LEADERSHIP AND EMPLOYEE PERCEIVED STRESS: MODERATING ROLE OF FINANCIAL THREAT AND CO-WORKER SUPPORT

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Abstract

This study investigated factors that influence the relationship between leadership styles (transformational and laissez-faire) and employee perceived stress during COVID-19 (N = 145). Using the Conservation of resources theory, I identified and tested two factors that may moderate the effects of leadership styles on employee perceived stress: financial threat and co-worker support. Co-worker support was found to moderate the relationship between transformational leadership and employee perceived stress. Financial threat was found to moderate the relationship between laissez-faire leadership and employee perceived stress. These findings contribute to the literature on leadership and employee stress and suggest that co-worker support and financial threat could moderate the positive or negative outcomes related to leadership styles.

Keywords: COVID-19. leadership; transformational leadership; laissez-faire leadership, perceived stress, conservation of resources, financial threat, co-worker support

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Introduction

For individuals working in organizations, interaction with their leaders is an important aspect of work. There is a growing body of literature showing support for the notion that the style of leadership often has a positive or negative relationship with employee stress (Skakon et al., 2010). Researchers have begun to uncover moderators of leadership style – employee perceived stress relationship. The current research aims to improve the understanding of leadership styles and their impact on employee perceived stress during COVID-19. This study adds to a growing body of work by investigating two factors that may moderate the effects of leadership styles on employee perceived stress: financial threat and co-worker support.

A considerable amount of literature has been published on the relationship between leadership and employee stress (Yao et al., 2014). Employee stress has negative repercussions in the workplace such as increased interpersonal conflict, absenteeism and turnover (Yao et al., 2014). Hence, lowering employee stress could be associated with better organizational outcomes and lower human resource costs. Leadership styles of supervisors can influence employees stress either positively or negatively (Gill et al., 2006; Yao et al., 2014). However, the majority of the literature has focused on transformational leadership and its impact on employee stress (Diebig et al., 2017), and fewer studies have investigated laissez-faire leadership (Skogstad et al., 2007). Also, less attention has been paid to factors that could potentially moderate the relationship between leadership styles and employee perceived stress (Arnold, 2017). Thus, studying leadership style and employee stress levels is important, because leadership style has a strong association with employees stress levels (Harms et al., 2017; Sosik & Godshalk, 2000).

The current research analyzes the relationship between leadership styles and employee perceived stress and examines the moderating effect of financial threat and co-worker support on this relationship in the context of COVID-19. Since the beginning of 2020, COVID-19 has shifted how many organizations function (Campbell & Gavett, 2021) and created change in the working conditions of many employees. One of the contributions of this study is to test whether the relationships between transformational leadership and employee perceived stress, and laissez-faire leadership and employee perceived stress hold in the context of changing working conditions during COVID-19. The second contribution is to test the boundary conditions of these relationships, i.e., do financial threat and co-worker support moderate these relationships during COVID-19? The third contribution is examining laissez-faire leadership, which has been largely ignored in past research (Skogstad et al., 2007). This research is important because previously leaders have been found to make a difference to employee stress levels (Russell, 2014). Also, stress levels are rising with the current global pandemic (Gallup, 2021). Therefore, leadership may be even more important to examine given the current COVID-19 crisis. Key terms will be defined more fully later in the literature review.

Theoretical framework

This study is theoretically grounded in the conservation of resources theory (Hobfoll et al., 2003; Modrzynski, 2018). Conservation of resources theory is one of the most widely cited theories used in organizational behavior (Hobfoll et al., 2018). Hobfoll (1989) defines *resources* as objects, conditions, personal characteristics, and energies that are valued by the individual. Among these valued resources include health, wellbeing, family, self-esteem, and a sense of purpose in life (Hobfoll et al., 2018). In his paper, Tran (2019) provides examples of resources. An object such as a home is considered a resource because it provides shelter and socio-

economic status. A condition such as marriage is a resource if it is perceived as valuable by the individual. Based on conservation of resources theory, I conceptualize leadership styles as resources for employees.

Conservation of resources (COR) theory states that the purpose of the majority of human activities is gaining, maintaining, and protecting resources (Modrzynski, 2018). In his review article, Hobfoll et al. (2018) established that there are four principles of COR theory. The first principle is that resource loss is disproportionately more important than resource gain. Hobfoll et al. (2018) further argue that resource loss affects people more quickly than resource gain. The second principle is that people must invest in resource gain to protect themselves against resource loss. The third principle of COR theory is that resource gain becomes more important when resource loss is significant. Finally, the fourth principle is that individuals become irrational and aggressive to protect resources when resources have been overstretched. People need resources to either manage stress or build up resource reservoirs for future needs (Guan & Frenkel, 2019). There are two reasons why the current study uses COR theory as the main theoretical lens.

First, the COR theory has been used to ground previous research on leadership (Guan & Frenkel, 2019; Hobfoll et al., 2018; Huang et al., 2020; Kim et al., 2016; Tran, 2019; Wu & Lee, 2020) and stress (Halbesleben, 2006; Hobfoll, 1989; Hobfoll et al., 2003, 2018; Rubino et al., 2012). For example, Wu and Lee (2020) conducted a survey among healthcare workers in individuals and in groups. They found that transformational leadership promoted employee personal and positive psychological resources and was associated with an increase in knowledge-sharing behavior. In his study, Hobfoll (2003) interviewed inner-city women (with a focus on low-income and women of color) and found that resource loss was associated with increased

psychological distress resulting in depressive mood and anger. Most of the women in the study had limited resource reservoirs and had to deal with many stressors. As such, their resource loss was acute, and consequently, they displayed high levels of depressive mood. And secondly, COR theory is the primary theory used to discuss how individuals deal with resources (Wu & Lee, 2020). Thus, COR theory is the main theoretical basis of this study.

Objectives of the study: Research question

Past research supports the assertion that certain leadership styles reduce employee perceived stress, and others increase stress. Due to COVID-19, many employees are going through traumatic experiences, dealing with complexity, and as such, they will need emotional and psychological support (Dirani et al., 2020). The main objective of this study is: to determine the relationships between transformational and laissez-faire leadership and employee perceived stress, in the context of COVID-19. The overarching research question for the study is: *Do leadership styles have an impact on employee perceived stress during COVID-19 when changes in working conditions are likely?*

Specific research questions are as follows:

1. What is the relationship between transformational leadership and employee perceived stress during Covid 19?
2. What is the relationship between laissez-faire leadership and employee perceived stress during Covid 19?
3. Does financial threat moderate these relationships?
4. Does co-worker support moderate these relationships?

Visual summary of the relationships can be found in Figure 4.1 of Appendix 4.

COVID-19

Initially originated in Wuhan, China; the novel coronavirus (COVID-19) has brought the entire world to its knees, causing a global health emergency (Ansell et al., 2020; Brancaccio et al., 2021; Dirani et al., 2020; Lee & You, 2020; Li et al., 2020). Since the beginning of 2020, COVID-19 has been declared a pandemic by the World Health Organization (WHO) (Spinelli & Pellino, 2020). Unsurprisingly, the spread of COVID-19 has caused widespread concern, fear, and stress on a global scale (Lahiri et al., 2021). After the initial couple of weeks, most of the population across the globe were confined in isolation and quarantine to reduce the spread of COVID-19.

As a way to control COVID-19, governments across the world have imposed rules and restrictions through social distancing, isolation, and home confinement following public health guidelines (Ammar et al., 2020). Campbell and Gavett (2021) argue that the general well-being of people has been affected due to isolation and feeling a loss of control over life and work. As a side effect of the measures to control COVID-19, organizations and businesses have been impacted structurally and economically. Organizations have been forced to limit interactions among employees by implementing work-from-home (WFH), which has uprooted established work-processes and decimated work-life balance while increasing workloads and working hours (Campbell & Gavett, 2021; Daraba et al., 2021). The National Bureau of Economic Research reported that 30% of American workers switched to working from home and that 10% were fired during the first half of 2020 (Brancaccio et al., 2021).

Characteristically similar to previous crises, the COVID-19 pandemic has given rise to a variety of psychological stressors that may contribute to peoples' psychological outcomes (Adamson et al., 2020). Lahiri et al. (2021) found that generalized anxiety and concerns related

to the COVID-19 pandemic were associated with higher degrees of insomnia among participants in India. Bhowmick et al. (2021) argue that fear, frustration, and financial loss due to COVID-19 coupled with increased lockdown periods could easily lead to increased stress. One of the many repercussions of COVID-19 has been an increase in stress amongst the general population (Bhowmick et al., 2021).

Stress

Stress is an individual's psychological response to a situation in which the individual feels there is something at stake and that the situation exceeds their resources to deal with it (Zhang et al., 2014). Skakon et al. (2010) described stress as an unpleasant emotional experience, which entails elements of fear, anxiety, irritation, anger, and depression. Stress can be due to various reasons, whether personal (age and gender) or external (work-related or physical) (Manning et al., 1996). According to Hobfoll (1989), stress is linked with mental health, many problems of physical health, and is a major factor affecting peoples' lives. In his study, George et al. (2017) concluded that perceived stress could lead to various negative outcomes such as burnout, employee turnover, reduced productivity, and well-being.

Previously, researchers in organizational behavior have utilized resource loss to understand stress and strain (Halbesleben et al., 2014). *Strain* is defined as a negative response to stressors (Rubino et al., 2012). *Stressors* are environmental conditions or demands that evoke the stress process (Zhang et al., 2014).

COR theory posits that stress occurs when a) key resources are threatened with loss, b) key resources are lost, or c) when the individual fails to gain control of key resources (Hobfoll et al., 2018). So, stressful life conditions both directly and indirectly impact resource reservoirs (Hobfoll et al., 2003). Accordingly, Hobfoll et al. (2003) concluded that resource loss is critical

in the stress process, and mobilizing remaining resources in the event of a stressful life situation may negate some of the negative impacts of stressful life circumstances. Thus, in the face of stressful life events, such as Covid 19, one should focus on enhancing their coping resources and resource preservation. COVID-19 has given rise to increased stress (Bhowmick et al., 2021). Bhowmick et al. (2021) conducted an online cross-sectional survey among the general population of West Bengal, India during the initial lockdown period and found that the participants reported feeling anxious. Adamson et al. (2020) conducted a global survey through social media during the early stages of pandemic and found that perceived stress was higher during COVID-19. Ravaldi and Vannacci (2020) conducted a cross-sectional web-based survey during phase-1 and phase-2 of COVID-19 lockdown in Italy on pregnant or post-partum women and reported that about 54.9% of the participants felt COVID-19 related anxiety. The women in the survey were mostly concerned about the health of their baby, partner and elderly relatives. Thus, employee resources may be depleted because of COVID-19, and as a result, they may experience an increase in perceived stress.

However, there is a growing body of research that demonstrates that perceived support from leaders is related to less perceived stress among employees (Nielsen et al., 2016).Accordingly, it can be argued that constructive leader behavior might help prevent further resource depletion of employees and, as a result, reduce perceived stress. On the other hand, destructive leader behaviour could increase employee perceived stress, especially during this crisis. Research findings demonstrate that employee perception of their leaders' behaviour matters (e.g., Arnold, 2017), but does leadership matter when an employees' working conditions are changing? Hence, I examine two types of leadership that could potentially be associated with employee perceived stress levels during a time of change. One such leadership style that I am

focusing on is transformational leadership since it has been associated with reduced employee stress in previous literature (Skakon et al., 2010; Sosik & Godshalk, 2000).

Transformational leadership and employee perceived stress

The extant literature defines leadership in many ways. George et al. (2017) described leadership as "the ability to guide followers towards shared goals and as a form of influence" (p. 3). According to Avolio et al. (1999), the best leaders are "able to get others to go beyond their own self-interests for the good of the group" (p. 443). Montano et al. (2016) defined leadership as a social influence process between leaders and followers, which helps accomplish organizational objectives. Researchers have referred to leaders as people being in possession of certain skills and capabilities (George et al., 2017; Skakon et al., 2010). To refine the notion of leadership, Bass (1999) proposed the full range of leadership theory which suggests that every leader displays either one or a combination of three leadership styles: transformational leadership, transactional leadership, and laissez-faire leadership. Leadership styles are the behaviors leaders utilize to influence the behaviors of employees (Skakon et al., 2010), and transformational, transactional and laissez-faire leadership styles are frequently researched in the leadership literature (Chen & Silverthorne, 2005).

Transformational leadership is defined as a form of leadership style in which leaders increase the awareness and commitment of individuals and enable them to transcend their own self-interests for the betterment of the group as a whole (Seltzer et al., 1989). Transformational leadership creates a work environment that fosters motivation and commitment while mobilizing the workforce under the organization's vision through clear communication of the organizational objectives (Gill et al., 2006). Of the three leadership styles described above, transformational

leadership is considered to be the most effective (Diebig et al., 2017; Sosik & Godshalk, 2000; Wu & Lee, 2020). According to George et al. (2017), when people imagine a leader, a transformational leader is close to the ideal that they have in mind. An in depth review of the literature on transformational leadership reveals that it has four key elements: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio, 1999; Diebig et al., 2017; Salem, 2015). Avolio (1999) further described the key elements as follows: idealized influence is the ability to be an effective role model; inspirational motivation is a leader's ability to inspire, intellectual stimulation is a leader's ability to stimulate colleagues to be innovative and individualized consideration is when the leader is a mentor, counselor, and facilitator. Examples of transformational leader behavior include mentoring employees, helping employees to complete various tasks, and increasing open communication with employees (Gill et al., 2006; Sosik & Godshalk, 2000; Yao et al., 2014).

Over the last two decades, there has been an interest how transformational leadership style is associated with employee stress. There is a growing body of research that has found that transformational leadership is associated with reduced employee stress (e.g., Bono et al., 2007; Diebig et al., 2017; Gill et al., 2006; Harms et al., 2017; Kanste et al., 2007; Offermann & Hellmann, 1996; Pishgooie et al., 2019; Salem, 2015; Schulz et al., 1995; Seltzer et al., 1989; Sosik & Godshalk, 2000). Harms et al. (2017) conducted a meta-analysis of 243 articles and found that higher levels of transformational leadership were associated with subordinates reporting lowered stress levels. Recently, Diebig et al. (2017) were able to investigate day level transformational leadership. They conducted a diary study over five consecutive workdays and found that transformational leadership was significantly negatively related to followers' day-to-day stress levels. Also, Pishgooie et al. (2019) analyzed the relationships between

transformational leadership and job stress among nurses in government hospitals in Iran and found a negative correlation between this relationship. Notably, Parasuraman and Alutto (1984) examined the influence of transformational leadership on job stress among customer contact service employees working in the hospitality industry in the Canada and found that transformational leadership was associated with reduced job stress. During the interviews, the employees reported reduced job stress if they perceived their managers to be utilizing transformational leadership. Bono et al. (2007) conducted paper surveys and experience sampling through handheld computers among healthcare workers for two weeks and found that employees whose supervisors showcased transformational leadership experienced more positive emotions throughout the day. Specifically, Salem (2015) observed a significant negative correlation between transformational leadership and job stress among employees in five-star hotels in Egypt. In their study, transformational leadership increased communication with followers and, in turn, reduced employee job stress. Also, among full-time corporate workers in mentoring relationships, Sosik and Godshalk (2000) found that mentor transformational leadership was associated with reduced protégé job-related stress. Hence, the accumulative research suggest that transformational leadership is negatively associated with employee perceived stress.

A COR approach suggests that transformational leadership may provide some much-needed solace to employees by replenishing resources while preventing further resource depletion, and thereby reducing stress. Based on previous research and theoretical arguments, I predict:

H1: Transformational leadership will be negatively associated with employee perceived stress.

Laissez-faire leadership and employee perceived stress

Historically, researchers have focused on constructive forms of leadership instead of negative forms of leadership such as laissez-faire (Skogstad et al., 2007). Even though the majority of leadership studies have focused on positive forms of leadership, leaders do not always engage in a positive manner with their employees (Kim et al., 2016).

Laissez-faire leadership is defined as the avoidance of decision-making or supervisory responsibility (George et al., 2017). Examples of laissez-faire leader behavior include failing to provide information or feedback to employees, lack of leaders' communication, and failing to recognize employees or their needs (Skogstad et al., 2007; Sosik & Godshalk, 2000). Patterned after leaders who are physically present but have abdicated their responsibilities (Frischer & Larsson, 2000), laissez-faire leadership is considered to be a failure on the part of the manager to take responsibility (George et al., 2017). Often categorized as the most ineffective and passive style, laissez-faire leadership is the epitome of delays in action, absence, and indifference (Sosik & Godshalk, 2000). A laissez-faire leadership style can result in severe consequences for employees and organizations (Frischer & Larsson, 2000). Skogstad et al. (2007) argue that the absence of positive leader behavior is not fulfilling subordinates' expectations and, as a result, increases subordinate stress. The absence of positive forms of leadership is not a 'zero-state' of leadership, but rather destructive (Skogstad et al., 2007). Therefore, it is surprising that empirical research on laissez-faire leadership and its negative consequences is scarce (Skogstad et al., 2007).

Over the last two decades, a handful of researchers have examined the relationship between laissez-faire leadership and stress among employees (e.g., Diebig & Bormann, 2020; Harms et al., 2017; Norris et al., 2021; Pishgooie et al., 2019; Skogstad et al., 2007, 2014).

Pishgooie et al. (2019) conducted a cross-sectional correlational study among nurses from government hospitals in Iran. Their results showed a significant positive correlation between laissez-faire leadership and job stress. Diebig and Bormann (2020) conducted a diary study spanning over five days to investigate how daily laissez-faire leadership was linked to followers' daily stress. Their results showed a positive correlation between daily laissez-faire leadership and followers' daily stress levels. Norris et al. (2021) conducted two cross-sectional surveys amongst employees in a US health care organization and found that perceived laissez-faire leadership was associated with an increase in workplace stressors. Skogstad et al. (2014) conducted a longitudinal survey among Norwegian working employees and found that laissez-faire leadership significantly accounted for subsequent variation in role ambiguity in employees over both time lags investigated. As such, poor leadership in the form of laissez-faire leadership was the root cause of employee stress through role ambiguity. In their non-experimental survey, Kanste et al. (2007) found that laissez-faire was positively related to emotional exhaustion among nurses. Thus, leaders have the ability to increase employees' psychological stress by being laissez-faire (Nyberg et al., 2009). In sum, these studies found a positive correlation between laissez-faire leadership and stress in employees along with other negative outcomes such as exhaustion.

Under COVID-19 induced work-from-home, managers are forced to manage their employees at a distance, which could have implications for their leadership behavior (Stoker et al., 2021). Since COVID-19 has resulted in an increase in stress among the majority of people (Adamson et al., 2020; Bhowmick et al., 2021), leaders themselves may be stressed. In recent years, there has been a growing interest in investigating leaders' personal resources and how it impacts leadership behaviors in organizations (Byrne et al., 2014; Diebig & Bormann, 2020). Byrne et al. (2014) investigated the relationship between leaders' depleted resources and their

behaviors through a cross-sectional online survey among leaders and followers in the USA and Canada and found that leaders' resource depletion predicted their leadership behavior. In their meta-analysis, Harms et al. (2017) found that leader stress was associated with poorer leadership because it would drain their cognitive and emotional resources, thus making it difficult for leaders to be effective in their roles. According to Diebig and Bormann (2020), effective leader behavior requires personal resources on behalf of the leader. Hence, if leaders' resources are depleted, they might reduce their effort in leadership behavior (Diebig & Bormann, 2020).

Since many employees who previously never worked from home are working from home, and they have less face-to-face contact with their leaders, it may be likely that employees will perceive their leader as laissez-faire. Also, leaders themselves may be depleted of their resources, and as a result, engage in laissez-faire leadership. Based on past research and theoretical arguments, I predict:

H2: Laissez-faire leadership will be positively associated with employee perceived stress.

The moderating role of financial threat

Perceived financial threat is defined as a state of fearfulness, anxious-uncertainty, and cognitive preoccupation that people feel when they are insecure about their personal financial resources (Marjanovic et al., 2018). Marjanovic et al. (2018) further explain that perceived financial threat is based on the idea that people want to maintain a positive balance between their income and expenses so that they can provide for themselves and their loved ones. Past research has focused on the relationship between financial outcomes and stress (e.g., Brown et al., 2005; Fiksenbaum et al., 2017; Furey et al., 2016; Mamun et al., 2020; Marjanovic et al., 2013; Viseu et al., 2018). Fiksenbaum et al. (2017) conducted a cross-sectional online survey with 418 participants and found that financial threat was significantly and positively related to

psychological distress. In another study, Mamun et al. (2020) found that among job seekers in Bangladesh, financial threat was moderately positively correlated with stress. Marjanovic et al. (2013) found that deterioration of personal finances was associated with increased fear, uncertainty, and worry about being able to maintain one's living standards. This feeling of financial threat in turn, was highly correlated with common stress reactions, such as psychological distress and depression. Furey et al. (2016) conducted a study among dairy farmers and found that financial worries reduced the farmers' available resources and as a result, they were struggling to deal with farm activities.

According to Marjanovic et al. (2013), perceived financial threat would be higher in times of economic crisis. The 2008 global economic crisis had a tremendous impact on employment trends along with physical and psychological wellbeing of the general population (Fiksenbaum et al., 2017). Fiksenbaum et al. (2017) further established that the main reasons for concern for individuals were unstable employment and personal financial situations. Viseu et al. (2018) conducted a cross-sectional survey in Portugal during a severe economic crisis between 2011 and 2014 to assess the relationship between financial threat and stress, anxiety, and depression. The authors found that financial threat was positively and significantly associated with all three negative outcomes.

COVID-19 has had a tremendous effect on economic and human health due to businesses shutting down, trillions in economic loss worldwide, and millions of people becoming jobless overnight (Dhar et al., 2020). As such, because of economic shutdowns and uncertainty due to COVID-19, employees may feel financially threatened. Previously, the majority of researchers have investigated the relationship between financial threat and stress directly, and some have tested the impact of financial threat as a mediator between economic hardship and distress.

Fiksenbaum et al. (2017) tested the impact of financial threat as a mediator between economic hardship and psychological distress. Following the COR theory, individuals' resources are depleted when faced with stressful situations (Hobfoll, 1989). I conceptualize financial threat as an additional factor that is resource depleting. When an individual is concerned about their ability to provide financially for themselves, they could feel financially threatened. This threat could theoretically change the relationship between either constructive leadership or destructive leadership and stress.

In this study, I investigate whether financial threat moderates the relationship between transformational leadership and employee perceived stress. I predict that transformational leadership leads to a smaller decrease in employee perceived stress when employees experience higher financial threat. Following the COR theory, individuals' resources may be depleted when faced with stressful situations. If employees are under a lot of financial stress, it may negate the positive effects that transformational leadership has on their resources. Therefore, the negative relationship between transformational leadership and employee perceived stress may be reduced and even become neutral when faced with financial threat. Hence,

H3: Financial threat will moderate the relationship between transformational leadership and employee perceived stress, such that the negative relationship between transformational leadership and employee perceived stress will be weaker for those who perceive more financial threat.

Second, financial threat may also moderate the relationship between laissez-faire leadership and employee perceived stress. COR theory posits that individuals lacking in personal resources will experience stress and be prone to further resource depletion (Byrne et al., 2014). The combination of a laissez-faire leader and high financial threat should be associated with

greater resource depletion (i.e., higher perceived stress) than if financial threat is low. Thus, financial threat may boost the positive relationship between laissez-faire leadership and employee perceived stress. I, therefore, predict:

H4: Financial threat will moderate the relationship between laissez-faire leadership and employee perceived stress, such that the positive relationship between laissez-faire leadership and employee perceived stress will be stronger for those who perceive more financial threat.

Financial threat is a resource depleting factor. Another factor that I am interested in, which could theoretically boost employees' resources is co-worker support.

The moderating role of co-worker support

Co-worker support is defined as providing desirable resources to other employees (Basford & Offermann, 2012). According to Basford and Offermann (2012), co-workers can influence their fellow employees and the working environment enormously. Previously, researchers have investigated co-worker support as a significant resource that can reduce employee stress (Baeriswyl et al., 2017; Chiaburu & Harrison, 2008; Fernet et al., 2010; Lowe et al., 2020). While I am proposing co-worker support as a moderator, a growing body of literature has shown that co-worker support is also negatively correlated with stress and burnout. For example, Chiaburu and Harrison (2008) conducted a meta-analysis and reported that co-worker support was negatively related to individuals' stress. Fernet et al. (2010) conducted a time-lagged survey among French-Canadian employees in Quebec, Canada, and found that employees who reported high-quality relationships with their co-workers reported less feelings of burnout. Also, Lowe et al. (2020) conducted a cross-sectional exploratory study among nurses and found that co-worker support was significantly negatively correlated to burnout. This indicates that when

employees feel increased support from co-workers, reports of burnout decrease. In their study, Baeriswyl et al. (2017) conducted a cross-sectional survey among employees in a research funding organization in Germany and found that employees' perception of co-worker support was associated with lower levels of emotional exhaustion. De Clercq et al. (2020) conducted two time-lagged paper and pencil surveys among six Pakistani organizations and found a link between employee reduced stress levels and co-worker support. Manning et al. (1996) argue that co-worker support could ameliorate the negative health effects of stress.

Aside from investigating co-worker support directly, researchers have also investigated co-worker support as a moderator of the relationship between employees' psychological strain and job stress. Karasek and Triantis (1982) tested the buffering effects of co-worker support using data collected from a US national survey in 1972. The authors found that employees reported feeling lower psychological strain in high-stress job situations when co-worker support was strong. In conjunction, these studies show a direct link between co-worker support and employees' reduced stress levels and that co-worker support moderated the relationships involving employee outcomes.

The COR theory provides support for formulating predictions regarding the role of co-worker support. Theoretically, co-worker support may boost the positive effect of transformational leadership. If employees have support from their co-workers and they have a transformational leader, then the relationship between transformational leadership and employee stress maybe even more negative than if employees did not have co-worker support. In their day-level longitudinal survey, Halbesleben and Wheeler (2015) investigated co-worker pairs across a wide variety of industries and suggested that co-workers play an important role in building a

resource base for fellow co-workers. Thus, co-worker support may help employees gain resources. Therefore, I predict:

H5: Co-worker support will moderate the relationship between transformational leadership and employee perceived stress, such that the negative relationship between transformational leadership and employee perceived stress will be stronger for those who report more co-worker support.

Second, co-worker support may also moderate the relationship between laissez-faire leadership and employee perceived stress. In previous studies, laissez-faire leadership has been positively associated with stress. Thus, if employees have co-worker support and they have a laissez-faire leader, it may buffer that relationship, i.e., reduce employee perceived stress. So, co-worker support may lessen this positive correlation by preventing further resource depletion associated with laissez-faire leadership and, therefore, reduce stress. In other words, co-worker support may protect employees from the negative effects of laissez-faire leadership. Based on these theoretical arguments, I predict:

H6: Co-worker support will moderate the relationship between laissez-faire leadership and employee perceived stress, such that the positive relationship between laissez-faire leadership and employee perceived stress will be weaker for those who receive more co-worker support at work.

Methods

Sample, Procedure, and Data Cleaning

There were two samples recruited for the study. First, a sample from social media. Ethics approval (see Appendix 1) was gained for creating one short participant recruitment message. Two versions of the message were created to distribute through social media websites (e.g., Facebook, Instagram, Twitter, and Reddit), asking permission of group administrators to have the message about the survey posted in groups. In return for participation, the participants were entered into a draw for one of four $25 Amazon.com gift cards. Interested participants clicked on the survey link which opened an informed consent page before starting the survey hosted by Qualtrics. Participants were asked if their working conditions had changed. If the answer was Yes, they continued with the survey. If the answer was No, they were taken out of the survey. The full measures can be seen in Appendix 2 and took on average of 20 minutes, with a median of 15 minutes to complete. Over the course of three months, 104 participants clicked on the survey link. A total of 47 participants were filtered out based on careless responding gauged by failure of attention check questions. If a participant failed at least one attention check question of the two included in the survey, they were removed from the data set. An example of an attention check question is “For this question, please choose strongly agree”. The median time for completing the survey was 897 seconds (about 15 minutes) where the 40% cut-off (McGonagle et al., 2016) for responding too fast is 358.8 seconds or less (about 6 minutes). None of the social media participants responded too fast to be removed. In total, 57 participants remained after completing the data cleaning process, resulting in 45% of the data set being rejected.

As recruiting participants via social media channels did not enable a large enough sample to test the hypotheses, and I was not convinced about the data quality given the large number of

deletions, a second form of participant recruitment from Mechanical Turk (MTurk) was utilized. After gaining Ethics approval (through an amendment – see Appendix 1), one short message was created targeted towards MTurk workers. MTurk is an online crowdsourcing marketplace where individuals pay others for services such as completing forms, spreadsheets, computations, or other similar tasks – including completing surveys. The posting was created on Amazon's MTurk website (https://www.mturk.com/) and a fee was paid to make the posting available to a set number of workers. In return for participation, each individual received $3. Interested participants clicked on the survey link which opened an informed consent page before starting the survey hosted by Qualtrics. Participants were asked if their working conditions had changed. If the answer was Yes, they continued with the survey. If the answer was No, they were taken out of the survey. The full measures can be seen in Appendix 2 and took on average 20 minutes, with a median of 15 minutes to complete. In two days, 112 interested participants clicked on the survey link. A total of 14 participants were filtered out based on careless responding gauged by failure of attention check questions. If a participant failed at least one attention check question (there were two included in the survey), they were removed from the data set. The median time for completing the survey was 897 seconds (about 15 minutes) where the 40% cut-off for responding too fast is 358.8 seconds or less (about 6 minutes). Of the individuals passing both attention check questions; 10 individuals were removed for responding too fast. There was one individual who took an excessively long time. This data was kept in the data set because the participant might have kept their browser window open and forgot to click "submit". In total, 98 participants' data sets remained after completing the data cleaning process, resulting in 12.5% of the data set being rejected.

In order to justify combining the samples from social media and MTurk, I compared the samples based on age, sex of participants, sex of their supervisor, and change in their working conditions since COVID-19. An independent samples t-test was conducted to explore differences between social media and MTurk participants in age. An alpha level of .05 was utilized. Variances were not homogeneous, $F(1, 141) = 5.51$, $p < .05$. Hence, equal variances were not assumed. A statistically significant difference was not evident between social media and MTurk participants, $t(105.604) = -1.85$, $p > .05$.

A chi-squared test of independence revealed that there was a significant difference between the samples in terms of sex, $\chi^2 (3, N = 145) = 10.92$, $p < .05$, and sex of their supervisor, $\chi^2 (2, N = 143) = 10.88$, $p < .01$. However, there was no significant difference in change in working conditions since COVID-19 between social media participants and MTurk participants, $\chi^2 (1, N = 145) = 2.23$, $p > .05$.

There were some differences in sex of participants and their supervisors between the social media and MTurk participants. The social media sample was more gender balanced in terms of sex of the supervisor, whereas the MTurk sample demonstrated a gender distribution in terms of leadership more similar to what would be expected in the general population. This is in line with the key finding in the World Economic Forum's Global Gender Gap Report (2021), where women were reported to hold only 27% of all managerial positions. 73% of the MTurk participants' supervisor were men, and 27% were women. The only difference between the samples was that social media participants had a more gender balanced in terms of the sex of the supervisor. Two other demographic variables of interest were the age of the participants and the change in working conditions since COVID-19. Since, the difference between the two samples' mean age and change in working conditions since COVID-19 were not statistically significant,

despite the difference in sex of participants the samples were not separated based on source. Another reason for combining the samples was that, even though there was a difference in sex breakdown of the sample, relatively equal numbers of men and women were recruited in total. Tables 3.1 and 3.2 describe the t-tests' and chi-square tests' results and can be found in Appendix 3.

Overall, the combined sample was composed of 50.3% female participants. The average age of participants was 37.3 years old (SD = 10.4). 61% of participants identified their supervisor as male. 92.4% of participants said their working conditions have changed since COVID-19. When responding about changes in working conditions, 50% of participants said they had been asked to work from home, 51% of participants said they had been told to work from home, 33% said their tasks had changed, 32% said their responsibilities had changed, 20% said their team has changed, 9% said their immediate supervisor had changed, 13% said they had less control over their daily work, and 29% said they had more control over their daily work.

Measures

All measures used in this study have been utilized and validated in previous research (see Appendix 2 for full measures).

Financial threat was measured with 5 items from financial threat scale developed by Marjanovic et al. (2013). A sample item is "How much do you feel at risk?" Items were rated on a 5-point scale ranging from 1 = Not at all to 5 = A great deal. The reliability of this scale was good with .92 Cronbach's alpha.

Transformational leadership was measured with 15 items developed by Rafferty and Griffin (2004). One negatively worded item was reverse-coded. Participants were asked to rate

how frequently their supervisor engages in various transformational behaviors on a scale of 1 = Strongly disagree to 5 = Strongly agree. Higher mean scores reflected higher perceptions of overall transformational leadership. A sample item is “My supervisor encourages people to see changing environments as situations full of opportunities”. Cronbach’s alpha was .93.

Laissez-faire leadership was measured using a scale from Hinkin and Schriesheim (2008). Eight items with seven response categories ranging from 1 = Strongly disagree to 7 = Strongly agree were included. Item examples are, “When I perform well my manager usually does nothing” and “My poor performance often gets no response from my manager”. The Cronbach’s alpha of the scale was .91.

Perceived co-worker support was measured using a 9 item scale developed by Ladd and Henry (2000) with response categories ranging from 1 = Strongly disagree to 7 = Strongly agree. Two negatively worded items were reverse-coded and higher mean scores reflected more perceived co-worker support. Example of items are: “My coworkers are supportive of my goals and values” and “My coworkers care about my opinions”. Reliability of the scale was good, as indicated by Cronbach’s alpha of .93.

Perceived stress was measured using a 10 items scale developed by Cohen and Janicki-Deverts (2012). Positively worded items were reverse-coded and higher scores reflected higher levels of perceived stress. The response scale of 1 = Never to 5 = Very often was used. Examples of items: “How often have you been upset because of something that happened unexpectedly?” and “How often have you felt that you were on top of things?”. Reliability was good, as Cronbach’s alpha was .90.

Results

Means, standard deviations, and intercorrelations among study variables appear in Table 3.3.

Hypotheses 1 and 2 were tested using ordinary least squares regression in IBM SPSS Statistics Version 24 (IBM Corp., 2016). Hypotheses 3, 4, 5 and 6 were tested using ordinary least squares regression analysis with Model 1 of the PROCESS macro (www.afhayes.com; version 2.16.3). The latter enabled a test of whether the interaction between financial threat and transformational leadership; co-worker support and transformational leadership; financial threat and laissez-faire leadership; and co-worker support and laissez-faire leadership, explained additional variance in employee perceived stress, over-and-above the conditional effects of transformational leadership and laissez-faire leadership.

Hypothesis 1 predicted that transformational leadership would be negatively associated with employee perceived stress. The results of the regression indicated that transformational leadership ($\beta = -.18$, $p < .05$) explained 3% of the variance in perceived stress, F (1, 143) = 4.74, $p < .05$. To test Hypothesis 3, transformational leadership was entered as the predictor variable, employee perceived stress as the criterion variable, and financial threat as the moderator. The interaction between transformational leadership and financial threat was not significant ($b = .11$, $p > .05$), therefore Hypothesis 3 was not supported. To test Hypothesis 5, transformational leadership was entered as the predictor variable, employee perceived stress as the criterion variable, and co-worker support as the moderator. The interaction between transformational leadership and co-worker support was significant ($b = -.14$, $p < .01$; see Table 3.4). A figure was created to visualize this interaction. Figure 4.2 from Appendix 4 depicts how the relationship between transformational leadership and employee perceived stress is contingent on level of co-

worker support. A simple slope analysis revealed that the relationship between transformational leadership and employee perceived stress was significant when co-worker support was high (b = -.33, t = -3.07, p < .01) and at the mean (b = -.16, t = -1.91, p = .05) but was not significant when co-worker support was low (b = .00, t = .04, p > .05). The results support Hypothesis 5.

Hypothesis 2 predicted that laissez-faire leadership would be positively associated with employee perceived stress. The results of the regression indicated that laissez-faire leadership (β = .43, p < .01) explained 18% of the variance in perceived stress, F (1, 143) = 31.95, p < .01. Hypothesis 2 was supported. To test Hypothesis 4, laissez-faire leadership was entered as the predictor variable, employee perceived stress as the criterion variable, and financial threat as the moderator. The interaction between laissez-faire leadership and financial threat was significant (b = -.09, p < .05; see Table 3.5). A figure was created to visualize this interaction. Figure 4.3 depicts how the relationship between laissez-faire leadership and employee perceived stress is contingent on perception of financial threat. A simple slope analysis revealed that the relationship between laissez-faire leadership and employee perceived stress was significant when financial threat was high (b = .09, t = 1.94, p < .01), at the mean (b = .18, t = 4.4, p < .01) and when financial threat was low (b = .27, t = 4.63, p < .01). The results partially support Hypothesis 4: the interaction was significant, but the form of moderation was not as predicted.

To test Hypothesis 6, laissez-faire leadership was entered as the predictor variable, employee perceived stress as the criterion variable, and co-worker support as the moderator. The interaction between laissez-faire leadership and co-worker support was not significant (b = .05, p > .05), hence Hypothesis 6 was not supported.

Discussion

This study responds to the call to examine boundary conditions of the relationship between leadership styles and employee outcomes (Arnold, 2017; Skakon et al., 2010) such as stress. The focus of this study is twofold. Firstly, I examined the relationship between transformational leadership and employee perceived stress, and boundary conditions of this relationship. Theoretically grounded in COR theory, I hypothesized that there would be a negative correlation between transformational leadership and employee perceived stress. The results supported this hypothesis. I investigated two moderators in this relationship: financial threat and co-worker support. The results showed that co-worker support moderated the relationship. There was a significant negative correlation between transformational leadership and employee perceived stress at high levels of co-worker support. Although financial threat had positive association with employee perceived stress, the moderating role in the relationship between transformational leadership and perceived stress was not confirmed. These findings provide support for COR theory in that both constructive leadership and co-worker support may be positioned as a resource for employees. Employees reported less stress when leaders were transformational and coworkers highly supportive showing the potential effect of multiple positive resources on employee stress.

Secondly, I examined the relationship between laissez-faire leadership and employee perceived stress, and boundary conditions of this relationship. I hypothesized that laissez-faire leadership would be positively correlated with employee perceived stress. The results supported this hypothesis. I also investigated two moderators in this relationship: financial threat and co-worker support. The results showed that financial threat moderated the relationship, but not in the way initially hypothesized. The relationship between laissez-faire leadership and employee

perceived stress was stronger for participants who reported lower levels of financial threat. Although co-worker support was negatively associated with employee perceived stress, a moderating role in the relationship between laissez-faire and stress was not confirmed. Thus, this study further bolsters the COR theory in that findings demonstrate that destructive leadership is a resource depleting factor for employees under certain circumstances such as when they are less financially threatened.

This study brings forward three key contributions. One of the contributions is the confirmation of relationships between transformational leadership and employee perceived stress, and laissez-faire leadership and employee perceived stress under the unique conditions of changes and COVID-19. The second contribution is an examination of two boundary conditions (i.e., financial threat and co-worker support) of these relationships. The third contribution is the examination of laissez-faire leadership style, which has not been the subject of extensive previous research. A plethora of previous research has demonstrated the relationships between leadership and employee stress. However, my research demonstrates that certain boundary condition such as financial threat and co-worker support can potentially change these relationships. In this study, positive co-worker support only moderated the effect of transformational leadership (positive form of leadership) and financial threat (negative moderator) only moderated the effect of laissez-faire leadership (negative form of leadership).

These findings contribute to research on transformational leadership, employee perceived stress and co-worker support. All in all, results support the negative correlation between transformational leadership and employee perceived stress during COVID-19 (Hypothesis 1). The finding of this result is consistent with the findings from Skakon et al. (2010). Skakon et al. (2010) demonstrated that transformational leadership was positively associated with reduced

stress among employees. I also found support for the moderating role of co-worker support in the relationship between transformational leadership and employee perceived stress.

While past research revealed that co-worker support has direct impact on stress, such as reducing individual's stress levels (Chiaburu & Harrison, 2008; De Clercq et al., 2020), my findings suggest that co-worker support may also have a moderation effect. Co-worker support moderated the relationship between transformational leadership and employee perceived stress (Hypothesis 5). Findings indicated a significant negative association between transformational leadership and employee perceived stress that was heightened for employees with high co-worker support. At low levels of co-worker support, participants reported a consistent level of stress whether their leader was transformational or not. In other words, when co-worker support was low, the relationship between transformational leadership and employee perceived stress was not significant. This means that co-worker support plays a role in reducing employee perceived stress and indicated that when employees have a transformational leader *and* high co-worker support, the combined effect boosts the negative relationship between transformational leadership and employee perceived stress.

The current study findings also contribute to nascent research on laissez-faire leadership (Skogstad et al., 2007), employee perceived stress and financial threat. All in all, results support the positive correlation between laissez-faire leadership and employee perceived stress during COVID-19 (Hypothesis 2). This finding is consistent with the findings from Diebig and Bormann (2020) who found that daily laissez-faire leadership was positively associated with daily increased stress among subordinates. I also found support for the moderating role of financial threat in the relationship between laissez-faire leadership and employee perceived stress.

While past research revealed that financial threat has positive association with individual stress levels (Furey et al., 2016; Mamun et al., 2020; Marjanovic et al., 2013; Viseu et al., 2018), the current findings suggest that financial threat may also play a moderating role. Findings showed that financial threat moderated the relationship between laissez-faire leadership and employee perceived stress (Hypothesis 4). The moderation effect was significant; however, the form of moderation was different than what was hypothesized. When employees perceive lower levels of financial threat, then the relationship between laissez-faire leadership and employee perceived stress was stronger. In other words, the relationship between laissez-faire leadership and employee perceived stress is stronger at low levels of financial threat. This could be because when financial threat is high, it overwhelms other types of resource depleting factors (such as laissez-faire). However, when employees are not financially threatened, then other resource drains such as poor leadership becomes more salient. Thus, this result demonstrates how negative financial threat, both on its own, and when combined with other resource depleting factors such as laissez-faire.

Hypotheses 3 and 6 were not supported. The relationship between transformational leadership and employee perceived stress was not moderated by financial threat (Hypothesis 3). When employees have a transformational leader, whether they feel financially threatened or not, the relationship between transformational leadership and employee perceived stress was similar. So, financial threat did not change the relationship between transformational leadership and employee perceived stress. This could be because when a leader is transformational, financial threat may not affect stress levels. The relationship between laissez-faire leadership and employee perceived stress was not moderated by co-worker support (Hypothesis 6). While co-workers can boost the positive effects of transformational leadership, they did not buffer the

negative effects of laissez-faire leadership in this study. This could be because when leader is laissez-faire, it is overwhelming for employees and co-worker support is not a sufficiently strong resource to reduce stress levels. These results may be specific to the pandemic, hence future research should replicate these relationships.

Practical Implications

The results of this study lead to several implications. Since leadership style is associated with employee perceived stress, leaders should implement more transformational and less laissez-faire leadership, especially during a pandemic when everyone is stressed. Organizations may help reduce employee stress levels by providing leaders with resources to be more transformational and less laissez-faire, whilst leading behind a computer screen in this new normal. Training for leaders in how to engage in constructive transformational leadership styles might be one step organizations could take in this regard. Also, given that leaders themselves may be experiencing stress related to changes in working conditions and Covid 19, organizations should provide supports to leaders in addition to employees.

The results supported the moderation effect of co-worker support but only for the relationship between transformational leadership and employee stress. Given this finding, organizations could encourage supportive co-worker relationships as these relationships boost the negative association of transformational leadership and employee stress. For example, organizations could start “online drop-ins” for employees only to encourage the formation of connections between employees. Providing ways that employees can engage socially might also be of benefit – for example employee trivia lunch hour on Zoom once a week. However, these

types of connection opportunities should not be seen as ‘must attend’ as this might create more stress than it alleviates.

Results of this study also showed a significant relationship between financial threat and employee perceived stress. Besides lowering financial threat possibly through providing employment security (e.g., Pfeffer, 1998) or other such approaches, organizations might consider helping employees gain resources outside of the organization such as government social protection and/or benefits. In sum, organizations can help reduce employee stress by providing a financial safety net while encouraging positive leadership and co-worker support and discouraging negative leadership styles.

Limitations

As with any study, the current study has limitations. Due to the cross-sectional nature of the survey, causal relationships between leadership styles and employee perceived stress cannot be inferred. Future longitudinal studies are needed to fully understand the relationships between leadership styles and employee perceived stress. The findings may not generalize to all populations of employees. The sample may not be representative of a general population, since participants were recruited through convenience sampling (Henry, 1990) via social media and MTurk and were required to have computer access. However, recent meta-analytic findings demonstrate that online panel data shows similar psychometric properties to data collected in conventional ways (Walter, Seibert, Goering & O’Boyle, 2019). I also followed best practice suggestions for online convenience samples (e.g., Porter et al., 2018). In addition, the sample size is relatively small, and therefore non-significant results may be due to lack of power. Also, my study relied upon self-reported cross-sectional data which is subject to common-method

variance (Podsakoff et al., 2012). However, I randomized the questions order, used validated scales, and ensured anonymity to participants to mitigate for the possibility that the findings were due to common method variance (Podsakoff et al., 2012).

Another concern would be about the quality of the data. About 45% of the data collected from social media was rejected as opposed to 12.5% of the data from MTurk due to participants failing attention checks or responding too fast. Losing half of the data from social media recruitment leads to potential questions about the quality of the remaining half of the data. Sampling from two different pools of participants also introduced some differences between the participants in the two samples. However, there was no statistically significant difference in change in working condition since COVID-19 or age. Despite these limitations, this study provides an examination of leadership style and stress during the Covid 19 pandemic and has also examined two potential moderators of the relationship between leadership style and employee perceived stress levels.

Future Directions

The findings from this study suggest possible future research. First, this study investigates two forms of leadership styles (i.e., transformational and laissez-faire) and their impact on employee perceived stress. Future studies could replicate these findings and focus on other constructive forms of leadership (transactional) or situational leadership to gauge their impact on employee perceived stress during COVID-19 and beyond.

This study investigates the relationship between leadership styles and employee perceived stress. Future studies could explore whether the relationship between leadership styles

and other employee outcomes such as turnover intention and job satisfaction are moderated by co-worker support and financial threat.

One of the interesting and yet unexpected findings was that the relationship between transformational leadership and employee perceived stress was not significant at low levels of co-worker support. Future research should replicate this finding and investigate whether co-worker support is a necessary but insufficient condition for transformational leadership to be associated with employee perceived stress. Another way researchers could replicate this current study, would be by investigating hypotheses which were not significant. Financial threat did not moderate the relationship between transformational leadership and employee perceived stress. Co-worker support did not moderate the relationship between laissez-faire leadership and employee perceived stress. One of the reasons for these non-significant results could be due to the lack of power (J. Cohen, 1988), but since two other hypotheses were significant, it is highly unlikely.

Conclusion

This study contributes to the existing literature by investigating whether financial threat and co-worker support moderate the relationship between transformational leadership and employee perceived stress, and laissez-faire leadership and employee perceived stress. Grounded in the COR theory (Hobfoll, 1989), co-worker support moderated the relationship between transformational leadership and employee perceived stress. Meanwhile, financial threat moderated the relationship between laissez-faire leadership and employee perceived stress. Future research should continue to focus on factors that can boost the positive effects of

transformational leadership and ameliorate the negative effects of laissez-faire leadership on employee perceived stress.

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Appendix 1: Ethics Approvals

MEMORIAL UNIVERSITY

Interdisciplinary Committee on
Ethics in Human Research (ICEHR)

St. John's, NL Canada A1C 5S7
Tel: 709 864-2561 icehr@mun.ca
www.mun.ca/research/ethics/humans/icehr

ICEHR Number:	**20210710-BA**
Approval Period:	October 28, 2020 – October 31, 2021
Funding Source:	SSHRC [RGCS#20192047]
Responsible Faculty:	Dr. Kara Arnold Faculty of Business Administration
Title of Project:	*Transition to work-from-home: Leadership and employee well-being in the digital workspace*

October 28, 2020

Mr. Sultan Munir Muhammad Sadik
Faculty of Business Administration
Memorial University of Newfoundland

Dear Mr. Sadik:

Thank you for your correspondence addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) concerning the above-named research project. ICEHR has re-examined the proposal with the clarification and revisions submitted, and is satisfied that the concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* to October 31, 2021. ICEHR approval applies to the ethical acceptability of the research, as per Article 6.3 of the *TCPS2*. Researchers are responsible for adherence to any other relevant University policies and/or funded or non-funded agreements that may be associated with the project.

The *TCPS2* **requires** that you submit an Annual Update to ICEHR before October 31, 2021. If you plan to continue the project, you need to request renewal of your ethics clearance and include a brief summary on the progress of your research. When the project no longer involves contact with human participants, is completed and/or terminated, you are required to provide an annual update with a brief final summary and your file will be closed. If you need to make changes during the project which may raise ethical concerns, you must submit an Amendment Request with a description of these changes for the Committee's consideration prior to implementation. If funding is obtained subsequent to approval, you must submit a Funding and/or Partner Change Request to ICEHR before this clearance can be linked to your award.

All post-approval event forms noted above can be submitted from your Researcher Portal account by clicking the *Applications: Post-Review* link on your Portal homepage. We wish you success with your research.

Yours sincerely,

Kelly Blidook, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

KB/bc

cc: Supervisor – Dr. Kara Arnold, Faculty of Business Administration
Director, Research Grant and Contract Services

MEMORIAL UNIVERSITY

Interdisciplinary Committee on
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ICEHR Number:	**20210710-BA**
Approval Period:	October 28, 2020 – October 31, 2021
Funding Source:	SSHRC [RGCS#20192047]
Responsible Faculty:	Dr. Kara Arnold Faculty of Business Administration
Title of Project:	*Transition to work-from-home: Leadership and employee well-being in the digital workspace*
Amendment #:	*01*

December 3, 2020

Mr. Sultan Munir Muhammad Sadik
Faculty of Business Administration
Memorial University of Newfoundland

Dear Mr. Sadik:

The Interdisciplinary Committee on Ethics in Human Research (ICEHR) has reviewed the proposed revisions for the above referenced project, as outlined in your amendment request dated November 25, 2020, and is pleased to give approval to the shorter recruitment script, as described in your request, provided all other previously approved protocols are followed.

If you need to make any other changes during the conduct of the research that may affect ethical relations with human participants, please submit an amendment request, with a description of these changes, via your Researcher Portal account for the Committee's consideration.

Your ethics clearance for this project expires October 31, 2021, before which time you must submit an annual update to ICEHR. If you plan to continue the project, you need to request renewal of your ethics clearance, and include a brief summary on the progress of your research. When the project no longer requires contact with human participants, is completed and/or terminated, you need to provide an annual update with a brief final summary, and your file will be closed.

Annual updates and amendment requests can be submitted from your Researcher Portal account by clicking the *Applications: Post-Review* link on your Portal homepage.

The Committee would like to thank you for the update on your proposal and we wish you well with your research.

Yours sincerely,

Kelly Blidook, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

KB/bc

cc: Supervisor – Dr. Kara Arnold, Faculty of Business Administration

MEMORIAL UNIVERSITY

Interdisciplinary Committee on
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ICEHR Number:	**20210710-BA**
Approval Period:	October 28, 2020 – October 31, 2021
Funding Source:	SSHRC [RGCS#20192047]
Responsible Faculty:	Dr. Kara Arnold Faculty of Business Administration
Title of Project:	*Transition to work-from-home: Leadership and employee well-being in the digital workspace*
Amendment #:	*02*

January 14, 2021

Mr. Sultan Munir Muhammad Sadik
Faculty of Business Administration
Memorial University of Newfoundland

Dear Mr. Sadik:

The Interdisciplinary Committee on Ethics in Human Research (ICEHR) has reviewed the proposed revisions for the above referenced project, as outlined in your amendment request dated December 22, 2020, and is pleased to give approval to the new protocol to recruit and collect data using mTurk, and to recruit participants using video on social media, as described in your request, provided all other previously approved protocols are followed.

If you need to make any other changes during the conduct of the research that may affect ethical relations with human participants, please submit an amendment request, with a description of these changes, via your Researcher Portal account for the Committee's consideration.

Your ethics clearance for this project expires October 31, 2021, before which time you must submit an annual update to ICEHR. If you plan to continue the project, you need to request renewal of your ethics clearance, and include a brief summary on the progress of your research. When the project no longer requires contact with human participants, is completed and/or terminated, you need to provide an annual update with a brief final summary, and your file will be closed.

Annual updates and amendment requests can be submitted from your Researcher Portal account by clicking the *Applications: Post-Review* link on your Portal homepage.

The Committee would like to thank you for the update on your proposal and we wish you well with your research.

Yours sincerely,

Kelly Blidook, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

KB/bc

cc: Supervisor – Dr. Kara Arnold, Faculty of Business Administration

Appendix 2: Full Measures

Screening Questions

Question: Have your working conditions changed since Covid19?

Response Options:

1 Yes

2 No

If Yes, participants were in the survey. If No, they were taken out of the survey.

Demographics

Question: What types of changes have been made to your job since Covid19? Please check all that apply.

Response Options:

1 I've been asked to work from home (if yes see below).

2 I've been told to work from home (if yes see below).

3 My tasks have changed.

4 My responsibilities have changed.

5 My team has changed.

6 My immediate supervisor has changed.

7 I have less control over my daily work.

8 I have more control over my daily work.

9 Other: _____

1 Question: Age (in years)

Response Option: Slider (18-90)

2 Question: I identify as

Response Options:

1 Male.

2 Female.

3 Transgender male.

4 Transgender female.

5 Gender nonconforming.

6 I prefer not to report my gender.

7 I prefer to report my gender this way: _____

3 Question: My supervisor identifies as

Response Options:

1 Male.

2 Female.

3 Transgender male.

4 Transgender female.

5 Gender nonconforming.

6 I prefer not to report my supervisor's gender.

7 I prefer to report their gender this way: _____

4 Question: Please select the level of leadership that best describes your supervisors' level of management.

Response Options:

1 Senior management: my supervisor is the CEO/president or reports directly to the CEO/President.

2 Middle management: my supervisor attends to strategic goals of multiple business units, manages significant projects, and is responsible for multiple organizational levels below my own level.

3 Front-line: my supervisor interacts directly with front-line employees.

Financial threat scale

Questions:

1 How uncertain do you feel?

2 How much do you feel at risk?

3 How much do you feel threatened?

4 How much do you worry about it?

5 How much do you think about it?

Response Options:

1 Not at all

2 A little

3 A moderate amount

4 A lot

5 A great deal

Transformational leadership scale

Questions:

Vision

1 My supervisor has a clear understanding of where we are going.

2 My supervisor has a clear sense of where he/she wants our unit to be in 5 years.

3 My supervisor has no idea where the organization is going.

Inspirational communication

1 My supervisor says things that make employees proud to be a part of this organization.

2 My supervisor says positive things about the work unit.

3 My supervisor encourages people to see changing environments as situations full of opportunities.

Intellectual stimulation

1 My supervisor challenges me to think about old problems in new ways.

2 My supervisor has ideas that have forced me to rethink some things that I have never questioned before.

3 My supervisor has challenged me to rethink some of my basic assumptions about my work.

Supportive leadership

1 My supervisor considers my personal feelings before acting.

2 My supervisor behaves in a manner which is thoughtful to my personal needs.

3 My supervisor sees that the interests of employees are given due consideration.

Personal recognition

1 My supervisor commends me when I do a better than average job.

2 My supervisor acknowledges improvement in my quality of work.

3 My supervisor personally complements me when I do outstanding work.

Response Options:

1 Strongly disagree

2 Somewhat disagree

3 Neither agree nor disagree

4 Somewhat agree

5 Strongly agree

Reverse Code Items: Vision (3)

Laissez-faire leadership scale

Questions:

Reward omission

1 I often perform well in my job and still receive no praise from my manager.

2 When I perform well my manager usually does nothing.

3 My good performance often goes unacknowledged by my manager.

4 I don’t often get praised by my manager when I perform well.

Punishment omission

1 My manager gives me no feedback when I perform poorly.

2 When I perform poorly in my job I receive no criticism from my manager.

3 When I perform poorly my manager does nothing.

4 My poor performance often gets no response from my manager.

Response Options:

1 Strongly disagree

2 Disagree

3 Somewhat disagree

4 Neither agree nor disagree

5 Somewhat agree

6 Agree

7 Strongly agree

Perceived co-worker support scale

Questions:

1 My co-workers are supportive of my goals and values.

2 Help is available from my co-workers when I have a problem.

3 My co-workers really care about my well-being.

4 My co-workers are willing to offer assistance to help me perform my job to the best of my ability.

5 Even if I did the best job possible, my co-workers would fail to notice.

6 My co-workers care about my general satisfaction at work.

7 My co-workers show very little concern for me.

8 My co-workers care about my opinions.

9 My co-workers are complimentary of my accomplishments at work.

Response Options:

1 Strongly disagree

2 Disagree

3 Somewhat disagree

4 Neither agree nor disagree

5 Somewhat agree

6 Agree

7 Strongly agree

Reverse Code Items: 5 & 7

Perceived stress scale

Questions: In the past 30 days,

1 How often have you been upset because of something that happened unexpectedly?

2 How often have you felt that you were unable to control the important things in your life?

3 How often have you felt nervous and "stressed"?

4 How often have you felt confident about your ability to handle your personal problems?

5 How often have you felt that things were going your way?

6 How often have you found that you could not cope with all the things that you had to do?

7 How often have you been able to control irritations in your life?

8 How often have you felt that you were on top of things?

9 How often have you been angered because of things that happened that were outside of your control?

10 How often have you felt difficulties were piling up so high that you could not overcome them?

Response Options:

1 Never

2 Almost never

3 Sometimes

4 Fairly often

5 Very often

Reverse Code Items: 4, 7 & 8

Appendix 3: Results Tables

Table 3.1 T-test results on demographic differences between participants sampled from social media versus participants sampled from MTurk

T-test results of differences between Age of participants					
Demographic variables	Source	Mean	Standard Deviation	t (df)	p
Age (in years)	Social media	35.3	11.2	-1.85 (105.6)	p = 0.07
	MTurk	38.7	9.7		

Table 3.2 Chi-squared test results on demographic differences between participants sampled from social media versus participants sampled from MTurk

Chi-squared results of difference between participants' sex, their supervisors' sex, and participants' change in working conditions since COVID-19				
Demographic variables	Source	N	χ^2 (df)	*p*
Participant's sex: Female	Social media	35	10.92 (3)	$p < .05$*
	MTurk	38		
Participant's sex: Male	Social media	19		
	MTurk	50		
Supervisor's sex: Female	Social media	28	10.88 (2)	$p < .01$**
	MTurk	23		
Supervisor's sex: Male	Social media	25		
	MTurk	64		
Working condition changed since COVID-19: Yes	Social media	55	2.23 (1)	$p = .14$
	MTurk	79		
Working condition changed since COVID-19: No	Social media	2		
	MTurk	9		

Note. ** $p < .01$ there is a significant difference between groups

* $p < .05$ there is a significant difference between groups

Table 3.3 Descriptive statistics and correlations for all study variables

(N = 145 participants in total)

Variables	M	SD	1	2	3	4
1. Financial threat	2.57	.96				
2. Transformational leadership	3.76	.86	-.08			
3. Laissez-faire leadership	3.29	1.5	.38**	-.50**		
4. Co-worker support	5.38	1.18	-.09	.50**	-.27**	
5. Employee perceived stress	2.73	.79	.44**	-.18*	.43**	-.11

Note. **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3.4 Ordinary Least Squares Regression Analysis using PROCESS Model 1 examining co-worker support as a moderator between transformational leadership and co-worker support

	b	*SE*	*t*	*p*
Constant	2.80	.07	40.54	<.01
Transformational leadership	-.16	.09	-1.91	=.05
Co-worker support	-.09	.07	-1.34	>.05
Transformational leadership x Co-worker support	-.14	.05	-2.75	<.01

Notes. N = 145, listwise deletion. Model summary: R^2 = .08, F (3, 141) = 4.19, p < .01. R^2 increase due to interaction: ΔR^2 = .05, F (1, 141) = 7.56, p < .01.

Table 3.5 Ordinary Least Squares Regression Analysis using PROCESS Model 1 examining financial threat as a moderator between laissez-faire leadership and financial threat

	b	*SE*	*t*	*p*
Constant	2.78	.06	47.27	<.01
Laissez-faire leadership	.18	.04	4.4	<.01
Financial threat	.29	.06	4.63	<.01
Laissez-faire leadership x Financial threat	-.09	.04	-2.59	<.05

Notes. N = 145, listwise deletion. Model summary: R^2 = .31, F (3, 141) = 20.78, p < .01. R^2 increase due to interaction: ΔR^2 = .03, F (1, 141) = 6.70, p < .05.

Appendix 4: Figures

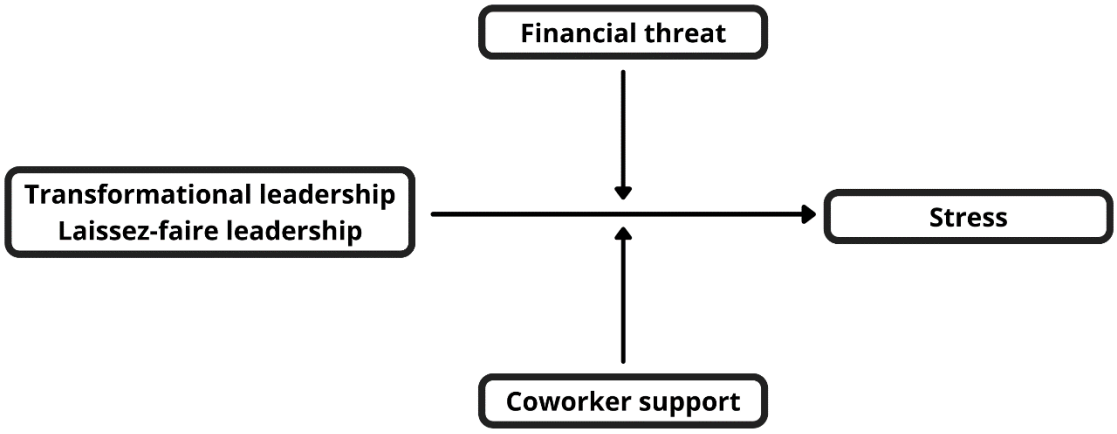

Figure 4.1 Visual summary of hypotheses

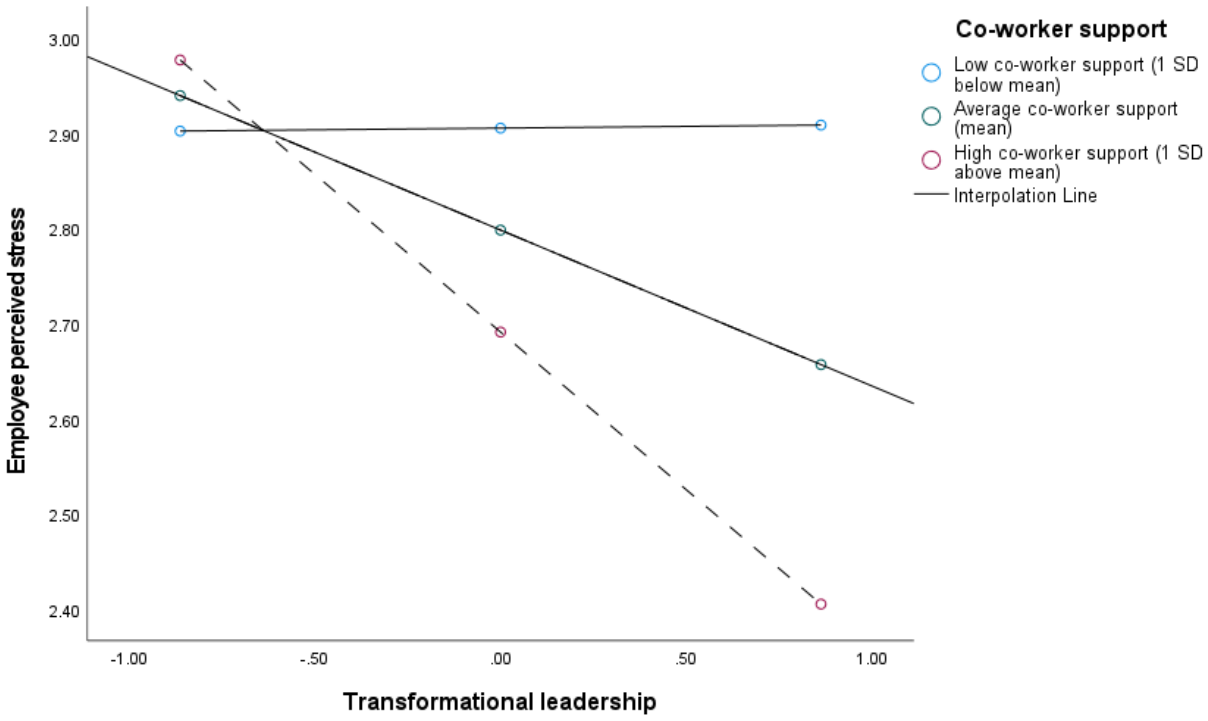

Figure 4.2 Moderating Effect of Co-worker Support on the Relationship between Transformational Leadership and Employee Perceived Stress.

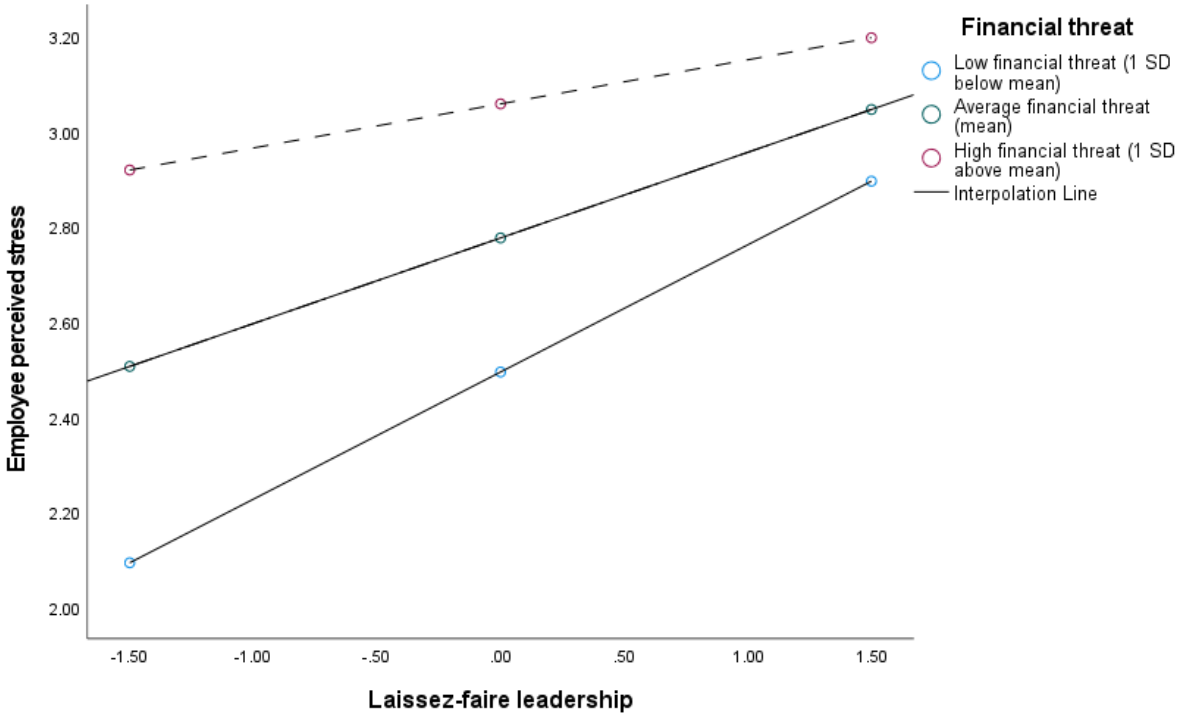

Figure 4.3 Moderating Effect of Financial Threat on the Relationship between Laissez-faire Leadership and Employee Perceived Stress.