

## Rumination as a Mediator between Personality and Negative Behavioral Outcomes: A Theoretical Model

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### ABSTRACT

Covid-19 pandemic has been one of the most uncertain and challenging times in people's lives. Without doubt, it has resulted in a massive shift in people's emotional capabilities to regulate and maintain positive emotions, while also making it hard to reduce negative effects. Our paper corroborates Lazarus and Folkman's theory of stress and coping to understand how individuals cope with stressful situations, such as the ongoing pandemic. Further, this paper argues that individuals with certain personality traits, especially low emotional stability, use rumination in the context of maladaptive coping strategies to deal with stressors. This may lead to negative interpersonal and intrapersonal behavioral outcomes that are highly detrimental to an individual's psychological well-being. Our model provides a roadmap to future researchers to further investigate the link between personality, maladaptive coping and behavioral outcomes in unusual and unforeseeable circumstances. We also suggest mindfulness as a remedy to problematic coping strategies during times of extraordinary stress.

**Keywords:** *Rumination, Mediator, Personality, Negative Behavior, Theoretical Model*

The COVID-19 pandemic has severely impacted our lives and reminded us of the uncertainty of life-changing events (Qiu et al., 2020; Prikhidko, 2020). Research has attempted to understand how environmental stressors influence individual coping responses in the context of personal dispositions (Carver & Smith, 2010), but research has not theoretically extended this model to the context of COVID-19. The aim of this paper is to extend the transactional theory of stress, to the context of individuals who possess certain personality traits under stress caused by COVID-19, and further examine how those personality traits may predispose those individuals to use certain cognitive processes resulting in unfavorable behavioral outcomes.

The transactional theory of stress was first given by Lazarus and Folkman (1984). The theory suggests that stress is the direct product of a transaction between an individual and their environment which may tax their resources and thus threaten their well-being (Lazarus, 1986, Lazarus & Folkman, 1987). According to Lazarus and Folkman's transactional theory of stress and coping, individuals are constantly appraising stimuli within their environment

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(Biggs, Brough & Drummond, 2017). This appraisal process generates emotions, and when stimuli are appraised as threatening, challenging, or harmful (i.e., stressors) and the resultant distress initiates coping strategies to manage emotions or attempt to directly address the stressor itself (Biggs, Brough & Drummond, 2017). In the context of COVID-19, such stress may lead to extremely negative behavioral outcomes for e.g., “a 14-year old girl allegedly committed suicide in Kerala’s Malappuram as she was disturbed because she could not attend online classes since her family did not have either a TV or smartphone (Hindustan Times, 2020).

There are two important factors that may predispose the individual to employ maladaptive coping responses resulting in negative behavioral outcomes: personality and cognition. According to trait theory, personality can be viewed as a stable set of dispositions that influence the way we think, feel and behave. Carver and Smith (2010) posit certain personality traits like low emotional stability can result in individuals employing maladaptive coping response, such as an emotion focused disengagement coping response. Such a coping response is characterized by taking an affective response that attempts to avoid the stressor instead of proactively deal with it.

Low emotional stability or neuroticism is characterized as worrying, insecure, self-conscious, and temperamental (Costa & McCrae, 1987). They may more frequently use inappropriate coping responses like hostile reactions and wishful thinking because they must deal more often with disruptive emotions (Costa & McCrae, 1987), for e.g., individuals high in neuroticism have more difficulty than others in quitting smoking because the distress caused by abstinence is stronger for them (Costa & McCrae, 1987). These patterns extend to other tendencies such as overeating, smoking or drinking excessively, form a facet of neuroticism (Costa & McCrae, 1980).

In the context of transactional theory, the cognitive phenomenological processes that enable individuals to attribute meaning to their environment, analyzing the relational, dynamic nature of the transaction in which stress may arise (Lazarus, 1966; Lazarus and Folkman, 1984), which may result in maladaptive cognitive processes such as rumination. Rumination is a mode of responding to distress that involves repetitively and passively focusing on symptoms of distress and on the possible causes and consequences of these symptoms (Nolen-Hoeksema, 2008). Rumination exacerbates depression, enhances negative thinking, impairs problem solving, interferes with instrumental behavior, and erodes social support (Nolen-Hoeksema, 2008).

Rumination exacerbates and prolongs distress, particularly depression, through several mechanisms (Nolen-Hoeksema, 2008). First, rumination enhances the effects of depressed mood on thinking, making it more likely that people will use the negative thoughts and memories activated by their depressed mood to understand their current circumstances (Nolen-Hoeksema, 2008). Second, rumination interferes with effective problem solving, in part by making thinking more pessimistic and fatalistic (Nolen-Hoeksema, 2008). Third, rumination interferes with instrumental behavior, leading to increases in stressful circumstances (Nolen-Hoeksema, 2008). In addition, Nolen-Hoeksema and Davis (1999) argued that people who chronically ruminate will lose social support, which in turn will fuel their depression. These consequences of rumination then make it more likely that the initial symptoms of depression will become more severe and evolve into episodes of major depression (Nolen-Hoeksema, 2008). In addition, they could prolong current depressive episodes (Nolen-Hoeksema, 2008). In a study by Morrison and O’Connor (2005), the

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interaction between rumination and stress predicted changes in anxiety and insomnia, social dysfunction, and depression, was partially supported.

Nevertheless, specific personality traits and maladaptive cognitive processes are not enough to result in negative behavioral outcomes, unless they act in tandem in the presence of an extra-ordinary stressor like COVID-19. In this paper, we argue that certain personality profiles, specifically individuals low on emotional stability and who partake in rumination as part of an emotional disengaged coping response are likely to exhibit a variety of negative behavioral outcomes in the context of extraordinary stress such as the current pandemic.

Examining literature associated with rumination, we organize negative behavioral outcomes around intrapersonal outcomes and interpersonal outcomes. We further divide intrapersonal outcomes into online and offline behaviors, and interpersonal outcomes directed at self and at others.

Intrapersonal outcomes refer to behaviors directed towards the self. These outcomes consist of acts of violence that imply “any attitude or act of self-injury that damages the individual’s physical and psychological well-being, and capacity for self-care” (Bulhan, 2004). In the context of the present study, intrapersonal outcomes are categorized into online and offline outcomes. Online outcomes can be understood in the context of the digital world and comprises negative coping strategies such as internet addiction. Offline outcomes, on the other hand, consists of maladaptive coping behaviors in an individual’s physical world. These majorly consist of mental health concerns like depression.

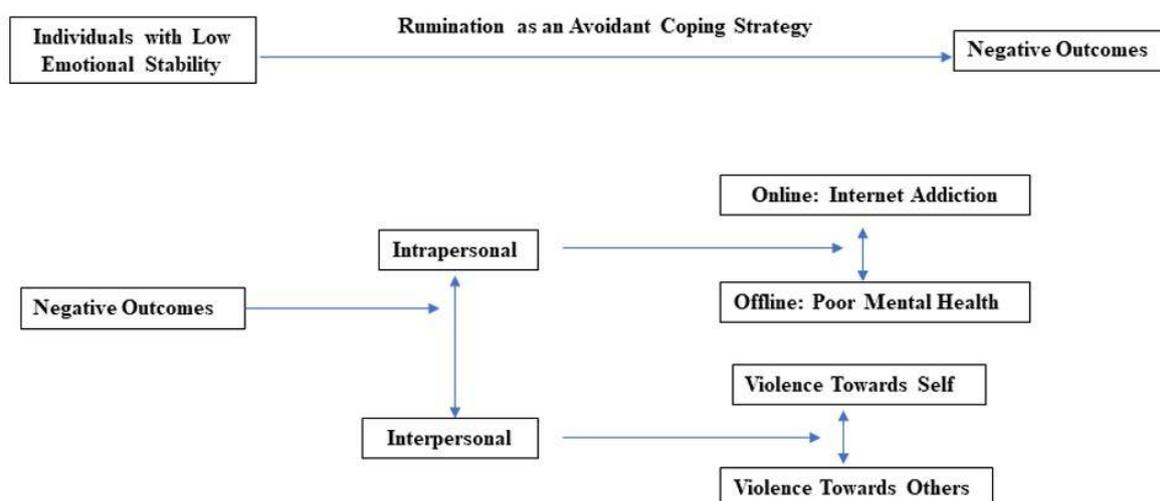
The digital world has facilitated the use of intrapersonal coping outcomes that are highly maladaptive in nature like internet addiction. It is associated with excessive or poorly controlled preoccupations, impulses, or behaviors related to computer use and internet access that cause impairment or suffering (Shaw & Black, 2008). Prior research has linked the use of coping strategies by distressed individuals with internet addiction (Hasan & Jaber, 2020). However, more research is required to specifically assess if internet addiction itself is used as an avoidance-oriented strategy predicated by rumination by distressed individuals with low levels of emotional stability. On the other hand, a key intrapersonal offline outcome of rumination is poor mental health. As state above, research has shown rumination to be chiefly with depression. Further, intrapersonal online and offline outcomes are cross-linked, for e.g., a recent study on adolescents in Turkey found that rumination is positively associated with internet addiction, and depression can often play a mediating role between the two constructs (Bağatarhan & Siyez, 2020).

In addition to intrapersonal outcomes, the stressors associated with COVID-19 have resulted in interpersonal outcomes as well. Interpersonal refers to behaviors between and among individuals and groups. Studies on rumination show that it has an impact at the interpersonal level, specifically on aggression. Individuals who ruminate on anger-provoking incidents and focus on anger inducing thoughts (e.g., thoughts about revenge) are more likely to be aggressive (Denson et al, 2012). Another study by Pedersen et al. (2011) found rumination criticizing oneself to create negative affect and anger at oneself, while rumination criticizing others result in angry affect, aggressive action cognition, and cardiovascular arousal. Aggression may lead to violence. Violence can be defined as “an extreme form of aggression that has severe physical harm (e.g., serious injury or death) as its goal.” (Anderson & Bushman, 2002). Interpersonal violence can be categorized into violence directed towards self and violence directed towards others. Self-directed violence is

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measured by suicide attempts, recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior. Violence directed towards others, on the other hand, consists of aspects of interpersonal aggression that are usually measured by an individual's engagement in activities like intimate partner violence, mugging, sexual coercion, physical fights, use of weapons, infliction of major injuries etc. (Harford et al., 2017). A study conducted to understand the relationship between rumination and non-suicidal self-injury found high rumination and experiences of numerous painful events led to higher frequency of non-suicidal self-injury (Selby et al., 2009). Babcock and Potthoff (2020) suggested anger rumination may increase the chance of committing a violent act against one's partner through a possible physiological process. Ruddle et al. (2017) predicted rumination coupled with low self-regulation may cause inter-partner aggression.

### COVID-19 as an Extra-Ordinary Stressor



## CONCLUSION

The extraordinary circumstances of the COVID-19 pandemic have emerged as a prominent psychological stressor in the lives of individuals. The pandemic has resulted in an economic crisis, job loss, loss of lives, deterioration in social interactions and a multitude of other complications. Over the years, research has attempted to understand the role of an individual's personality in coping with such extreme stressors. The leading theory on coping with stress has been provided by Lazarus and Folkman. Lazarus & Folkman (1984) explained "coping as a phenomenon involves both cognitive and behavioral responses that individuals use in an attempt to manage internal and/or external stressors perceived to exceed their personal resources" (Echemendia, 2019). They also claimed that individual differences existed in how people reacted to stress. Therefore, this present study posits individuals with certain personality traits, such as low emotional stability are more prone to using maladaptive coping strategies such as rumination. This in turn may lead to a host of negative behavioral outcomes.

One remedy for rumination is mindfulness. Mindfulness is often defined as the awareness that arises through “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn, 2013). A study conducted to understand the impact of mindfulness-based stress reduction (MBSR) concluded that adults who completed MBSR not only showed increased mindfulness but also overall well-being, reduced rumination, and decreased depression symptomatology (Deyo et al., 2009). Another study found mindfulness was significantly negatively correlated with rumination (Raes & Williams, 2010).

Future research on our model should focus on three fronts: (1) empirical research should examine the robustness of the theoretical links of our model; (2) researchers should attempt to examine more personality traits that may predispose an individual to ruminate; (3) research should examine how state and trait mindfulness can act as potential moderators in our model.

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