

COLLECTIVE STRESS DURING CRISIS-BASED DOOMSCROLLING

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Abstract

Purpose: A conceptual framework for crisis-based doomscrolling is developed to demonstrate how the compulsive viewing of negative crisis-related content on digital platforms impacts collective stress as a common emotional pressure experienced by a group or society in times of crisis.

Design/methodology/approach: This study synthesizes recent empirical research on Doomscrolling, Media-Related Distress, and Collective Stress that are being conducted in the contexts of pandemics, wars and disasters. This study synthesizes empirical evidence-based theories (Media Effect Theory, Social Stress Theory, Emotional Contagion, Social Amplification of Risk), identifies pathways and modulators that have been tested with empirical evidence.

Findings: Research has demonstrated that continued consumption of crisis-oriented news via social media can cause increased depression, anxiety, and PTSD as well as lower levels of overall wellbeing. Additionally, there is a relationship between exposure to media in times of disasters and conflict, with intense exposure contributing to acute and long term stress response at the societal level. This paper builds upon these two areas of research and posits that doomscrolling in response to Crises creates a sense of collective threat while perpetuating a cycle of negative emotions such as fear, anger, and a sense of hopelessness; creating a cycle of collective stress that may be exacerbated when the media does not have the necessary structures (or "Guardrails") to promote media literacy amongst consumers.

Originality/value: Despite being widely studied as an individual behaviour, doomscrolling has yet to be explored as a macro-level phenomenon resulting from multiple crises leading to collective/aggregated stress. Until now, no one has provided a theoretical framework that explains how doomscrolling behaviour and emerging aggregate stress processes relate. This article proposes an integrated model that connects individual digital behaviours with new collective stress behaviours, while also identifying ways for future studies to empirically test this model.

Keywords: Doomscrolling; crisis communication; collective stress; social media; digital mental health; emotional contagion

1. INTRODUCTION

There are many examples of crises—like pandemics, natural disasters, political instability and violent conflict—occurring on a highly connected digital landscape, where individuals are more likely than ever to use their smartphone and social media for immediate updates. This increased access to multiple sources of constantly flowing negative, crisis-related information has become a new form of consumption and was coined as doomscrolling (Kahn et al., 2022). Doomscrolling is behaviour where an individual consistently returns to the same distressing online content. They often have difficulty breaking away from it, particularly in times of high uncertainty (Ren et al., 2022). During crises (i.e., natural disasters, potential health threats), the compulsion to check updates may increase as individuals try to lessen ambiguity surrounding their perceived risks and gain as much up to date information as possible. By doing so, they may ultimately be left feeling more stressed (Elhai et al., 2020).

After 2020, there were numerous studies demonstrating this relationship in many countries and the overwhelming correlative relationship between high levels of digital news consumption related to COVID-19, through online social networking platforms, to anxiety, depression, fear, and other psychological distress (Bendau, et al. , 2021; Gao, et al. 2020; Boursier, et al., 2021). Scrolling through social media became an unhealthy coping method when feeling isolated or panicked (Boursier, et al. , 2021). Rather than decreasing levels of anxiety, depression, and other forms of psychological distress related to COVID-19, using social media for hours per day (multi-hour scrolling of feed) was associated with increasing the risk of developing symptoms related to all types of psychological distress. The research showed a similar pattern of results in adolescents and young adults compared to adults. In summary, social media overuse leads to more depression, anxiety, and increased risk for developing any type of mental illness (Keles, et al., 2020; O'Reilly, et al., 2018).

While earlier research has primarily focused on the individual aspects of doomscrolling, these types of disasters occur collectively. Millions of people will be using social media platforms to view and engage with crisis-related material in tandem with one another. A shared emotional experience can emerge as a result of these events, influenced by social media algorithms and trending topics, as well as the ability of many people to access and use the same material simultaneously (Hartman et al., 2010). Recent research also indicates that mass media coverage during disasters has the potential to produce acute stress reactions at the population level, potentially exceeding the level of stress felt by individuals who directly experienced the traumatic event (Holman et al., 2014). Additionally, many media outlets tend to promote negative material because audiences are more likely to focus their attention on negative content due to their own negative psychophysiological reactions (Soroka et al., 2019), creating additional emotional responses from the public.

The effects of social media on users during crises are exacerbated via two methods. Emotional contagion, where users show and then replicate the emotional states of their friends in comments, posts and reactions (Nabi et al., 2017), is one way. The second way is through interpersonal sharing of alarming or false information (Laato et al., 2020). As a result of these two processes, misinformation, negative emotional messages and narratives that amplify risk circulate quickly during times of crisis, which then intensify community-wide fear, confusion, and feelings of scarcity (Nekmat, 2022). In addition, the nature of social media leads to frequent checking of the site and other platforms, which creates an endless cycle of information and distraction due to the algorithms used to keep users engaged (Meier & Reinecke, 2021). As a result of this situation, the existence of collective stress due to the increased social and emotional burden placed on individuals by multiple people during times of uncertainty arises.

Although researchers in media studies agree that one of the ways that the media can amplify collective stress during crises is through shaping the perceptions of risk, levels of emotional arousal and the ways that people will behave (Garfin et al., 2020). However, while this is an important focus for media researchers, few studies have been conducted to actually connect doomscrolling during times of crisis with the creation of collective stress. Most of the current literature involves research on the impact of doomscrolling on the individual, while research on the impact of this process on individuals collectively remains to be developed.

Because there have been no studies examining how digital behaviour can affect underserved communities, in the present study, I will present a theoretical model that explains the relationship between doomscrolling due to an emergency situation and collective stress by using information from the literature on the relationship between digital behaviours and collective stress, where this model will position doomscrolling as a form of social digital behaviour creating a collective response; therefore, this research will focus on explaining how doomscrolling creates social digital behaviour leads to a collective emotional perception of threat (the intensity of the emotional environment: fear, anger & helplessness) and creates feedback loops that increase community-wide anxiety through multiple social isolation.

The timeliness of the conceptual exploration is important, as the world is paving the way toward many types of global public health, climate disasters, geopolitical conflicts & economic uncertainty (most recently demonstrated with the public health crisis). Understanding how digital behavioural responses will add to our knowledge of community-level crisis communication, platform & digital media design, mental health, and crisis communication strategies for an emergency response will lead to a more effective use of all forms of digital behaviour and their potential for increasing collective emotional health. Ultimately, the overall goal of this paper will be to help expand research in doomscrolling from individual psychological aspects to the collective socio-emotional character of the digital experience, contingent on previous literature on this subject.

2. LITERATURE REVIEW

2.1 Crisis-Based Doomscrolling: Concept and Dynamics

Doomscrolling is a behaviour characterised by obsessive, continuous, and often excessive engagement with digital material that is perceived as negative or threatening. The constituent features of doomscrolling include continuous and unrelenting checking of content; continual inability to discontinue checking content; and constantly being exposed to themes and topics of an emotional nature that amplify feelings of fear and anxiety about a crisis (Ren et al., 2022). In situations such as periodic national shutdowns like the COVID-19 pandemic, people have turned to, relied upon, and increasingly been captivated by consuming social media with the desire to receive real-time information and instruction, resulting in further contact with narratives relating to crises (Chen et al., 2020). The digital dependence people on digital content creates habits of continually and repetitively scrolling through endless items of interest, often fuelled by fear about an uncertain future and the need to understand what is currently going on.

Many people will use their smartphones to not only check for current news on a particular crisis or situation, but to seek out some form of comfort through digital content. This often leads users to experience even more anxiety due to the increased psychological load from consuming too much digital content. The design of digital platforms allows for these types of interactions to take place. Digital platforms are designed to foster increased levels of user engagement, predominantly through providing access to content driven by highly emotional content. This is further amplified during times of crisis like during the COVID-19 pandemic; this includes things like seeing daily numbers of individuals infected and dying, and seeing the emotional narrative around both of those figures.

Therefore, doomscrolling is the combination of two sources of influence: human need for emotional support during times of uncertainty due to a crisis; and the way digital platforms are designed and function through algorithmic models to provide users with content that generates high levels of emotional response.

2.2 Psychological and Emotional Impacts of Crisis-Related Media Consumption

There is a large amount of evidence that supports the connection between how much time people have had access to media about a crisis to greater levels of harm to mental health. In a variety of studies, researchers assessed the relationship between high levels of consumption of pandemic media and anxious, depressed, distressed, and fearful feelings among those who consumed it (Bendau et al. 2021, Boursier et al. 2021, Gao et al. 2020). One reason that social media use has also had a negative impact is that on social media, people view heightened emotional experience, causing them to continue to worry and ruminate (O'Reilly et al. 2018). In a study examining social media as a method for people to cope with their loneliness during the COVID-19 pandemic, researchers found that people who used social media for this purpose experienced higher levels of anxiety, demonstrating that engaging with others online in a negative or despairing manner reduces one's psychological resilience (Boursier et al. 2021).

Adolescents and young adults may be most vulnerable to this negative effect of social media exposure. A systematic review of studies examining social media exposure and mental health found consistent and high correlations between high levels of social media use and increased levels of depressive and anxious symptoms (Keles et al. 2020). Similarly, Meier and Reinecke (2021) found that digital communication with others can have negative effects on mental health if that communication is around stressful or threatening information. Therefore, when people engage in 'doomscrolling' during a crisis, they not only experience emotional fatigue from being inundated with distressing information, but also experience increased cognitive load and ultimately emotional exhaustion.

Individuals who are dependent on smartphones also report having more intense feelings of anxiety in relation to online news about crises than those who do not use smartphones extensively. This suggests that an individual's technology habits can affect their level of emotional vulnerability (Elhai et al., 2020). Collectively, these studies indicate that doomscrolling during a crisis is not only a behavioural pattern but also a psychological stressor with quantifiable emotional effects.

2.3 Media-Induced Collective Stress: Evidence From Crisis Research

The majority of doomscrolling literature focuses on the impact that this behaviour has for an individual. It is, however, important to note that similar research exists that demonstrates how exposure to mass crisis media creates social or group stress. In a landmark study looking at the Boston Marathon Bombing, Holman et al. (2014) found that greater exposure to media during this incident was linked to higher levels of acute stress in a broad audience; even individuals who lived far away from Boston were impacted by media reports. Thus, when the public is exposed to traumatic events via different forms of media, such stress can be transmitted throughout an entire community.

Research conducted by Garfin et al. (2020) during the COVID-19 pandemic found that repeated exposure to frightening news could lead to worse public health outcomes because heightened anxiety, distress, and maladaptive behaviours would be more prevalent across an entire community due to the accumulation of negative media contacts during the COVID-19 Crisis. The authors argue that as a result of exposure to multiple channels of media about COVID-19 (e.g., rates of infection, lockdowns, deaths, etc.), there was a worldwide increase in the collective emotional experience of fear and fatigue.

In addition, Soroka et al. (2019) demonstrated a cross-national negative bias in physiological responses to news; they suggest that populations around the world have a common tendency to respond to negative media with greater physiological response than to positive or neutral media. Thus, it is likely that extended exposure to news during doomscrolling, as previously stated, has led to widespread population responses.

Crisis media not only offers information to the public but serves as an additional source of psychological stress when it comes to dealing with global emergencies. Because doomscrolling is so prevalent due to the large amount of media available during these periods, it's thought that it will enhance the psychological stress levels of both individuals and populations due to crisis media being consumed in an accelerated manner compared to traditional routes.

2.4 Emotional Contagion, Risk Perception, and Social Media Amplification

Through the use of social media, an individual's emotional reaction can influence their greater social circle(s) creating a collective emotional response to events occurring around them. The process of emotional contagion—the way in which a person absorbs/reflects the emotions of another person—is very much alive and well within widespread use of digital means, and the opportunity for users to connect with those people via social media enables them to absorb, reflect, and disseminate the reported impact of a crisis via social media. By presenting information about their experience dealing with crises via social media, individuals encourage emotional contagion (Nabi et al., 2017), where the emotional climate associated with a crisis (e.g., fear, sadness, anger, outrage, etc.) spreads rapidly and enhances the emotional response to the crisis through digital channels as well as connecting users via digital platforms to create a shared negative emotional state.

Likewise, social media influences how a person perceives a potential risk when presented with misinformation. According to Nekmat (2022), during times of crisis, the spreading of inaccurate information creates an emotional state of fear and increases the level of threat associated with a potential danger. Misinformation creates the

propensity for impulsive and maladaptive coping strategies for individuals when dealing with crisis events, due to increased anxiety and perceptions of scarcity (Laato et al., 2020).

As a result, these interactions between social media and misinformation create what has been termed a risk amplification cycle, where a person may increase the volatility of their emotional state as a result of sharing false information with others. Furthermore, Turner-McGrievy et al. (2021) indicate that digital media influences how people respond to crises, including their health-related behaviors, coping strategies, and how they adjust emotionally following a crisis event. Doomscrolling creates an environment that supports or reinforces the feelings of the users experiencing the negative content they are receiving online. This cycle indicates that doomscrolling during times of crisis helps create shared emotional experience in addition to shared distress.

2.5 Conceptual Gaps and the Need for an Integrated Perspective

While the effects of social media and crisis-related media exposure on mental health have been examined extensively, there are some conceptual gaps that remain. The first is that the majority of studies treat doomscrolling as a psychological behaviour at the individual level, while crises are collective experiences affecting whole populations simultaneously (Ren et al., 2022; Meier & Reinecke, 2021). Secondly, research on how media create collective stress has demonstrated the impact of crisis news on populations as a whole (Holman et al., 2014; Garfin et al., 2020), but it does not directly examine the digital-specific behaviours (i.e., doomscrolling) that may have contributed to these collective outcomes.

Thirdly, studies on emotional contagion (Nabi et al., 2017) and misinformation (Nekmat, 2022; Laato et al., 2020) illustrate how emotions and risk perceptions can be transmitted across networks; however, they do not connect those processes to sustained levels of collective stress experienced by populations. Finally, while negativity bias (Soroka et al., 2019) provides a reason for people to consume crisis content, the ways in which such content may collectively create stress on a population level through digital compulsive scrolling remain unclear.

Within the literature on mental health, risk psychology, crisis communication, and digital behaviour, a consistent conclusion exists: doomscrolling seems likely to produce collective stress among many, but there is no integrated conception or framework to date. This gap is the motivation for the current study.

3. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

In this part of the research paper, we will create a theoretical structure that explains how crisis-related doomscrolling causes collective stress. We will, therefore, combine four major areas of literature: (i) crisis communication, (ii) digital mental health, (iii) emotional contagion, and (iv) media-induced perception of risk; to create a unified conceptual framework/methodology for understanding the theoretical model outlined below. This unified framework will explain the complete theoretical process from a person to the collective psychological effects of doomscrolling through six sub-components: uncertainty about the crisis; intensifying the act of doomscrolling; emotional overload; social amplification; conceptual framework/model, and final research propositions. Each of these areas will explain how digital behaviours at the individual level get transformed into psychological effects at the collective level.

3.1 Crisis Uncertainty as the Trigger of Doomscrolling

When humans are living through a difficult moment in time, such as during a pandemic or after a natural disaster, they have many questions about what to do next. The world is filled with ambiguity and unpredictability, and fear is often created by the news of these types of events, making people eager to learn what is happening and to stay updated about these events. Because social media is the easiest way to stay up to date on these crises and receive information in real-time (Chen et al., 2020), social media encourages people to engage in more information-seeking behaviour than is usually present in normal circumstances. As a result of being in a state of ambiguity, people tend to check their phones repetitively, and by doing so, are at a greater risk of being exposed to crisis-related information (Elhai et al., 2020). Therefore, the initial psychological force driving individuals to engage in doomscrolling is the presence of crisis uncertainty that leads to heightened information-seeking behaviour.

3.2 Intensification of Doomscrolling Behaviour

Once the users start to continuously check on the crisis developments, the line between the intended purpose of finding information and the unintentional habit of consuming information will become blurred. Doomscrolling as a habitual behavior is defined as becoming deeply engaged in a negative and/or distressing content for protracted periods due to the utilization of algorithms used by digital platforms to amplify information related to crises, which drives user engagement (Ren et al., 2022). Since the feeds in the digital environment are constantly refreshed with new updates, new threats, and new reactions, a sense of urgency to continue scrolling develops, ultimately, resulting in compulsively checking back to stay abreast of perceived threats from fear-based and crisis-oriented, content. Research indicates that increased exposure to media during crisis situations is associated with increased psychological distress (Boursier et al., 2021; Gao et al., 2020).

3.3 Emotional Overload and Psychological Strain

Doomscrolling, or continuously scrolling through negative news articles, creates an overwhelming amount of emotion from all the information being taken in. There is evidence that people who engage in doomscrolling have higher rates of anxiety, depression, fear, and psychological distress than those who do not participate in doomscrolling (Bendau et al., 2021; Boursier et al., 2021). Many of the crisis-related stories being posted on various websites are presented in ways that create greater feelings of vulnerability for readers and thus have a

stronger negative emotional response from them. The results of a systematic review found that continuous exposure to crisis-related stories resulted in higher levels of emotional exhaustion, particularly among younger users that are more likely to experience higher levels of online stress (Keles et al., 2020). The negativity bias associated with digital news publications contributes to the cognitive overload and emotional fatigue experienced by doomscrolling participants (Soroka et al., 2019). At this point, doomscrolling becomes not just an adaptive behaviour to deal with ongoing uncertainty but also acts as a psychological stressor.

3.4 Social Amplification Through Emotional Contagion and Misinformation

The emotional pressure felt at the individual level soon influences our social settings through emotional spread (via social networking) via the spread of misleading information related to crises. When an individual feels an emotion expressed by another in their social circles, especially in communities online, this results in multiple people feeling the same emotions and establishes a common emotional state for that group of individuals. When misleading or exaggerated information about a crisis is shared, it increases individuals' anxiety and anxiety levels increase their perception of fear and danger regarding the event. Additionally, anxiety has led to increased sharing by individuals of fear-inducing or misleading content creating a larger sense of threat or scarcity in the group. Many social media platforms have used algorithms that are designed to promote high-volume engagement through suggested connections to users of the platform. This includes promoting misinformation, and the combination of emotional spread and social media algorithms combine to amplify the emotional climate of a crisis among individuals and subsequently elevate the levels of anxiety across a broader social group.

3.5 Conceptual Model: From Doomscrolling to Collective Stress

3.5.1 Overview of the Conceptual Pathway

The conceptual model demonstrates the process through which the phenomenon of crisis induced doomscrolling grows from an isolated activity by one person to become shared among many as a distressed state or collective stress. In this model, crisis uncertainty leads to increased compulsion to seek out and scroll through news sources until the person has reached an emotional tipping point, which is ultimately transferred to others through digital means. Emotional contagion, along with misinformation and negativity bias, create a collective emotional strain within society. This theory is supported by the earlier research conducted by Holman and Garfin, where the effects of traveling to extreme emotional experiences with crises creates an overall change in the emotional climate in society.

3.5.2 Crisis Uncertainty and the Emergence of Doomscrolling

Crises create ambiguity and rapidly evolving risk, compelling individuals to seek constant updates to manage fear and uncertainty. Social media becomes the main platform for such monitoring because of its immediacy and continuous flow of information (Chen et al., 2020). This leads individuals to repeatedly check their devices—often beyond their intention—resulting in habitual and compulsive doomscrolling (Elhai et al., 2020). This stage is critical because it initiates the behavioral pattern that exposes users to intensive crisis-related content.

3.5.3 Emotional Overload as an Individual Consequence

Doomscrolling over an extended period subject's users to numerous stressful, overwhelming, and frequently sensationalised pieces of information. The continued exposure to this type of information also contributes to more intense levels of psychological distress, such as anxiety and depressive symptoms, and increases emotional fatigue and feelings of fear (Bendau et al., 2021; Gao et al., 2020). Beyond the impact on an individual's mental health, research on mental health outcomes in the youth population has documented how these individuals' levels of stress increase during and after this type of exposure, leading to negative emotional outcomes (Keles et al., 2020). Therefore, the most immediate impact of the increasing number of people doomscrolling is the heightened experience of emotion for the individual.

3.5.4 Social Amplification Through Emotional Contagion and Misinformation

After experiencing excessive emotions, people's feelings go through emotional spreading where other people in networks (via emotional contagion) will reflect those same feelings (Nabi et al., 2017). At the same time, false information and unverified narratives during times of crises create heightened volumes of overwhelming fear to the group by amplifying the perceived danger, encouraging the spread of these emotionally charged communications through anxiety-influenced habits of sharing the 'False and Unverified Information' (Nekmat, 2022; Laato et al., 2020). Popular media sites use algorithms to elevate negative and highly stimulating items as a means of increasing viewership (O'Reilly et al., 2018). The mechanisms of emotional spreading create greater visibility of threats within the network thereby increasing the magnitude of emotional similarity across network participants.

3.5.5 Convergence into Collective Stress

The distribution and subsequent re-distribution of emotionally charged social media posts across the internet can lead to an accumulation of emotions experienced by individuals within a community as they interact with each other online. This accumulation of emotion results in a "collective stress" experience, where many members of a community are experiencing high levels of stress, anxiety, and burnout at the same time due to being exposed to so many negative posts on social media. Research in the area of crisis media has demonstrated that the constant exposure of individuals and communities to negative media can create population-level stress for individuals who have not been directly affected by the crisis (Holman et al., 2014). Likewise, Garfin et al. argue that media during a crisis creates an environment in which the general public becomes significantly distressed (2020). This conceptual model reflects how prolonged "doomscrolling" leads to collective stress as a societal outcome.

Figure 1: Conceptual Model

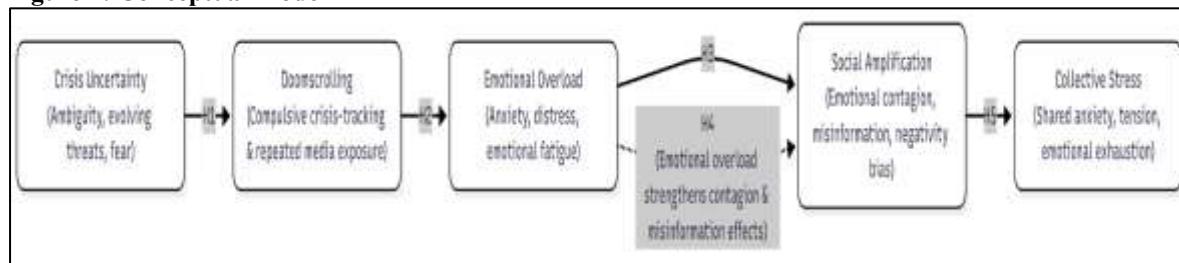


Figure 1 shows the conceptual model of crisis-based doomscrolling and collective stress

3.6 Research Hypothesis Proposed

3.6.1 H₀₁: Crisis Uncertainty → Doomscrolling

Doomscrolling is likely to become more frequent and severe as uncertainty increases, particularly during times of crisis. When people seek out repeated information through their social media feeds, they do so because they feel obligated to stay informed about developing events, are concerned that they may not have received an important announcement, and are confused by changing information regarding the nature of threats. The first proposition of this study is that uncertainty in relation to crises positively affects the occurrence of doomscrolling.

3.6.2 H₀₂: Doomscrolling → Emotional Overload

The second statement emphasizes that as a result, the increase of time spent doomscrolling leads to people becoming emotionally overwhelmed. Research has shown that an individual's consumption of information related to a crisis, such as those caused by COVID-19 has resulted in increased levels of panic, worry, and feelings of hopelessness (Bendau et al., 2021; Boursier et al., 2021; Gao et al., 2020). Therefore, as a person continues to doomscroll, the person will become increasingly stressed/emotionally fatigued due to the continued escalation of stress/emotional fatigue.

3.6.3 H₀₃: Emotional Overload → Emotional Contagion

The third hypothesis postulates that users in digital social networks who are overwhelmed with negative feelings influence others through web-based emotional contagion. Online posts by users who are experiencing emotional distress increase the likelihood of other users mimicking and absorbing those emotions during times of crisis (Nabi et al., 2017). Therefore, emotional overload is believed to be a significant factor in emotional contagion via social media environments.

3.6.4 H₀₄: Emotional Contagion + Misinformation → Amplified Threat Perception

The fourth assumption states that Emotional Transmission through Social Media and Misinformation will lead to an increased Sense of Group Threat or Fear. The combination of New Stories about the Crisis, as well as Story Sharing Motivated by Anxiety, creates fear, disorientation and confusion among the Group (Nekmat, 2022) (Laato et al., 2020). The more that Group Members share these increased Threat-Risk Perceptions the more Similar or Alike their Emotional States will become.

3.6.5 H₀₅: Amplified Threat Perception → Collective Stress

The final aspect of heightened perceptions of threat will add to the collective stress of the community. According to evidence, communities develop a shared stress response to alarming information about threats if they are continuously presented with this type of information (even when not directly affected by these threats) (Holman et al., 2014; Garfin et al., 2020); hence to "anticipate" that an increased perception of threat will add to the emotional strain experienced at the community level.

4. RESEARCH METHODOLOGY

While this investigation is chiefly conceptual, it sets an empirical basis for possible future verification. The methodology outlined above serves as a template for conducted empirical research on the relationship between "Crisis" stress that arises when individuals engage in the activity of 'doomscrolling.' Furthermore, it creates possibilities for longitudinal and/or digital-trace extensions to the proposed approach, as it investigates the hypothesised relationship between several variables: uncertainty (in crises), doomscrolling, emotional overload (due to the accumulation of information), the spread of emotional states among those who are doomscrolling, and heightened perceptions of risk associated with crises and stress levels collectively.

4.1 Research Design

We will use a quantitative explanatory research design to test hypotheses H1 through H5. Given previous studies that have successfully utilized large-scale surveys to investigate the relationship between social media usage, anxiety, depression, and distress (Bendau et al., 2021; Gao et al., 2020; Boursier et al., 2021), we will use a structured questionnaire to gather self-reported information about the component constructs of the model. As the primary type of this design is cross-sectional, we will also recommend using a longitudinal panel extension to study the time-related dynamics of the phenomenon of doomscrolling and its relationship to collective levels of stress, an approach influenced by previous studies on media exposure and acute stress after crisis events (Holman et al., 2014; Garfin et al., 2020).

4.2 Target Population, Sampling, and Context

The target population for this research will be individuals who actively use social media and experienced exposure to crisis-related media during times of a global emergency, i.e., Pandemic, Political Unrest, Natural Disasters. Research conducted to date examining the impacts of Crisis Media and Mental Health have primarily investigated how the Crisis News on Social Media has affected the Adult (Aged 18—65 years) and Young Adult (Aged 13—17 years) populations (Keles et al., 2020; Meier & Reinecke, 2021). A non-probability sampling method (Purposive/Snowball Sampling) can be used initially to initially identify social media users who are most often exposed to Crisis Media. A more representative sampling method, such as stratified sampling by age, region, and platform, should be employed later in this research to increase the generalizability of findings.

4.3 Measurement of Key Constructs

The model will measure each of its constructs with research-based multi-item Likert-style scales that have been adapted to meet the needs of both crisis and doomscrolling topics as established through previous research:

Crisis Uncertainty: The perceived uncertainty of events; this could include things such as conflicting information, unpredictability of results, and so on. The items developed would be in keeping with past research concerning crisis communication and prediction of risk (Chen et al., 2020), to emphasise ambiguity and lack of clarity.

Doomscrolling: The repeated compulsive exposure to crisis-related media on social media. This would include the act of being unable to stop looking through social media channels of news around late at night or difficulty disengaging from that media or spending significantly more time scrolling through the negative news stories related to the crisis than would be reasonable based on a person's regular social media usage patterns; items would informally speak to the idea of problematic media/social media use (Elhai et al., 2020; Meier & Reinecke, 2021), but the context these items are placed within would focus on crises.

Emotional Overload: Based on previous studies indicating an association between social media usage and negative mental health consequences (Bendau et al., 2021; Gao et al., 2020; Boursier et al., 2021; Keles et al., 2020), assessment of emotional overload will include self-reported levels of anxiety, fear, emotional exhaustion, and depressive symptoms related to crisis content.

Emotional Contagion in Digital Networks: The Emotional Contagion (EC) construct will measure respondent's perceptions of emotional influence through others when viewing crisis-related content either through social media platforms or their website, as well as how they receive emotional information through social media platforms (Nabi et al., 2017). Based upon existing emotional contagion media research Chinese articles will be drafted accordingly.

Amplified Threat Perception: The perception of amplified threats and risks responds to a collective heightened level of danger/risk/insecurity primarily due to continual exposure to crisis-dependent content. For example, individuals may express sentiments such as "this crisis is out of control" or "everything is getting worse," which are based conceptually on negative bias and risk perception derived through the media. (Soroka et al., 2019; Nekmat, 2022; Laato et al., 2020).

Collective Stress: To operationalize the concept of collective stress, we define respondents' perceptions regarding levels of shared emotional distress that others experience. Specifically, respondents will identify whether they believe that most people they interact with are experiencing high levels of emotional stress, that most people within their community are feeling anxious, and whether they perceive that most people in today's society are currently experiencing high levels of emotional fatigue. This conceptualization is consistent with previous research indicating that collective stress occurs at the level of the population as a result of exposure to crisis-related media (Holman & Garfin, 2014; Garfin, Holman, et al., 2020).

The collective stress items will be measured using a 5-point Likert scale, which ranges from 1 = Strongly Disagree to 5 = Strongly Agree.

4.4 Data Collection Procedures

The researchers will use an online questionnaire through Facebook and other social media outlets. The researchers will perform the same methods of data collection that have been used with previous researchers/cited studies in examining social media and mental health problems (Gao et al., 2020; Boursier et al., 2021; Meier & Reinecke, 2021). The researchers will screen participants for the following qualifications:

Usage of social media (e.g., use of social media at least a few times a week) and,

Experience with crisis situations as reported in the timeframe selected for the study.

Participants will be provided with a written explanation of why the study is being conducted, how much time it will take to complete, and what procedures are in place to protect participant rights. Participation will be voluntary, with electronic consent obtained before a participant begins the questionnaire.

4.5 Data Analysis Strategy

The analysis of hypothesized relationships H1-H5 will occur using Structural Equation Modeling (SEM). SEM has the capability to allow for simultaneous estimation of multiple relationships amongst latent constructs, making it a standard analytical approach used in many of the research studies investigating complex psychological and behavioural models (Meier & Reinecke, 2021). The assessment will involve two main stages:

Evaluation of the Measurement Model

a. Confirmatory Factor Analysis (CFA) will be conducted to assess the reliability and validity of each of the latent constructs including: Doomscrolling; Emotional Overload; Emotional Contagion; Amplified Threat Perception; and Collective Stress.

b. Internal consistency will be assessed (i.e., through Cronbach's Alpha and Composite Reliability) using quantifiable measures of Convergent validity and Discriminant Validity.

The structural model will include a testing of the direct paths associated with Hypotheses H₀₁-H₀₅:

H₀₁: Crisis Uncertainty → Doomscrolling

H₀₂: Doomscrolling → Emotional Overload

H₀₃: Emotional Overload → Emotional Contagion

H₀₄: Emotional Contagion → Amplified Threat Perception

H₀₅: Amplified Threat Perception → Collective Stress

Assessment of model fit will be conducted using standard Goodness-of-Fit indices (i.e., CFI; TLI; RMSEA; SRMR).

To evaluate the Order of Timeline Constructs over Long-term Designs, Longitudinal Structural Equation Modeling (SEM) or Cross-Lagged Panel Designs may be helpful, particularly in studies that examine the impact of Crisis Media Exposure on Stress Reactions over time (Holman et al., 2014; Garfin et al., 2020). Additionally, Exploratory Analyses could integrate Moderation (for example: Age, Social Media Use, or Coping Strategies) and Mediation (for example: Emotional Overload as the Mediator between Doomscrolling and Emotional Contagion).

4.6 Ethical Considerations

Because anxiety, fear, and feelings of threat are sensitive issues, it is critical to provide special care with respect to the ethical issues associated with these topics. The survey will contain a statement reminding participants that they have the right to skip questions and to withdraw at any point during the survey without facing any repercussions. For those participants who may find it uncomfortable or distressing to think about the events during a crisis, the survey will also include contact information or links to mental health resources where the participant may receive assistance. Data will be collected anonymously or pseudonymously, with no identifiable data maintained about the participants, and will only be used for research and academic purposes. The principles outlined here are consistent with ethical standards developed and used by researchers in previous studies that examined the influence of social media on crisis exposure and mental health (Bendau, et al., 2021; O'Reilly, et al., 2018; Turner-McGrievy, et al., 2021).

5. FINDINGS AND DISCUSSION

Through a multi-layered psychological and social process of transforming individual emotional vulnerability into collective stress, the results of the conceptual analysis demonstrate how doomscrolling during crises functions. A review of the integrated literature indicates that when individuals become repeatedly exposed to information associated with crises, three primary results arise from this exposure: (i) increased individual anxiety and emotional saturation; (ii) increased amplification of fear, misinformation and negativity throughout networks; (iii) synchronized formation of emotional climates thereby aggravating collective stress levels. Research conducted prior to this study demonstrated similar behavioural patterns associated with doomscrolling that indicate doomscrolling is not just a personal activity but also a collectively shared digital phenomenon that has been created through the use of algorithms, the influence of interpersonal relationships and the methods for disseminating crisis related information.

Table 1 synthesizes the key findings emerging from the conceptual model each later elaborated in subsequent subsections.

Table 1: Summary of Core Findings from the Conceptual Model

Finding Category	Emergent Insight	Implication for Collective Stress
Individual Emotional Impact	Doomscrolling increases anxiety, emotional exhaustion, and threat perception	Creates emotional vulnerability that spreads socially
Platform-Level Influence	Algorithms amplify negative, high-arousal crisis content	Reinforces exposure loops and intensifies psychological strain
Social Transmission	Emotional contagion and misinformation circulate rapidly	Synchronizes fear and panic across communities
Risk Perception Dynamics	Repeated exposure increases perceived severity and proximity of threats	Fuels public anxiety and heightens group-level stress responses
Collective Outcomes	Shared emotional climate develops (fear, tension, pessimism)	Results in community-wide collective stress

The Table 1 summarises the emergent conceptual findings into five domains, demonstrating how individual-level emotional responses deepen into social and collective processes. Each row is expanded in Sections 5.2–5.6.

5.2 Emotional and Psychological Responses to Crisis-Based Doomscrolling

The review of the literature indicates that doomscrolling is associated with significant levels of emotional distress. Users of social media who are exposed to this type of content experience increased levels of anxiety, long-term fear, and mild depressive feelings, irritability, and cognitive fatigue. Users may experience these feelings in part

due to the rapid succession and alarming or sensationalized presentation of crisis-related information via social media.

Bendau et al. and Gao et al. found a strong correlation between how frequently users are exposed to crisis-related content and the level of anxiety reported by those users.

Boursier et al. discovered that individuals who continually scroll through crisis content to relieve uncertainty will often experience increased emotional exhaustion and worsening mental states.

The emotional overload experienced during doomscrolling creates a cascade of stress. When a user experiences an initial overload of emotions, the social transmission of emotion becomes more intense and provides an opportunity for broader social contagion of the emotion.

Table 2: Emotional Responses Observed in Crisis-Related Digital Behavior Literature

Emotional Outcome	Description	How It Contributes to Collective Stress
Anxiety	Persistent worry and hypervigilance	Forms baseline emotional climate of fear
Emotional Exhaustion	Cognitive and affective fatigue	Reduces coping capacity in groups
Fear Response	Heightened sense of threat	Amplifies panic when shared online
Depressive Affect	Low mood, hopelessness	Reduces collective resilience
Stress Reactivity	Immediate physiological and cognitive arousal	Triggers group-wide stress spillover

Table 2 consolidates the emotional indicators most frequently reported in prior research. These indicators are the building blocks of a shared stress climate, offering a structured view of how personal distress becomes socially contagious.

5.3 Platform-Level Reinforcement and Exposure Loops

Doomscrolling is a phenomenon that users often think they drive themselves, but it is also a product of the platform's manipulative algorithms to keep users engaged. The content that creates the most engagement—for example, crisis-related (negative, emotionally charged, etc.) posts—are the most engaging for users, as documented by Meier & Reinecke, O'Reilly, et al. The digital platforms assist in creating an environment of negativity by using:

the algorithm to select astonishing stories for users;
endless scrolls;
push notifications of new posts;
real-time updates and alerts; and
create an emotionally salient, high arousal situation with their content.

Figure 2: Platform-Driven Crisis Exposure Loop

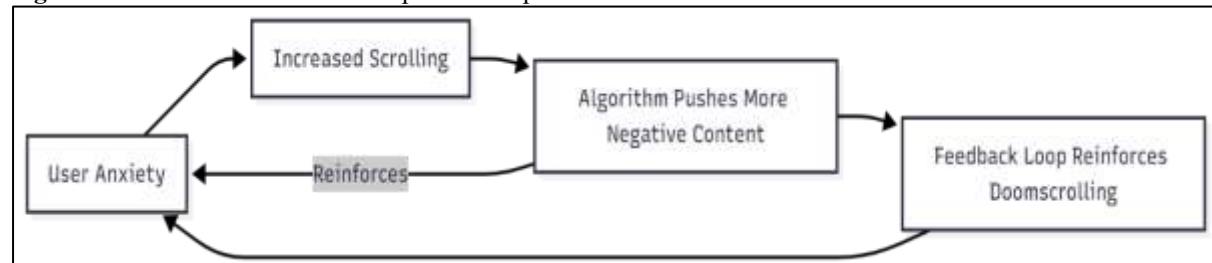


Figure 2 illustrates how user anxiety and platform algorithms mutually reinforce each other. This cycle explains why doomscrolling escalates over time and why emotional overload intensifies even when crises stabilize.

5.4 Social Transmission: Emotional Contagion and Misinformation

The findings of Nabi et al. convey that the phenomena associated with doomscrolling can set the stage for widespread contamination of emotions among users through the following processes: Mimicry, resonance, and alignment with others' emotions, as well as the high volume of interactions on social media, contribute to the rapid dissemination of online emotional expressions.

Likewise, research conducted by Nekmat and Laato, et al. demonstrate how misinformation leverages users' anxiety-driven reactionary tendencies by offering users the experience of a greater "perceived" threat from exposure to their information. The combination of both of these conditions leads to the emergence of a so-called "dual-amplification effect."

The dual-amplification effect is characterized by:

Emotional contagion causing increased magnitude of emotional state

Misinformation resulting in distorted perceptions of threat.

Intensification of weather-like emotional climates.

Table 3: Mechanisms of Social Emotional Amplification

Amplification Mechanism	How It Occurs	Impact on Collective Stress
Emotional Contagion	Users mirror posts expressing fear or panic	Synchronizes emotional states
Misinformation Spread	Sharing unverified crisis claims	Magnifies uncertainty and alarm
Echo Chambers	Algorithm reinforces similar content	Intensifies threat perceptions
Viral Narratives	High-emotion content spreads faster	Accelerates collective fear cycles

Table 5.3 reveals that emotional amplification is not random—it is structured, predictable, and digitally accelerated. These mechanisms explain how doomscrolling transforms from a personal burden into a group-level emotional event.

5.5 Risk Amplification and Threat Construction

A major conclusion is that users who engage in this behaviour tend to have higher perceptions of risk and impending doom related to this issue. Through their research, Soroka et al. found that humans respond more negatively to any form of news, which ultimately contributes to an increase in perceived threat regarding the crisis. As a result of the increased perception of risk the following behaviours have been observed:

Increased perception of a potential threat to control,
Feelings of increased risk and vulnerability,
Decreased trust in government and/or other institutions,
Increased likelihood to engage in panic-buying, increased vigilance,
An increase in reactivity across the population.

Figure 3: Threat Amplification Spiral

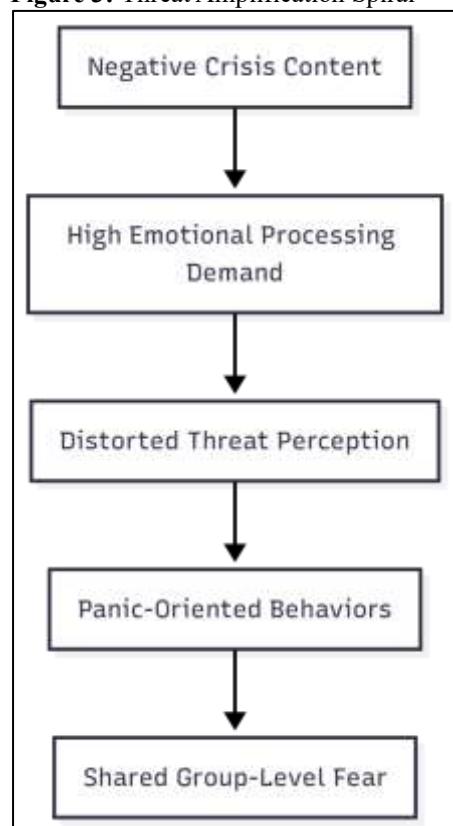


Figure 3 visualizes how risk perception escalates step-by-step until it manifests as collective stress.

5.6 Emergence of Collective Stress

The main result of this research is that doomscrolling creates collective stress which is defined as a shared psychological strain experienced by communities; Holman et al. have shown that even when geographically separated from the source of a tragedy, mass media exposure produces stress throughout a population. Conceptual reinterpretation of this involves merging the emotional experiences of multiple individuals to form a general emotional climate for their respective communities. For example, the fear of an impacting group continues regardless of the intensity of any particular event. Emotional experiences may also be synchronized by the use of social media. As a result, the stress experienced by a community is exacerbated through the process of conversational interaction and media exposure.

Table 4: Indicators of Collective Stress Observed Across Studies

Collective Stress Marker	Description	Observed Outcome
Shared Fear	Community-wide anxiety symptoms	Widespread vigilance
Panic Behaviors	Hoarding, avoidance, rumor circulation	Disruption in social order
Emotional Fatigue	Group-level burnout and pessimism	Reduced resilience
Social Polarization	Tension due to conflicting narratives	Fragmentation of public discourse

The table 4 clarifies that collective stress is not a vague construct—it has identifiable behavioural, emotional, and social markers validated in prior crisis research.

5.7 Discussion

5.7.1 Doomscrolling as an Uncertainty-Driven Coping Response

In summary, the findings indicate a common theme across all studies: doomscrolling results from people's need to cope with their feelings of uncertainty. When faced with a crisis, people have to deal with ever-changing threats, unclear signals about risk, and higher levels of fear, which often leads to them wanting to obtain clarity through continuously checking digital channels. This is consistent with earlier research showing that when people are faced with uncertainty, they tend to repeatedly check their smartphones or social networks (Elhai, et al., 2020). Though initially an adaptive behavior and helping people remain informed about an event (as in the case of a natural disaster), it quickly transitions into being maladaptive when the amount of information in an environment is full of alarming, fear-inducing material. Results suggest the transition from adaptive to maladaptive evaluates the beginning of a cycle of increased individual and collective emotional distress.

5.7.2 Platform-Driven Amplification of Negative Emotional Exposure

One additional, possibly major theme is how social media as a digital platform is heightening negative emotional exposure. Social media algorithms are designed to give preferential treatment to high-arousal, negative emotionally charged content; such content tends to be more engaging to users, as evidenced by the aforementioned examples (O'Reilly et al., 2018). Together with the finding of an established negativity bias for news (Soroka et al., 2019), users who are scrolling through social media at the time of crisis are inundated with posts that are sensationalized, threatening, and/or emotionally charged. Prior research on the effects of crisis-related media exposure has demonstrated that increased media use for crisis-related information correlates with greater anxiety, depressive symptoms, and emotional exhaustion (Bendau et al., 2021; Gao et al., 2020). Therefore, these findings further strengthen the assertion that platform design and curation of content do not simply act as a conduit for information dissemination, but they also serve as prominent catalysts in increasing emotional exposure during critical incidents.

5.7.3 Emotional Contagion and the Social Synchronization of Fear

The research further demonstrates that a person's feelings can be transferred to others through Emotional Contagion, and that these feelings can spread to many people. When one person expresses Fear, Worry, Stress, etc., another person may also express these same emotions. Emotional Contagion is the cause of all these patterns of emotion within a network or group (Nabi, et al.). The results of the study support this idea; the emotional overload from Doomscrolling creates a perfect environment for the quick spread of negative emotional signals throughout the network, which can produce a similar emotional "climate" across that entire network. This echo of Collective Emotion matches the earlier research on how the Social Media Environment allows Users to Mimic the Emotional Environment of their entire Network and increases overall Distress within the Community (Boursier et al.). Thus, the Integrating Discussion section provides a summary of how Collective Emotion derived from Doomscrolling is a connection between Individual Doomscrolling Behaviour and Collective Doomscrolling Experience through Emotional Contagion.

5.7.4 Misinformation as an Accelerator of Collective Threat Perception

Another central theme identified through this study is how misinformation Works To Create A Collective Sense Of Fear Among People. Evidence showed that through the process known as "doomscrolling", people are inundated with a flow of unverified messages related to a crisis and conspiracy theories, resulting In a Greater Sense Of Confusion About That Crisis And Greater Risk Perceptions. Previous Studies Have Shown That Misinformation Results In Less Emotional Response By Increasing The Perception Of Scarcity And Threat (Nekmat, 2022; Laato & al., 2020). This Study Also Supports This Finding By Demonstrating How Misinformation Distorts Users' Ability To Gauge The Severity Of A Crisis, And In Doing So, Increases The Speed At Which The Experience Of Anxiety Is Passed Socially. In This Way, Misinformation Acts As An Accelerator, Thus Turning Individual Uncertainty Into A Collective Apprehension.

5.7.5 Convergence Toward Collective Stress as a Shared Emotional Outcome

Taken together, all of these interconnected dynamics lead to a state of collective stress at the population level characterised by high levels of anxiety, increased levels of tension (both physically as well as mentally), and fatigue at a community level. As users continuously access and post information that creates emotional cues for themselves most likely because of the initial trigger effect from their own individual doomscrolling behaviour, these studies show that the emotional state experienced by individual users eventually becomes a collective emotional state among all users of social media or other crisis media (Holman et al., 2014). In line with the above,

Garfin et al. (2020) also highlight how the repeated exposure to crisis media increases the overall levels of distress felt by the public and enhances the level of psychological vulnerability at a community level. Therefore, in addition to the findings presented here, it can be inferred from these three studies that the act of doomscrolling (i.e., consuming large amounts of crisis media) transforms the state of emotional overwhelm experienced by the individual into societal stress.

6. CONCLUSION

This research illustrates that doomscrolling is more than simply engaging in a bad habit or using technology—it represents a major socio-psychological process whereby individual emotional distress is transformed into collective emotional stress. This study traces the chain reaction from crisis-induced uncertainty to compulsive information-seeking behaviour, emotional overload, social amplification, and the creation of community-level tension—which shows that the digital information share ecosystem can greatly influence how community members experience the emotional climate during a crisis. Doomscrolling begins as an attempt to deal with the uncertainty surrounding a crisis; however, continued exposure to negative and repeated messages about a crisis will create increasing levels of anxiety and cognitive fatigue. When these emotions flow through social networks, they become amplified by misleading or false information, platform amplification, and gradually move toward a common state of fear, exhaustion, and anxieties about society. In this case, the resulting collective stress reflects a common emotional state that will affect all members of a community regardless of their actual level of engagement with the crisis. The findings of this study illustrate the need for more integrated strategies in crisis response to include individual digital behaviours, the dynamics of emotion, and social media environments. To effectively deal with and reduce the negative psychological impact of doomscrolling, we must not only provide individual coping mechanisms for those engaged in the activity, but we also need to develop surety in platform design, provide information governance that is stronger than what currently exists, and create society-wide awareness initiatives to significantly reduce the overall psychological burden placed on communities during global crises.

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