance in genetic health: Perceptions, norms, and preferences. *Social Cognition, 37*(3), 266–293.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics, & P. N. Gahuri (Eds.), *New Challenges to International Marketing (Advances in International Marketing* (Volume 20, pp. 277–319). Emerald Group Publishing Limited.

Ho, C. S., Chee, C. Y., & Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Annals of the Academy of Medicine Singapore, 49*(1), 1–3.

Househ, M. (2016). Communicating Ebola through social media and electronic news media outlets: A cross-sectional study. *Health Informatics Journal, 22*(3), 470–478.

Howell, J. L., Crosier, B. S., & Shepperd, J. A. (2014). Does lacking threat-management resources increase information avoidance? A multi-sample, multi-method investigation. *Journal of Research in Personality, 50*, 102–109.

Howell, J. L., Ratliff, K. A., & Shepperd, J. A. (2016). Automatic attitudes and health information avoidance. *Health Psychology, 35*(8), 816.

Howell, J. L., & Shepperd, J. A. (2012). Reducing information avoidance through affirmation. *Psychological Science, 23*(2), 141–145.

Howell, J. L., & Shepperd, J. A. (2013aaa). Behavioral obligation and information avoidance. *Annals of Behavioral Medicine, 45*(2), 258–263.

Howell, J. L., & Shepperd, J. A. (2013bbb). Reducing health-information avoidance through contemplation. *Psychological Science, 24*(9), 1696–1703.

Howell, J. L., & Shepperd, J. A. (2016). Establishing an Information Avoidance Scale. *Psychological Assessment, 28*(12), 1695–1708.

Hua, J., & Howell, J. L. (2022). Coping self-efficacy influences health information avoidance. *Journal of Health Psychology, 27*(3), 713–725.

Hwang, Y., & Yi, M. (2002). Predicting the use of web-based information systems: intrinsic motivation and self-efficacy. *AMCIS 2002 Proceedings*, 149.

Icekson, T., Roskes, M., & Moran, S. (2014). Effects of optimism on creativity under approach and avoidance motivation. *Frontiers in Human Neuroscience, 8*, 105.

Johnson, J. D. (1997). *Cancer-related information seeking*. Hampton Press.

Kahlor, L. A., Olson, H. C., Markman, A. B., & Wang, W. (2020). Avoiding trouble: Exploring environmental risk information avoidance intentions. *Environment and Behavior, 52*(2), 187–218.

Kalogeropoulos, A. (2020). Coronavirus: a growing number of people are avoiding news. *The Conversation* (Retrieved from) ⟨https://theconversation.com/coronavirus-a-growing-number-of-people-are-avoiding-news-139246⟩.

Kim, H. K., Ahn, J., Atkinson, L., & Kahlor, L. A. (2020). Effects of COVID-19 misinformation on information seeking, avoidance, and processing: A multicountry comparative study. *Science Communication, 42*(5), 586–615.

Kirk, C. P., & Rifkin, L. S. (2020). I'll trade you diamonds for toilet paper: Consumer reacting, coping and adapting behaviors in the COVID-19 pandemic. *Journal of Business Research, 117*, 124–131.

Ko, N. Y., Lu, W. H., Chen, Y. L., Li, D. J., Wang, P. W., Hsu, S. T., … Yen, C. F. (2020). COVID-19-related information sources and psychological well-being: An online survey study in Taiwan. *Brain, Behavior, and Immunity, 87*(July), 153–154.

Lallement, J., Dejean, S., Euzéby, F., & Martinez, C. (2020). The interaction between reputation and information search: Evidence of information avoidance and confirmation bias. *Journal of Retailing and Consumer Services, 53*, Article 101787.

Lammers-van der Holst, H. M., Lammers, G. J., van Der Horst, G. T., Chaves, I., de Vries, R. D., GeurtsvanKessel, C. H., … van Der Kuy, H. M. (2022). Understanding the association between sleep, shift work and COVID-19 vaccine immune response efficacy: Protocol of the S-CORE study. *Journal of Sleeping Research, 31*(2), Article e13496.

Lau, L. L., Hung, N., Go, D. J., Ferma, J., Choi, M., Dodd, W., & Wei, X. (2020). Knowledge, attitudes and practices of COVID-19 among income-poor households in the Philippines: A cross-sectional study. *Journal of Global Health, 10*(1).

Lewis, I. M., Watson, B., & White, K. M. (2010). Response efficacy: The key to minimizing rejection and maximizing acceptance of emotion-based anti-speeding messages. *Accident Analysis & Prevention, 42*(2), 459–467.

Li, Y., Tan, C.-H., Xu, H., & Teo, H.-H. (2011). Open source software adoption: Motivations of adopters and amotivations of non-adopters. *ACM SIGMIS DATABASE: the DATABASE for Advances in Information Systems, 42*(2), 76–94.

Link, E., & Baumann, E. (2022). Explaining cancer information avoidance comparing people with and without cancer experience in the family. *Psycho-Oncology, 31*(3), 442–449.

Lowry, P. B., Zhang, J., Wang, C., & Siponen, M. (2016). Why do adults engage in cyberbullying on social media? An integration of online disinhibition and deindividuation effects with the social structure and social learning model. *Information Systems Research, 27*(4), 962–986.

Luberto, C. M., Cotton, S., McLeish, A. C., Mingione, C. J., & O'Bryan, E. M. (2014). Mindfulness skills and emotion regulation: The mediating role of coping self-efficacy. *Mindfulness, 5*(4), 373–380.

Malhotra, M. K., & Grover, V. (1998). An assessment of survey research in POM: from constructs to theory. *Journal of Operations Management, 16*(4), 407–425.

Matthews, J. I., Doerr, L., & Dworatzek, P. D. (2016). University students intend to eat better but lack coping self-efficacy and knowledge of dietary recommendations. *Journal of Nutrition Education and Behavior, 48*(1), 12–19. e11.

McCloud, R. F., Okechukwu, C., Sorensen, G., & Viswanath, K. (2017). Cigarette graphic health warning labels and information avoidance among individuals from low socioeconomic position in the US. *Cancer Causes & Control, 28*(4), 351–360.

Meijers, M. H., Smit, E. S., de Wildt, K., Karvonen, S.-G., van der Plas, D., & van der Laan, L. N. (2022). Stimulating sustainable food choices using virtual reality: taking an environmental vs health communication perspective on enhancing response efficacy beliefs. *Environmental Communication, 16*(1), 1–22.

Midkiff, M. F., Lindsey, C. R., & Meadows, E. A. (2018). The role of coping self-efficacy in emotion regulation and frequency of NSSI in young adult college students. *Cogent Psychology, 5*(1), 1520437.

Miles, A., Voorwinden, S., Chapman, S., & Wardle, J. (2008). Psychologic predictors of cancer information avoidance among older adults: The role of cancer fear and fatalism. *Cancer Epidemiology and Prevention Biomarkers, 17*(8), 1872–1879.

Mitchell, A., Oliphant, J. B., & Shearer, E. (2020). About Seven-in-Ten U.S. Adults say they need to take breaks from COVID-19 news. *Pew Research Center.* 〈https://www.journalism.org/2020/04/29/about-seven-in-ten-u-s-adults-say-they-need-to-take-breaks-from-covid-19-news/〉. September 1, 2020.

Mitchell, J. I., Gagné, M., Beaudry, A., & Dyer, L. (2012). The role of perceived organizational support, distributive justice and motivation in reactions to new information technology. *Computers in Human Behavior, 28*(2), 729–738.

Momsen, K., & Ohndorf, M. (2020). When do people exploit moral wiggle room? An experimental analysis of information avoidance in a market setup. *Ecological Economics, 169*, Article 106479.

Moneta, G. B., & Spada, M. M. (2009). Coping as a mediator of the relationships between trait intrinsic and extrinsic motivation and approaches to studying during academic exam preparation. *Personality and Individual Differences, 46*(5–6), 664–669.

Myhre, A., Xiong, T., Vogel, R. I., & Teoh, D. (2020). Associations between risk-perception, self-efficacy and vaccine response-efficacy and parent/guardian decision-making regarding adolescent HPV vaccination. *Papillomavirus Research, 10*, Article 100204.

Narayan, B., Case, D. O., & Edwards, S. L. (2011). The role of information avoidance in everyday-life information behaviors. *Proceedings of the American Society for Information Science and Technology, 48*(1), 1–9.

Huck, S., Szech, N., & Wenner, L.M. (2015). More effort with less pay: On information avoidance, belief design and performance. CESifo Working Paper Series No. 5542.

Neben, T. (2015). A model of defensive information avoidance in information systems use. Proceedings of the International Conference on Information Systems, 3.

Orom, H., Schofield, E., Kiviniemi, M. T., Waters, E. A., Biddle, C., Chen, X., … Hay, J. L. (2018). Low health literacy and health information avoidance but not satisficing help explain "don't know" responses to questions assessing perceived risk. *Medical Decision Making, 38*(8), 1006–1017.

Park, H. W., Park, S., & Chong, M. (2020). Conversations and medical news frames on twitter: Infodemiological study on covid-19 in south korea. *Journal of Medical Internet Research, 22*(5), Article e18897.

Persoskie, A., Ferrer, R. A., & Klein, W. M. (2014). Association of cancer worry and perceived risk with doctor avoidance: An analysis of information avoidance in a nationally representative US sample. *Journal of Behavioral Medicine, 37*(5), 977–987.

Peterson, E. B., Taber, J. M., & Klein, W. M. (2022). Information Avoidance, Self-affirmation, and Intentions to Receive Genomic Sequencing Results Among Members of an African Descent Cohort. *Annals of Behavioral Medicine, 56*(2), 205–211.

Podsakoff, N. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Popova, L. (2012). The extended parallel process model: Illuminating the gaps in research. *Health Education & Behavior, 39*(4), 455–473.

Poulsen, A. U., & Roos, M. W. (2010). Do people make strategic commitments? Experimental evidence on strategic information avoidance. *Experimental Economics, 13*(2), 206–225.

Procopio, C. H., & Procopio, S. T. (2007). Do you know what it means to miss New Orleans? Internet communication, geographic community, and social capital in crisis. *Journal of Applied Communication Research, 35*(1), 67–87.

Qazi, A., Qazi, J., Naseer, K., Zeeshan, M., Hardaker, G., Maitama, J. Z., & Haruna, K. (2020). Analyzing situational awareness through public opinion to predict adoption of social distancing amid pandemic COVID-19. *Journal of Medical Virology, 92*(7), 849–855.

Rahi, S., Mansour, M. M. O., Alharafsheh, M., & Alghizzawi, M. (2021). The post-adoption behavior of internet banking users through the eyes of self-determination theory and expectation confirmation model. *Journal of Enterprise Information Management, 34*(6), 1874–1892. https://doi.org/10.1108/JEIM-04-2020-0156

Rao, H. R., Vemprala, N., Akello, P., & Valecha, R. (2020). Retweets of officials' alarming vs reassuring messages during the COVID-19 pandemic: Implications for crisis management. *International Journal of Information Management, 55*, Article 102187.

Rezvani, A., Khosravi, P., & Dong, L. (2017). Motivating users toward continued usage of information systems: Self-determination theory perspective. *Computers in Human Behavior, 76*, 263–275.

Ristvej, J., & Zagorecki, A. (2011). Information systems for crisis management–current applications and future directions. *Communications-Scientific Letters of the University of Zilina, 13*(2), 59–63.

Rouleau, L., Hallgren, M., & de Rond, M. (2020). Covid-19 and our understanding of risk, emergencies, and crises. *Journal of Management Studies, 58*(1), 245–248.

Roy, K. C., Hasan, S., Sadri, A. M., & Cebrian, M. (2020). Understanding the efficiency of social media based crisis communication during hurricane Sandy. *International Journal of Information Management, 52*, Article 102060.

Rudisill, C. (2013). How do we handle new health risks? Risk perception, optimism, and behaviors regarding the H1N1 virus. *Journal of Risk Research, 16*(8), 959–980.

Ryan, R. M., Koestner, R., & Deci, E. L. (1991). Ego-involved persistence: When free-choice behavior is not intrinsically motivated. *Motivation and Emotion, 15*(3), 185–205.

Savage, M. (2020). News consumption skyrocketed at the start of the pandemic, but for some it's led to fatigue or anxiety. Where do you draw the line while staying informed? *British Broadcasting Corporation.* 〈https://www.bbc.com/worklife/article/20200505-coronavirus-how-much-news-is-too-much〉. September 1, 2020.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*(6), 1063–1078.

Schultz, F., Utz, S., & Göritz, A. (2011). Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media. *Public Relations Review, 37*(1), 20–27.

Schwarzer, R., & Renner, B. (2000). Social-cognitive predictors of health behavior: Action self-efficacy and coping self-efficacy. *Health Psychology, 19*(5), 487.

Shi, W. (2019). Health information seeking versus avoiding: How do college students respond to stress-related information? *American Journal of Health Behavior, 43*(2), 437–448.

Siebenhaar, K. U., Köther, A. K., & Alpers, G. W. (2020). Dealing with the COVID-19 infodemic: Distress by information, information avoidance, and compliance with preventive measures. *Frontiers in Psychology*, 2981.

Singh, R. (2016). The impact of intrinsic and extrinsic motivators on employee engagement in information organizations. *Journal of Education for Library and Information Science, 57*(2), 197–206.

Sklar, S. M., & Turner, N. E. (1999). A brief measure for the assessment of coping self-efficacy among alcohol and other drug users. *Addiction, 94*(5), 723–729.

Soroya, S. H., Farooq, A., Mahmood, K., Isoaho, J., & Zara, S.-E. (2021). From information seeking to information avoidance: Understanding the health information behavior during a global health crisis. *Information Processing & Management, 58*(2), Article 102440.

St. Jean, B., Jindal, G., & Liao, Y. (2017). Is ignorance really bliss?: Exploring the interrelationships among information avoidance, health literacy and health justice. *Proceedings of the Association for Information Science and Technology, 54*(1), 394–404.

Standage, M., & Treasure, D. C. (2002). Relationship among achievement goal orientations and multidimensional situational motivation in physical education. *British Journal of Educational Psychology, 72*(1), 87–103.

Stenius, M., Haukkala, A., Hankonen, N., & Ravaja, N. (2017). What motivates experts to share? A prospective test of the model of knowledge-sharing motivation. *Human Resource Management, 56*(6), 871–885.

Straub, D. (1989). Validating instruments in MIS research. *MIS Quarterly, 13*(2), 147–169.

Sweeny, K., Melnyk, D., Miller, W., & Shepperd, J. A. (2010). Information avoidance: Who, what, when, and why. *Review of General Psychology, 14*(4), 340–353.

Sweeny, K., & Miller, W. (2012). Predictors of information avoidance: When does ignorance seem most blissful? *Self and Identity, 11*(2), 185–201.

Sweetser, K. D., & Metzgar, E. (2007). Communicating during crisis: Use of blogs as a relationship management tool. *Public Relations Review, 33*(3), 340–342.

Taber, J. M., Klein, W. M., Ferrer, R. A., Lewis, K. L., Harris, P. R., Shepperd, J. A., & Biesecker, L. G. (2015). Information avoidance tendencies, threat management resources, and interest in genetic sequencing feedback. *Annals of Behavioral Medicine, 49*(4), 616–621.

Thrasher, J. F., Swayampakala, K., Borland, R., Nagelhout, G., Yong, H.-H., Hammond, D., … Hardin, J. (2016). Influences of self-efficacy, response efficacy, and reactance on responses to cigarette health warnings: a longitudinal study of adult smokers in Australia and Canada. *Health Communication, 31*(12), 1517–1526.

Tran, T., & Lee, K. (2016). Understanding citizen reactions and Ebola-related information propagation on social media. IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), San Fransisco, California, USA.

Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 29, pp. 271–360). Academic Press Books - Elsevier.

Vallerand, R. J. (2000). Deci and Ryan's self-determination theory: A view from the hierarchical model of intrinsic and extrinsic motivation. *Psychological Inquiry, 11*(4), 312–318.

Van der Weele, J. J. (2012). When ignorance is innocence: On information avoidance in moral dilemmas. *SSRN Electronic Journal*.

Varga, C. A. (2001). Coping with HIV/AIDS in Durban's commercial sex industry. *AIDS Care, 13*(3), 351–365.

von der Trenck, A., Neben, T., & Heinzl, A. (2014). The impact of self-determination on the information-stopping behavior of professionals: An exploratory study in the software industry. *ACIS*.

Wang, W.-T., & Hou, Y.-P. (2015). Motivations of employees' knowledge sharing behaviors: A self-determination perspective. *Information and Organization, 25*(1), 1–26.

Wang, X. (2016). People's motivation to participate in social network sites, subsequent behaviours, and situation self-awareness following a crisis: Evidence from the MH370 flight incident. *Australasian Journal of Information Systems, 20*.

Webb, T. L., Chang, B. P., & Benn, Y. (2013). 'The Ostrich Problem': Motivated avoidance or rejection of information about goal progress. *Social and Personality Psychology Compass, 7*(11), 794–807.

Yang, Q., Herbert, N., Yang, S., Alber, J., Ophir, Y., & Cappella, J. N. (2021). The role of information avoidance in managing uncertainty from conflicting recommendations about electronic cigarettes. *Communication Monographs, 88*(3), 263–285.

Yang, Z. J., & Kahlor, L. (2013). What, me worry? The role of affect in information seeking and avoidance. *Science Communication, 35*(2), 189–212.

Yu, Y., Lau, J. T. F., & Lau, M. M. C. (2022). Competing or interactive effect between perceived response efficacy of governmental social distancing behaviors and personal freedom on social distancing behaviors in the chinese adult general population in Hong Kong. *International Journal of Health Policy and Management, 11*(4), 498–507.

Zhang, F., Morss, R. E., Sippel, J., Beckman, T., Clements, N., Hampshire, N., … Mosier, R. (2007). An in-person survey investigating public perceptions of and responses to Hurricane Rita forecasts along the Texas coast. *Weather and Forecasting, 22*(6), 1177–1190.

Zimmer, F., Scheibe, K., & Stock, W.G. (2018). A model for information behavior research on social live streaming services (SLSSs). International Conference on Social Computing and Social Media, 15–20 July, Las Vegas, NV, USA.