

BI Norwegian Business School - campus Oslo

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Master Thesis

Thesis Master of Science

“Make it or break it during a pandemic”.

The role of Transformational Leadership, employee Growth Mindset, Change Readiness and Stress during rapid changes such as a pandemic (COVID-19).

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## **Abstract**

This study seeks to explore the relationship between transformational leadership and employee's readiness towards change, and the moderating effect of employee growth mindset. Furthermore, this study aims to look at the direct relationship between employee growth mindset and perceived stress during a specific change context, namely, the pandemic COVID-19. For this study, a sample of 159 respondents was obtained. The results show that transformational leadership and employees' readiness towards change are positively related, however, not significant. Further, there was found no support for the moderating influence of growth mindset. Finally, there was detected a negative relationship between growth mindset and stress, however, the results were not significant. Directions for future research and implications are also discussed.

## **Introduction:**

In a globalized, competitive and high paced environment, innovation and employee readiness towards change becomes inevitable for organizations to create a sustainable competitive advantage (Walinga, 2008) and implement a change strategy (Armenakis, Harris & Mossholder, 1993). Organizational change has been referred to as the transition of the organization from one state to another (Lewin, 1951). The present business environment is continuously evolving and highly competitive due to dynamic technology, globalization and changing markets (Oreg & Berson, 2019). With the outbreak of the COVID-19 pandemic, countries have been forced to go into lockdown to prevent further spread of the virus, and organizations with their employees have been forced to change the nature of how they work to cope with these rapid changes. Employees are facing changes in work practices, such as the transition from regular offices, to home offices, where digital tools such as Zoom, and Meet have taken over as communication tools. If individuals are not ready for change, they will resist (Lewin, 1945). Building organizations that can make it through uncertainty and change requires a new mindset that is driven from the top down, where employees need to be in a continued state of change readiness (Rowden, 2001).

Readiness towards change is a cognitive forerunner to individuals' support or resistance towards change (Armenakis et al., 1993), and can be defined as employees' commitment and effectiveness to implement change (Weiner, Amick & Lee, 2008). The transition towards change covers all parts of an organization from its structure to its technology, resources, processes and even its culture in order to gain the required output (Rees & Hassard, 2010). Leaders often play an important role in facilitating successful change processes (e.g. Bass, 2008; Herold et al, 2008; Kotter, 2007; Bartunek, 1984), where positive leadership styles such as transformational leadership has been found to increase positive emotions towards organizational changes (Agote, Aramburu, & Lines, 2016). Transformational leadership can be defined as an array of observable and learnable methods used to influence employee attitudes and assumptions and to strengthen commitment from the employees towards the organizations mission (Kouzes & Posner, 1993; Yukl, 1994).

Several studies have investigated the underlying mechanisms facilitating employees' attitudes and acceptance towards change and new technology implementation (Marler & Fisher, 2013). Research by Parish, Catalase & Busch

(2008), imply that the relationship between a leader and employees plays an important role in shaping employees' attitudes towards change, where both support and involvement from the leader are found to positively affect this relationship (Choi, 2011). Employees readiness towards change can be affected by their need for personal growth, as well as the ability to see change as an opportunity for learning (Elias, 2009). Thus, it is possible that growth mindset functions as a boundary condition, that may affect the influence of the relationship between transformational leadership and employees change readiness. Dweck (1999), refers to mindsets as the implicit beliefs about the malleability of personal attributes. One often distinguishes between a growth and a fixed mindset. Growth mindset is the belief that attributes, such as intelligence and skills is changeable, while fixed mindset, on the other hand, is definite and hard to change.

Research by Dweck (1986; 2006) highlights how mindset can contribute to take on challenges, as well as deal with failure. Change processes often increase uncertainty and stress, and thereby also resistance to change among the employees (Conway & Monks, 2011; Weber & Weber, 2001). During the outbreak of COVID-19, employees experienced uncertainty and change to a high degree, thus potentially leading to negative outcomes such as stress. Individuals experience stress when demands are appraised as exceeding their resources (Lazarus & Folkman, 1984). Growth mindset individuals tends to adjust more adaptively (Dweck & Leggett, 1988), and further, growth mindset can be a predictor of resilience to challenges in educational settings. Thereby, growth mindset might be negatively related to stress during rapid changes, such as COVID-19.

The purpose of this study is twofold. Firstly, this study seeks to explore the relationship between transformational leadership and employees' change readiness, and possibly whether employee growth mindset can moderate this relationship. The second part investigates the direct relationship between employees' growth mindset, and if this potentially can reduce negative outcomes such as stress during a specific context, namely the COVID-19 pandemic.

Several positive outcomes are associated with different leadership behaviors, such as transformational leadership, and what specific behaviors effective leaders holds. However, literature has focused less on the understanding of the contexts and the content of the change initiated, possible moderating or mediating variables the change recipients may hold, as well as change recipients'

attitudes (Oreg & Berson, 2019). Thus, this research offers contributions within several fields. Firstly, it investigates the direct relationship between transformational leadership and employees' readiness towards change, during COVID-19, where the content of employees' workday was changed from regular work to home offices. Secondly, it investigates the possible moderation of growth mindset. This relationship is to our knowledge not investigated in previous research. Further, mindset has mainly been studied in educational setting, while this study seeks to explore if growth mindset work as a moderator between transformational leadership and employee change readiness in organizations or the working population in general. Furthermore, a study conducted by Kim & colleagues (2017), shows that individuals holding a lower growth mindset in comparison with higher growth mindset, are more likely to reject relevant technologies. As mentioned, digital tools were implemented in many organizations during COVID-19. Thus, this study contributes to look at the context of digital change implementation. Lastly, this paper contributes to the literature on the relationship between growth mindset and negative outcomes such as stress, where no previous literature has focused on this relationship during rapid changes such as a pandemic, to our knowledge.

## **Theoretical framework**

### **Readiness Towards Change**

Organizational change has historically been a transactional event but has recently become more of an open-ended, radical, complex, personal and continuous process (Anderson & Anderson, 2001). Organizational changes are planned changes of components of the organization to increase the efficiency of the organization (Cawsey & Deszca, 2007). These components can be mission, vision, strategy, goals, structure, systems, technology or people, to mention some (Cawsey & Deszca, 2007). The changes vary in depth; Some are large-scale changes, which can change the organization's way of thinking, solving problems and doing business. These are called transformational changes (Huczynski & Buchanan, 2013). Others are smaller and limited to a group or department. Organizational changes happen in multiple dimensions such as individual, relationship, team and organizational level. When implementing changes, the change agents, often leaders or managers, has to tend to all the levels of implementation (Anderson & Anderson, 2001).

Studies conducted on this matter have found that approximately 70% of all change processes fail at being productive (Balogun & Hailey, 2004; Burnes, 2004). This substantiates the need for further exploration of what facilitates successful change processes in today's ever-changing business environment. Change processes often increases uncertainty, anxiety and stress internally in the organization and thereby also resistance to change among the employees (Conway & Monks, 2011; Weber & Weber, 2001). Therefore, understanding the attitudes and behaviors employees have towards change is useful in order to plan for successful change processes (Elias, 2009; Lines, 2005; Vakola & Nikolau, 2005). Attitudes toward organizational change can be defined as the individual's overall positive or negative stance with regards to a change initiative implemented in their organization (Elias, 2009). Elizur and Guttman (1976) classified the attitudes towards change into three groups which has been supported by several researchers (Elias, 2009; Dunham et al., 1989; Piderit, 2000). Affective responses bases on the subject's feelings towards the change (e.g. anxiousness or satisfaction). Cognitive responses are based on the subject's opinions about the advantages/disadvantages, usefulness and need for the changes, as well as whether they mean they have the knowledge required to handle the changes. Change readiness, which this study focuses on, is a cognitive forerunner to either an individual's support or resistance towards change (Armenakis et al., 1993). Instrumental responses are based on how the subject has behaved or intends to behave towards the change in the future. These attitudes can be difficult to change as they may face resistance from within themselves (Dunham, 1984). The subject can have different attitudes towards different change initiatives, meaning that their general attitude towards change does not necessarily apply to all change initiatives (Choi, 2011).

The psychologists Robert Kriegel and Davis Brandt have conceptualized what personality traits that supports readiness towards change. They argue that there are seven different dimensions of personality traits, namely passion, resourcefulness, optimism, adventurousness, adaptability, confidence and tolerance for ambiguity (Kriegel & Brandt, 1996). Passionate individuals feel excited about new opportunities and experiences. They approach these with intensity and determination. Resourceful people use what they got at hand to deal with situations in the best possible way. Optimistic people are positive towards the future, while adventurous people are comfortable taking risks and dicing into



the unknown. Adaptive people can adjust expectations when discovering new realities and recover from setbacks quickly. Confident people believe in their own ability to deal with difficult situations, while people that have a high tolerance for ambiguity are comfortable living with uncertainty and surprise.

Literature shows that the employee readiness factors greatly impact their preparation for immediate action both mentally and physically (Madsen, 2003). Rapid changes in the environment often require immediate action. One can possibly argue that COVID-19 required many organizations to take immediate actions, and both implement changes and facilitate readiness towards change amongst employees. Many employees have been forced to adapt to a virtual work environment, using different tools for communication, such as Zoom or Teams. Readiness towards change correlate with several aspects, such as higher commitment by employees (Seggewiss et al., 2019), both to their leaders and the organization as a whole. Further, it is also found that readiness towards change results in both lower absenteeism and turnover intentions (Martin et al., 2005). If the organization's employees have a high degree of readiness to change, the change initiatives of the organization have a higher chance to succeed, and the same is true the other way around (Elving & Gravenhorst, 2009).

### **Transformational Leadership**

Readiness towards change puts high demands on leaders, as they play an important role in facilitating successful change processes (e.g. Bass, 2008; Herold et al, 2008; Kotter, 2007; Bartunek, 1984). Further, Gill (2003) imply that inadequate leadership styles can be one reason for organizational change being unsuccessful. Research shows that leaders holding a more supportive and facilitative style can contribute to a stronger or positive relationship with organizational change (e.g. Higgs, 2003). Leadership can be defined as: "the ability of an individual to influence, motivate and enable others to contribute towards effectiveness and success of the organization of which they are members" (House et al., 2004 s. 56). This definition implies that leadership is a relationship, where the leader is trying to influence others towards effective and successful change. Further, the definition also intersects with the concept of positive leadership styles, which focuses on change, as well as inspiring followers to commit to a shared vision, challenging them to be innovative problem solvers, and provide both challenge and support (Bass & Riggio, 2006).

Of these leadership styles, transformational leadership has been researched the most and is widely accepted as a positive leadership style (e.g. Gardner et al., 2010). Transformational leadership intercept with positive leadership styles where they influence employees' attitudes, and strengthen their commitment to the organization (Yukl, 1994). Transformational leaders influence the behavior of their employees to accomplish the goals of the organization, while at the same time showing consideration towards the employees. According to Kouzes and Posner (1995), transformational leadership can be conceptualized through five sets of behaviors; challenging the process, inspiring a shared vision, enabling others to act, modeling the way and, finally, encouraging the heart. These behaviors help facilitate sense giving and persuasion by creating support for the new changes. A study conducted by Mathiesen & colleagues (2011), found that leaders who model positive or wanted behavior can transfer this to the workplace and the employees. Transformational leaders show the way for their employees, and show positive attitudes both towards the organization, as well as the employees working there (Einarsen et al., 2007; Ekvall & Arvonen, 1991; Haslam, 2007).

Transformational leaders have been found to increase positive emotions towards organizational changes (Agote, Aramburu, & Lines, 2016; Seo, Taylor, Hill, Zhang, Tesluk, & Lorinkova, 2012). Several factors are found to be important for employees' readiness towards change, such as participation, communication and trust in leaders (Seggewiss et al., 2019). Employees need to be involved in change development (Giangreco & Peccei, 2005), which transformational leaders can encourage through inspiring a shared vision, and enabling others to act (Kouzes & Posner, 1995). A study conducted by Oreg (2006) found that trust is an important aspect of change implementation, and possibly change readiness. Transformational leadership style facilitates trust among the employees, which can reduce negative emotions as anxiety while strengthen enthusiasm, thus making the employees more aligned with rapid changes or implementation of new changes (Howell & Shamir, 2005). As conceptualized by Kriegel and Brandt (1996), both optimism, resourcefulness and confidence defines employees' readiness towards change, which potentially a transformational leader can provide.

An important job the leader has that underlies all of this is the role of sense giving. This is shaping the meanings the employees have about the changes

(Giaola & Chittipeddi, 1991). For an employee to deal with changes, they must understand the rationale behind the changes through a process of sense-making (Balogun, Bartunek, & Do, 2015). Sense-giving is basically an act of persuasion (Bartunek et al, 1999). From this, one can argue that leaders and leader behavior during change, is an important aspect influencing employees' attitudes towards the changes and, thereby, their readiness towards change. This stands in accordance with the conceptualization of transformational leadership (Kouzes & Posner, 1995), where they inspire a shared vision towards these changes, and enables others to act. As mentioned, this can facilitate sense giving amongst employees, by creating support for the changes or change readiness in the organization, amongst employees.

Resistance towards change can depend on the circumstances, thus employees can react differently to different changes. It is often determined by how the change was conducted. A study conducted by Penava & Sehic (2014), found a direct negative relationship between transformational leadership and resistance to change, through the component inspirational motivation. Thus, leaders who inspire and provide meaning will impact how employees see the change. Idealized influence, where leaders are seen as role models by the employees is also perceived by those employees to be capable of leading or implementing changes. Employee involvement, information sharing, and trust are all important when influencing individuals' attitudes towards change, or readiness towards change. When leaders involve employees in decision making, thus keeping the information flow open, they will be more open for change, and develop positive attitudes or readiness towards change (Choi, 2011; van Dam et al., 2008). These factors can be related to individual consideration, which is one important aspect of transformational leadership. The relevance of transformational leadership has also been found to apply to a greater extent in an unstable and dynamic environment. During COVID-19, one can possibly argue that the environment was unstable, and that transformational leadership can positively relate to employees' readiness towards change.

Thus, we propose that:

**Hypothesis 1:** There is a positive relationship between transformational leadership and employees' readiness towards change.

## **Growth Mindset as a Moderator**

Individuals make sense of, as well as cope with their surroundings using schematic structure, often called mindset, which is peoples' perception of attributes, such as intellectual abilities or personality, to mention some (Dweck, 2012). Further, mindset is the beliefs one has about human abilities, intelligence and characteristics (Anderson & Anderson, 2001). Mindset can both influence and shape individuals' motivation and responses to stimuli (Tabernero & Wood, 1999). The importance of cognitive schemas is well documented, both for individuals' specific behavior, as well as the connection to specific situations (e.g. Piaget, 1928; Kelly, 1955). There is a substantial amount of research focusing on how one's specific mindset influence performance related to goal achievement and motivation, as well as how one perceives failure (e.g. Murphy & Dweck, 2016; Rattan et al, 2015; Blackwell et al, 2007). Mindset construes a framework for how one interprets and respond to experiencing events (Dweck & Leggett, 1988).

The researcher's Dweck and Leggett (1988) introduced the entity- and incremental theory of intelligence, which is referred to as fixed and growth mindset today (Dweck, 2012). Individuals with a growth mindset believe that own effort, training and practice can influence the end results (Dweck, 2006). Thus, one sees the connection between hard work and the outcome. Further, individuals with a growth mindset often seek out challenges, and view this as a learning opportunity, thus they seek competence and mastery of new things (Blackwell et al., 2007; Dweck & Leggett, 1988; Erdley et al., 1997). Contrarily, a fixed mindset is characterized by individuals who believe that own abilities are predestined, and hard to change (Dweck, 2006). Traits, attributes and personality are relatively fixed. In comparison to a growth mindset, fixed mindset individuals often avoid challenging tasks, out of fear for being exposed for lacking certain abilities (Blackwell et al, 2007). Fixed mindset individuals strive towards appearing or feeling successful, and often engage in different defensive behavior to hide failure (Hong, Chiu, Dweck, Lin, & Wan, 1999; Nussbaum & Dweck, 2008). Individuals can hold one mindset in one domain, and another in a different domain, thus for example a growth mindset when it comes to intelligence, and a fixed mindset when it comes to athletics (Tabernero & Wood, 1999).

Mindsets have been researched extensively in educational settings, where Dweck, Chiu & Hong (1995) found that mindset have an effect on goals,

motivation and behavior. Further, different mindsets can impact how individuals adjust and respond to both challenges and setbacks. Research by Dweck & Leggett (1988) found this to be true for students, where students holding a growth mindset adjust more adaptively to challenges, as well as adjust more adequately to difficult academic transitions. A growth mindset fosters both learning and achievement, and individuals holding a growth mindset are more acceptant to challenges and new strategies, as well as during challenging transitions (Blackwell et al, 2007; Taberero & Wood, 1999). Different mindsets can influence beliefs about one's ability to learn new things (Heslin & VandeWalle, 2008), thus possibly affect one's perception about challenges or change. Furst & Cable (2008) argue that change often is perceived as a challenging situation. Thus, one can possibly argue that different mindset amongst employees might have implications for their readiness towards change.

Further, research show that individuals with fixed mindset are more likely to reject relevant technologies, in comparison with growth mindset individuals, especially when these technologies are more personally relevant and user-friendly (Kim et al., 2017). Employees holding a fixed mindset might be less open to readiness towards change, because they are less likely to believe in changes and development in general (Blackwell et al., 2007). Contrarily, an employee holding a growth mindset would possibly embrace challenges or change, because they see challenges as a tool to improve abilities and performance (Hong et al., 1999; Blackwell et al., 2007). It is found that employees with a growth or fixed mindset act differently, even though they have nothing to lose (Sirola & Pitesa, 2017). During a rapid change, such as COVID-19, organizations need to implement new technologies, such as different video tools that are helpful in facilitating or improving one's work to make for example home-offices optimal. One example can be recruitment, where physical interviews was replaced with video interviews during the lockdown. A person holding a fixed mindset could even overshadow these helpful new features or implementations. Change is an unavoidable phenomenon, however, when bringing in new technologies it is important to provide employees with the context for the change, so they will be able to understand the need for it, and possibly make it less difficult (Croft & Cochrane, 2005). Individuals often resist change and adopting these new technologies can for instance mean changes to job responsibilities, added workload and additional training to tackle these new implementations.

It is found that individuals' fundamental beliefs about transformation or change are likely to be influenced by the actors in the organization constructing the transformation (Uhl-Bien, 2006). Leaders are often tasked with leading transformation, thus, there are different actions these can take to influence the social cognitive process of the employees for them to welcome change. The leader can foster readiness towards change among employees (Rafferty et al., 2013). As mentioned, transformational leadership is the ability to stimulate and motivate employees (Bass, 1985). Transformational leaders can potentially empower employees to embrace change (Berson & Avolio, 2004). Research conducted by Dragoni (2005) suggests that both development and learning facilitated by leaders can contribute to a preference for learning and growth amongst employees, consistent with a growth mindset. Employees holding a growth mindset might align better with transformational leaders, because transformational leaders foster both learning and development, which is found to be important for individuals holding a growth mindset (Blackwell et al., 2007). Contrarily, individuals holding a fixed mindset are less open to, or likely to, believe in development in general (Blackwell et al., 2007). Thus, transformational leadership can possibly be less effective for individuals with a lower growth mindset.

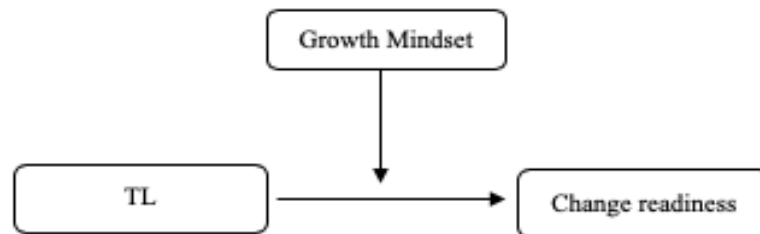
Furthermore, this implies that growth mindset might potentially moderate the relationship between transformational leadership and readiness towards change, making this relationship even stronger than if transformational leadership was studied alone. Transformational leaders have the ability to stimulate, motivate and engage followers towards development and change. Especially transformational leaders can trigger employees exploratory and critical thinking processes, fostering a working environment where problem solving are highly valued, and creativity is strongly prioritized (Jung et al., 2003). This aligns with the preference of growth mindset individuals, thus, potentially strengthen employees' readiness towards change even more. A transformational leader transfers their vision about change through effective communication and support for development and problem solving during these changes

It appears to be lacking research about potential moderators of the relationship between transformational leadership and employees' readiness towards change. Thus, the present study aims to include such a moderation variable by looking at growth mindset. We propose that transformational leadership is one important aspect for employees' readiness towards change,

however, that growth mindset might explain more of employees' attitudes towards change. Employees' growth mindset might explain more of the relationship between transformational leadership and employee readiness towards change, than if growth mindset was not considered, thus moderating the effect of the relationship between transformational leadership and employees' readiness towards change.

Thus, we propose that:

**Hypothesis 2:** Growth mindset moderates the positive relationship between transformational leadership and employees' readiness towards change.



**Figure 1.**  
*Research model.*

### **Growth Mindset as a buffer for stress during rapid changes**

Organizational changes have been found to lead to higher employee stress levels (Rafferty & Griffin, 2006; Hansson et al., 2008). In Norway alone, approximately 40% of the work stock experience work related stress to a high degree, where it impacts both physical and psychological well-being (Ledernytt, 2016). Further, Chokski (2019) states that workplace stress is at an all-time high. Lazarus & Folkman (1984) defines stress as “a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (p. 21). It is found that negative stress can have severe impact and impose high costs on both individual, organizational and societal level (e.g. Lee & Ashforth, 1996; McCarthy, Trougakos & Cheng, 2016), through turnover, sick leave and lower well-being, to mention some. Further, research shows that employees' mental health is key for their satisfaction and productivity (Harter et al., 2002; Adler et al., 2006; Brenninkmeijer et al., 2008). Thus, organizations would want to minimize

negative stress amongst their employees, which can be beneficial to the organization.

After the outbreak of COVID-19, individuals, organizations and the society as whole, experiences uncertainty and change to a high degree, with permanent layoffs, temporary layoffs, as well as bankruptcies. Thus, potentially leading to negative outcomes such as stress. Further, several companies had to adjust to the changes with home offices, and implementation of digital tools to cope with the new work surroundings. For example, all meetings now require video tools through a computer. All of these, minor to major changes can potentially lead to negative outcomes. Venkatesh & Goyal (2010) found that the acceptance of both digital changes and new technologies depend on employees' acceptance, while it is known that individuals often avoid using new digital tools (Kane, 2017) in general. Therefore, it is interesting to investigate mechanisms that potentially can lead to better adjustments during these rapid changes, such as holding a growth mindset.

Researchers have found relevance for growth mindset for both coaches and leaders (e.g. Heslin & Keating, 2017), as well as better resilience during challenges in educational settings. Further, individuals holding a growth mindset usually tends to seek mastery over new areas (Blackwell et al., 2007). Thus, one can possibly argue that organizations where employees hold a growth mindset will seek out mastery when faced with changes, because this is a new area they potentially can master. Studies have found that individuals differ in how they approach stressful situations, and that this can depend on their mindset (e.g. Crum, Salovey & Achor, 2013). This means if they perceive stress to be either harmful or beneficial (Crum, Salovey & Achor, 2013). Individuals holding a growth mindset tend to adapt better and more effectively when faced with obstacles and challenges. Those individuals holding a growth mindset (positive stress mindset), can cope and adjust better to change and stressful situations through their beliefs that stress can result in enhancing outcomes, in comparison with individuals holding a fixed mindset who will try to avoid potential negative consequences (Crum, Salovey & Achor, 2013).

Mindset can affect individuals' judgements, evaluation, health and behavior (Gollwitzer, 1999; Crum & Langer, 2007; Liberman, Samuels & Ross, 2004). Research by Levy & colleagues (2004) found that individuals who have a negative mindset about aging are less likely to engage in proactive actions, as

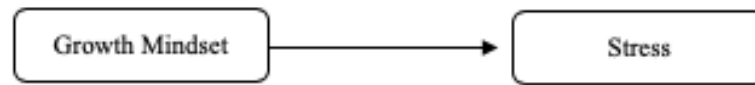


eating healthy or exercising, compared to individuals with a growth mindset (positive mindset). Students holding a growth mindset about intelligence, where intelligence is malleable or changeable, have shown to demonstrate improvements in both behavior and attitude (Blackwell, Trzesniewski & Dweck, 2007). Thus, adoption of a growth mindset can impact psychological, behavioral and physiological outcomes and one can potentially argue that mindset can have an effect on how employees adapt to rapid changes. Furthermore, individuals holding a growth mindset can potentially impact or even buffer negative outcomes such as stress during these rapid changes. A study conducted Crum, Salovey & Achor (2013) investigated if individuals holding a positive stress mindset (growth mindset) had a positive effect on both health and performance. They found that individuals holding a positive stress mindset (growth mindset) are more likely to choose behaviors that meet demands and goals in a stressful situation.

Research has found that mindset can determine responses to challenges, where students holding a growth mindset tend to adjust more adaptively, in comparison with students holding a fixed mindset (Dweck & Leggett, 1988), and that growth mindset can be a predictor of resilience to challenges in educational settings. Further, Dweck & Leggett (1988) found that mindsets are most relevant during context that are hard or challenging. One explanation for this can be that individuals holding a growth mindset enjoys being challenged. Thus, one can possibly argue that employees holding a growth mindset can buffer against negative outcomes such as stress in challenging environments, such as rapid changes during COVID-19. Research has also found that in general, individuals holding a growth mindset can potentially buffer negative consequences of challenges. Even though research on this area has focused substantially on the education arena with students, it is just as important to investigate if growth mindsets can buffer negative consequences as stress in other settings as well, included the working population in general. Negative outcomes can potentially lead to stressful life circumstances and can be a risk factor for psychological distress. It is found that mindset can impact resilience (Yeager & Dweck, 2012), where growth mindset individuals holds the belief that they are not defined by their past and can change and develop, which makes them more adequate responding to change or challenging situations.

Thus, we propose that:

**Hypothesis 3:** There is a negative relationship between employees' growth mindset and stress during rapid changes.



**Figure 2.**  
*Research model.*

## Methodology

### Sample and procedure

One important aspect of a research process is the collection of data. To investigate the variables transformational leadership, growth mindset, readiness towards change and negative outcomes (stress), we did not have many limitations regarding respondents who potentially could answer the survey. The only criteria to answer the survey was that the respondents were currently working (or temporarily laid off, however, still reporting to a leader), as well as currently reporting to a leader above themselves. The original plan was to target IT companies and start-ups, as we believe they are facing more rapid changes than other companies. However, with the outbreak of COVID-19, we decided to target several other industries as well, due to COVID-19 being a rapid change agent for almost all industries.

The data was collected electronically through a self-assessment questionnaire developed using Qualtrics, which is a quantitative approach for data-collection. The questionnaire was sent out through Facebook and LinkedIn in June, as well as through email, to target some specific companies which has been facing severe challenges and change, and potentially negative outcomes such as stress, during the pandemic. Self-reports can cause common method variance (Podsakoff et al., 2003), which again can influence the validity of the findings. One common bias is the social desirability bias, where individuals want to be perceived in a socially favorable way, thus one might answer in line with this. However, one can reverse several items to reduce the risk of respondents guessing desirable answers (Malhotra et al., 2006), which we have done with three of the variables, namely; mindset, readiness for change and perceived stress during COVID-19. Further, the

survey did not give any indications of the relationships between the variables under investigation, trying to limit some of the biases that can occur.

In total, we gathered a sample of 211 respondents, which satisfied the range of 150-200 respondents (Pallant, 2013). As we were dependent on answers on all the chunks of questions representing the different variables, we had to remove responses from several respondents due to lack of response on too many questions. Thus, we ended up with N=159 respondents in total. One explanation for this can be that the questionnaire was too long and time consuming for the respondents. The change-readiness scale consisted of 35 items alone, which together with the other variables might have made it too long. When investigating the drop-out rate in Qualtrics, we also detected that the respondents stopped answering after completing approximately 75% of the questionnaire. This feedback was also given from some of the respondents, alongside difficult language on some of the questions in the survey.

### **Demographics**

Several demographic data were collected in this study, including age, gender, tenure, size of organization and role. Age and tenure variables were measured in years, using intervals. The age intervals were divided into 18-24, 25-34, 35-44, 45-54 and 55-64. In regard to age, most of the respondents were between 25 and 34 (40.6%), while the second largest group were the range 45-54 (27.5%). Tenure was divided into “less than a year”, “1-3 years”, “3-5 years” and “more than 5 years”. Most respondents had worked with current leader between 1 and 3 years, which stands for 40% of the answers. 35% had worked for current leader less than a year, thus, most of the respondent in this survey had not worked that long with their current leader. Gender was measured as a dichotomous variable coded such that 1 was male, and 2 was female. The data set gathered consisted of 98 females (62.2%), and 61 males (36.8%).

In regard to size of organization most respondents worked in larger organizations (500+), which consist of 32.5% of the sample, while the second highest were the range 12 to 50 employees which make up 26,3% of the sample. This breakdown was divided into “1-11”, “12-50”, “51-200”, “201-500” and “500+”. The last variable that we measured was role (role in the company), which was divided into six categories, namely, “upper management”, “middle management”, “support staff”, “trained professional”, “consultant”, and “other”.

## Measures

The different measures used in this research were taken from established pre-existing research on each of the concepts. Thus, they all meet the criteria of reliability and validity. Further, all items were measured using a 5-point Likert-scale, and the respondents were asked to rate statements from 1, “strongly agree” to 5, “strongly disagree”.

### Readiness towards Change

Respondents’ readiness to change was measured by applying Robert Kriegel and David Brandt’s (1996) Change-Ready Scale. This scale has 35 items covering seven dimensions of readiness to change, namely, resourcefulness, optimism, adventurousness, drive, adaptability, confidence and tolerance for ambiguity. The respondent provides answers on the 35 items using a five-point Likert scale. The scores of the questions within the same dimensions are added up, giving a total score on each of the dimensions. All negatively worded items were reversed before conducting analyses. Previous measures have reported a Cronbach’s alpha of .79 (Katsaros, Tsirikas & Bani, 2014). Our study reported a Cronbach’s alpha of .85, which indicates a good internal consistency.

### Growth Mindset

One way of measuring mindset is to use the Implicit Person Theory (IPT) scale by Levy and colleagues (1998). This scale consists of eight items, using a five-point Likert scale (1=strongly disagree - 5=strongly agree). The respondents will rate themselves by checking the boxes that best reflect how much they agree with eight statements to measure the continuum growth to fixed mindset. This questionnaire includes statements such as: “*The kind of person someone is, is something basic about them, and it can’t be changed very much*”, to measure a fixed mindset. While the question: “*People can substantially change the kind of person they are*”, corresponds with a growth mindset. The items measuring fixed mindset were reverse scored and a mean IPT score was calculated for each respondent so that high scores reflect a growth mindset. Previous measures have shown a high reliability score, with a Cronbach’s alpha of .93 (Levy et al., 1998). Five validation studies have been conducted to secure that the items measure what is intended (Levy et al., 1998). The scale has also been adopted by other researchers, which supports its validity (e.g. Rydell et al., 2007; Heslin et al., 2006; Heslin & VandeWalle, 2011). Our study reported a Cronbach’s alpha of

.90. This is still a satisfying score, where .70 and above indicates good internal consistency (DeVellis, 2012).

### **Transformational Leadership**

To measure transformational leadership, we have applied the Global Transformational Leadership (GTL) scale by Carless, Wearing and Mann (2000). There are several other scales that measure transformational leadership (e.g. Avolio, Bass, & Jung, 1995; Conger & Kanungo, 1994; Kouzes & Posner, 1990; Alban-Metcalf & Alimo-Metcalf, 2000) that are relatively long and time-consuming to complete. The GTL scale is a shorter, less time-consuming alternative that is based on the seven behaviors of a transformational leader (Carless et al., 2000). These behaviors are; they communicate a vision, develop staff, provide support for them to work towards their objectives through coordinated teamwork, empower staff, are innovative, led by example and are charismatic (Carless et al., 2000). The scale consists of one item for each of the seven behaviors and is measured on a 5-point Likert scale ranging from 1 = *rarely or never* to 5 = *Very frequently or always*. In our survey the respondents are asked to rate their direct leader on each of these items. The authors of the GTL scale have evaluated the constructs convergent and discriminant validity with positive results. The internal consistency of the construct is high with a Cronbach's alpha of .93. This has later been confirmed and validated by Beveren, Dimas, Lourenço and Rebelo (2017). Our study reported a Cronbach's alpha of .94, which is a very good internal consistency score.

### **Stress**

To measure stress, we used the Stress Mindset Measure-Specific scale (SMM-S; Crum, Salovey & Achor, 2013). This measure consists of eight items that refer to one's beliefs of the nature of stress in the context of a specific stressor (in this case recent changes related to COVID-19). The questions evaluate the respondents' stress mindset (e.g. "The effects of this stress are negative and should be avoided."), as well as things related to the enhancing and depleting effects of stress on health, vitality, learning and growth performance and productivity (Crum, Salovey & Achor, 2013). We obtained the scores by reverse scoring the four negative questions and then taking the mean of all eight questions. A high score reflects a mindset that the effects of stress are enhancing. The internal consistency has a Cronbach's alpha of .80. Our study also reported a Cronbach's alpha of .80, which is considered a satisfying score.

## **Control variables**

Several demographic data were collected in this study, including age, gender, tenure, size of organization, role and industry. These control variables were included to be able to control for sociodemographic differences that might influence the results. Ommundsen (2001) has studied mindset in relation to motivational climate in school setting with children, thus, we want to investigate possible variation to grown-ups in the working population. Other control variables included years in current position, as well as position in current company (e.g. upper management, middle management, consultant). There might be differences between junior and senior workers, as well as how long one has worked with the current leader. Research has found some differences in the relationship between leaders and employees regarding gender, age and working hours (Dysvik & Kuvaas, 2011), to mention some. Industry is included because research has found that individuals can have different mindset in different domains (Dweck et al., 1995; Taberero & Wood, 1999). Thus, it is interesting to include industry as a control variable.

## **Statistical analyses**

The program SPSS was used to conduct our statistical analyses, and further test our hypotheses. The data was analyzed in several phases. Firstly, we ran descriptive statistics to describe and explore the characteristics of our sample, checking for outliers and normal distribution. Some outliers were detected from the histogram and boxplot, which the descriptive statistics provided. However, we decided to keep them since they were not extreme cases. The histogram from the descriptive statistics also showed that our sample was quite normally distributed. Thereafter we started to manipulate the data to further be able to test our hypotheses. Thus, reversing all the negatively worded items, as well as adding up total scores from the items that make up each scale to give an overall score (e.g. Total score for Mindset). When all the mean scores were calculated we run reliability tests in order to test the internal consistency of the measures. All the scales had a Cronbach's alpha of .80 or above, which satisfies the above .70, recommended by DeVellis (2012).

Although all the measures used have substantial psychometric support, we also decided to conduct a factor analysis, which is a data reduction technique (Pallant, 2013). For example, an exploratory factor analysis (EFA) can be used to

check for cross-loadings between the items, which we applied. An oblique rotation is often preferred, because it gives a more accurate solution compared to an orthogonal rotation (Costello & Osborne, 2005). Pallant (2013), suggest that KMO should be over .6, Bartlett's test should be significant ( $p = .000$ ), and most correlation coefficients should be over .35, for a factor analysis to be considered. This was the case for almost all items, however, some correlation coefficients below .35 was detected, and several items loaded on more than one component. Therefore, we removed 19 items from the Change Readiness scale, and one item from the Stress scale. For stress we removed item number 7. For the Change Readiness scale, the items 1-4, 9, 14, 16-21, 23-24, 26, 30 and 33-35 were removed. Thereafter, reliability testing was conducted once more by estimating Cronbach's Alpha for each of the measures. All measures were the same as before, above the .7 limit, ranging from .80 to .94. Thus, we retained the new EFA with the excluded items.

Thereafter we started to explore the relationship among variables (e.g. between transformational leadership and readiness towards change), to detect the strength and direction of the relationship between variables. Correlation analyses was conducted first, using Person's product-moment correlation, which gives an indication of both the direction (e.g. positive or negative) and the strength of the relationship (Pallant, 2013).

Further, hierarchical regression was conducted to test the hypotheses, and the possible moderating influence of growth mindset. Regression is used to assess the effects of a moderating variable, where the moderator explains when a dependent variable (DV) and independent variable (IV) are related. To test for moderation, one will investigate the interaction effect between X (transformational leadership) and W (growth mindset), and whether this effect is significant in predicting Y (Change readiness) (Pallant, 2013). PROCESS can be used to test the moderation hypotheses (Hayes, 2018). This has been argued to be more suitable approach when conducting moderation analysis, compared to regression techniques. This technique does not impose the assumption of normal distributed data and provides better control for type 1 error. Thus, we also tried running PROCESS through bootstrapping. PROCESS calculates the influence of the IV on the DV, through the moderating variable (MV). However, the results from PROCESS analysis did not change substantially from the regression. A double moderation was also performed as the final step in the analyses to see if

this had a stronger effect between the variables. Thus, investigating the variables stress and growth mindset as a possible double moderation. However, we decided to keep the simple moderation model since there was not detected any significant results from the double moderation. Thus, we conducted a basic regression analysis between the variables growth mindset and stress instead of including stress as a moderator as well, which is shown in hypothesis 3 where we look at the direct effect of growth mindset on stress during COVID-19.

## Results

### Exploratory Factor Analysis

To further investigate the number of constructs and structure of our measures, an exploratory factor analysis (EFA) was conducted. An oblique rotation was performed, as suggested by Costello and Osborne (2005). The four variables in our study had several items loadings below .35, and also showed some cross-loadings between the scales. Therefore, 16 items were removed from the Change Readiness Scale, which in total consisted of 35 items. Furthermore, one item was removed from the Stress Scale, which in total consisted of eight items. After forcing the removal of items loading below .45, all variables loaded on four different components. The results from the final EFA is shown in the Appendix. All the loadings ranged from .40 to .90, which is considered as sufficient (Pallant, 2013).

### Descriptive statistics

In table 1, mean, standard deviation, bivariate correlations and Cronbach's Alpha is presented for all variables. As mentioned, all items had sufficient reliability, ranging from .80 to .94, which indicates an adequate reliability score above the recommended .70 (e.g. DeVellis, 2012). A weak correlation is defined as .10, a medium correlation as .30, and a strong correlation as .50 (Cohen, 1988). Table 1 illustrate weak, to moderate correlations. From the correlation analysis one can see that there is a non-significant correlation between transformational leadership and readiness towards change,  $-.03$  ( $p > .05$ ). When splitting files in regard to gender, there was however a significant correlation between transformational leadership and readiness towards change for males  $.315$  ( $p < .05$ ). The same was not found for females  $-.008$  ( $p > .05$ ). Growth mindset showed a non-significant correlation with transformational leadership ( $.06$ ), and a non-



significant correlation with change readiness (-.08). Readiness towards change is significantly correlated with age, -.24 ( $p < .01$ ), and the role the employer holds in the company, .21 ( $p < .01$ ). Growth mindset showed a significant correlation efficient with age, -.25 ( $p < .01$ ). Stress and readiness towards change also showed a significant correlation efficient, -.22 ( $p < .05$ ). Lastly, there was not found a significant correlation efficient between growth mindset and stress, -.10, ( $p > .05$ ).

The correlation matrix gives an indication of the relationships between the different variables in this study, however, regression analysis is needed to further test the hypotheses in the study.

**TABLE 1: Descriptive statistics, Correlations and Scale reliability**

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	1.62	.48	-								
2. Age	3.81	1.21	-.04	-							
3. Tenure	1.95	.90	.00	.35**	-						
4. Size of org	3.33	1.39	-.19*	.01	.03	-					
5. Role	3.50	1.66	0.06	-.34**	-.05	-.20*	-				
6. TL	3.47	6.93	-.01	-.08	.07	-.10	-.00	<b>(.94)</b>			
7. CR	3.10	10.21	-.15	-.24**	-.16*	-.15	.02	.21**	<b>(.85)</b>		
8. GM	3.11	6.28	.06	-.25**	-.12	-.04	-.06	.01	.06	<b>(.90)</b>	
9. Stress	2.80	4.97	.07	.14	.13	-.08	-.01	-.01	-.15	-.22*	<b>(.81)</b>

N=159. Scale reliability indicated by Cronbach's Alpha coefficients are in parantheses. \*\*, \* P < .05. \*\*P < .0.1. TL = Transformational leadership; CR = Change Readiness, GM = Growth Mindset

### **Moderation Analysis**

Hierarchical regression was first conducted to test the hypotheses in this study. The results from the process analysis indicated that there is a direct relationship between transformational leadership and change readiness, however, the results were not significant. Thus, hypothesis 1: *“There is a positive relationship between transformational leadership and readiness towards change”*, was not supported.

To test the hypothesis that employees change readiness is affected by transformational leadership, and more specifically, if employees’ growth mindset moderates the relationship between transformational leadership and change readiness, hierarchical multiple regression, using PROCESS (Hayes, 2018), was conducted. Hierarchical multiple regression is a more sophisticated exploration of the interrelationship between variables (Pallant, 2013). In the first step, two variables were included. Growth mindset and transformational leadership. These variables accounted for an amount of variance in employees change readiness,  $R^2 = .0308$ ,  $F = 1.5027$ ,  $p > .05$ , however, the results were not significant.

Further, the interaction term between growth mindset and transformational leadership was added to the regression model, which also accounted for a proportion of the variance in employee’s readiness towards change.  $\Delta R^2 = .0042$ ;  $F = .6104$ ,  $p = .4359$ ,  $b = .0156$ ,  $t = .7813$ ,  $p > .05$ . However, the results were not significant. Thus, hypothesis 2: *“Growth mindset moderated the positive relationship between transformational leadership and employees’ readiness towards change”*, was not supported. Table 2 shows the results from the hierarchical multiple regression analyses.

Lastly, the direct relationship between growth mindset and stress was examined. The final results from PROCESS (Hayes, 2018), indicated that there was a negative relationship between growth mindset and stress as indicated, however, the results were not significant. Thus, hypothesis 3: *“There is a negative relationship between employees’ growth mindset and stress during rapid changes”*, was not supported.

**TABLE 2: Moderating effect of growth mindset**

Variable	$\beta$	SE	t-values	p-values
GM	-.1321	.5063	-.2609	.7946
TL	-.2940	-.5018	-.5859	.5589
GM x TL	.0156	.0200	.7813	.4359

R<sup>2</sup> increase depending on interaction; R<sup>2</sup> = .0042; F = .6104; p = .4359

TL = Transformational Leadership; GM = Growth Mindset

## Discussion

The purpose of this study was to investigate the relationship between transformational leadership and employee's readiness towards change, and the possible moderating effect of employee's growth mindset between the two variables. Lastly, the aim of this paper was to explore the direct relationship between employee's growth mindset and stress, to see if growth mindset had a buffering effect during a specific rapid change. Thus, hypothesized a negative relationship between employee's growth mindset and stress during a specific rapid change, namely the COVID-19 pandemic. Although several studies have been conducted to research the relationship between different leadership behaviors such as transformational leadership and employees change readiness, our study contributes to the change literature by looking at moderation relationship through employee mindset. While also looking at the direct relationship between growth mindset and stress, during a specific context. Growth mindset has previously been linked to resilience in education setting, however, this study contributes to looking at the working population in general with grown-ups, as well as a very specific context which yet lacks substantial research.

Our research showed that transformational leadership was positively, however, not significantly related to employee readiness towards change. Previous research has indicated that leaders' behavior can influence change related outcomes and shape employees' logics about the organization, and Bartunek (1984), found that leaders can influence employees' interpretation of change. Other research has found that leadership behavior is critical during change processes, impacting attitudes or readiness towards change amongst employees (Bridges, 2009).

Even though previous research has found a positive and significant relationship between transformational leadership and change readiness (e.g.

Nordin, 2012), some findings have been also been mixed (e.g. Henricks, Young & Kehoe, 2020). Our study did not find a significant relationship between the two constructs, which can have several explanations. The question about change readiness being malleable versus stable can be one explanation for the findings. Some attitudes may be more easily shifted, while others might be more difficult to shift (Kelly & Amburgey, 1991). Even though research has found correlation evidence between repeated measures (Jones & Van de Ven, 2016), our study targeted the situation and context around COVID-19, which is a specific change. Research has found that readiness for a specific change (state-readiness) is less stable than trait-resistance. Thus, this might potentially influence the results. Furthermore, transformational leaders might intercept with readiness towards change among employees during some change processes, however, a pandemic like COVID-19 might be too stressful and extremely uncertain. A study conducted in Norway found that the context in which a change is happening can be more important than the leader's individual traits due to a modest relationship between transformational leadership and personality measures (Hetland & Sandal, 2003). The context in this study (COVID-19), has been shaped by the Norwegian "dugnad"-spirit, which can be explained as when individuals come together and contribute to their community. In this case, the community is the whole of Norway, with borders being closed and seeing other countries handle the pandemic differently and individually. During the pandemic the Norwegian Health Organization and other authorities have continuously been giving directions that individuals generally have been following, despite of ambiguous facts and reasoning being conveyed. This "dugnad" may have led to employees putting their heads down and pull together in the same direction without asking questions regardless of the style of leadership they are exposed to.

Furthermore, employees' can have different attitudes towards different change initiatives (Choi, 2011), meaning that their change readiness during a situation like COVID-19 can be different than other changes. Thus, potentially affect the relationship between transformational leadership and readiness towards change. Hetland & Sandal (2003), also found that employees' perception of the leader can be related to the role of the rater. In this study, employees rated their own leaders, with their specific perception of transformational leadership, which might impact the results. As mentioned, a transformational leader may impact change readiness through informational sharing, support and trust (Choi, 2011; van

Dam et al, 2008). During a pandemic like COVID-19, where the situation is both unstable and uncertain, there might be more difficult for the leader to share information with employees, because the situation is changing rapidly from day to day. In many organizations employees was told to have home offices, and the next day employees were temporarily laid off, with uncertainty about when to return. New digital communication tools such as Zoom and Meet also changes how employees received information during the pandemic, potentially also impacting the results in this study.

### **Growth mindset as a moderator**

We hypothesized that growth mindset moderates the relationship between transformational leadership and change readiness, where the moderating variable growth mindset changes the magnitude of the relationship between transformational leadership and change readiness. Thus, increasing the moderator would increase the effect of the predictor (IV) on the outcome (DV). Our results showed a change of the magnitude; however, the results were not significant. When investigating the interaction term, the moderating effect of employees' growth mindset was almost significant. This implies that growth mindset can work as a moderator for the DV (change readiness), however, it is not that strong when the IV is transformational leadership. Or it can be that the specific context, with COVID-19, affected the results. Furthermore, our results also showed a small relationship with transformational leadership and change readiness to begin with. This can also be related to the context of our study, targeting a pandemic like COVID-19 specifically. This is a severe change for many individuals, with uncertainty and challenges, which might impact the results.

Research show that a growth mindset is positively related to change and attitudes to change. Dweck (2012), states that individuals holding a growth mindset are more inclined to engage in challenging situations. Thus, challenging situations is often related to change. Contrarily, those with a fixed mindset perceive challenges as something negative, in comparison with growth mindset individuals (Blackwell, 2007). Therefore, growth mindset individuals might be more open for challenges, and readiness towards change. Nevertheless, most research has been conducted in education settings, which is substantial different from the situation and context around a pandemic.

Previous research has also looked at the relationship between transformational leadership and employees' growth mindset, arguing that they might reinforce each other, as they both focus on personal development (Caniëls et al., 2018). Transformational leaders can motivate and challenge employees', where growth mindset individuals respond better than those holding a fixed mindset. Therefore, transformational leadership is not suitable for every employee. Furthermore, growth mindset is important for employees, as it interacts with transformational leadership style and impact employees' work engagement. Even though this study did not find significant results and lack of evidence for the moderation hypothesis, they all appear to be related, which serve as an important theoretical contribution to future research.

### **Growth mindset as a buffer for stress during COVID-19**

Lastly, we hypothesized that growth mindset work as a buffer for stress during a specific change (COVID-19), or in other words, that there is a negative relationship between growth mindset and stress. During the COVID-19 pandemic, several organizations experienced changes and uncertainty to a higher degree. Digital changes were implemented in many organizations during the pandemic with home offices being the new work arena. Growth mindset individuals, in comparison with fixed mindset individuals are known to embrace digital changes to a higher degree than fixed mindset individuals. Our results show that there is a negative relationship between stress and growth mindset, supporting our hypothesis and further strengthening the relationship between growth mindset and stress. However, the results were not significant.

Further, previous research has found that growth mindset individuals has better resilience during challenges in educational settings (Dweck & Leggett, 1998), and that mindset are more relevant during context that are challenging and hard. A pandemic like COVID-19 has been a challenge for many organizations and employees. However, those employees holding a growth mindset might see this as a new area that they can master, which again buffer for potential negative outcomes such as stress. Employees holding a growth mindset are not defined by their past, they feel that they can change and develop, which impact their resilience (Yeager & Dweck, 2012), and make them more adequate responding to change and challenges. The fact that we found a negative relationship, however, not a significant relationship between growth mindset and stress can be a result of

the nature of the changes that happened as a result of the pandemic. Firstly, working from home does not necessarily mean that the tools the employees use to perform their work change noteworthy. A portion of the respondents might already be familiar with the tools that was implemented during the pandemic. Physical meetings have been replaced by virtual meetings through platforms such as Zoom, Teams and Skype, which is a form of communication that is not new for most people as it has existed for almost two decades.

Secondly, employees in Norway have a great security net through NAV that might have helped buffering their stress levels since they do not have to worry that much about their private finances compared to employees' in other countries with less welfare systems. Thus, these variables might have impacted the results in this specific context.

### **Limitations and suggestions for future research**

Several limitations can be found related to our data collection, as well as design of the study. It is important to take these into account for potential future research on the field. Firstly, there are some limitations regarding the data collection and sample in our research. The data was collected randomly, targeting a variety of industries and companies. Therefore, this is a heterogeneous sample, which might make it harder to generalize our findings in the study.

Further, the study does not measure causality, hence, we cannot safely deduce the directions of the relationships (Bryman & Bell, 2015). Therefore, it might not be that transformational leadership affects growth mindset and not that a growth mindset forms the perception of one's leader. In order to deduce causal relationships, future studies should conduct a longitudinal, experimental study (Dysvik & Kuvaas, 2011). Future research could also look at the different dimensions of transformational leadership separately to get a better understanding of how the different characteristics of a transformational leader impacts employee readiness for change. The same can be said for readiness for change, as this construct also consists of several underlying dimensions.

Secondly, the study bases on an employee self-report questionnaire. Having the respondents answer questions about themselves in particular is likely to cause common method bias in that they want to provide positive answers (Chang, Witteloostujin & Eden, 2010). The validity of the findings might



therefore be limited (Podsakoff et al., 2003). To reduce the common method bias, all respondents were insured that the data were handled confidentially and that nothing could be traced back to them. Additionally, they were encouraged to answer honestly about their beliefs and behaviors and not as they would like them to be. Further, several items were reversed to potentially limit this bias. Perceptual variables can be difficult to measure with other means than self-reports, however, a third person observer can be used to for example measure transformational leadership amongst the leaders in the organization.

Thirdly, studies show that an individual's previous experiences will influence how they react to similar experiences and that if an individual has positive experiences with change, they will be more positive towards new changes (e.g. Buch, Kuvaas, Shore & Dysvik, 2014; Dunham et al., 1989). This indicates that there can be other variables than the ones tested for in this study that offers different explanations. Thereby, future research could for example have previous experience with change as a control variable. Further, this study detected differences in both age, gender and tenure under current leader, in regard to all variables. This was not hypothesized in our study. However, future research should investigate the possible effect of other confounding variables. For example, research has found that organizational commitment is a strong antecedent of attitudes /readiness towards change (Choi, 2011). Information sharing has been found to contribute to a reduction in negative attitudes towards change (van Dam, et al., 2008), making it another interesting variable to control for. Gigliotti and colleagues (2019) found that perceived organizational support is an important factor for state-readiness / shaping state readiness. Thus, future research can investigate specific leadership behavior that is important.

Finally, the sample in this study had a good spread in both gender and age, which supports the generalizability of this sample. However, the sample size ( $N=159$ ) is in the lower end of what is sufficient in a convenience sample such as this (Pallant, 2013). The sample size for the variable stress was also quite low, were fewer individuals' experiences stress during COVID-19. Thus, future research should also gather a larger sample. Furthermore, future research could explore whether these results vary in different industries and/or countries, which will strengthen the question about generalizability. This study targeted several different industries, were IT made up the largest percentage. Other industries might yield different results.

Future research should also look at other potential factors that might moderate or mediate the relationship between transformational leadership and employee readiness towards change. Another interesting approach is to investigate other leadership styles, to see if there is a stronger relationship between this leadership style and employees' readiness towards change. Our strongest results from this study was the relationship between growth mindset and readiness towards change, thus, another independent variable may show stronger and significant results.

Building on previous literature, another interesting path can be to look at the mindset the leaders holds, and how this potentially affect employees' mindset. It is found that leaders holding a growth mindset correspond better with employees holding a growth mindset. Further research can also look at the organization's mindset, and how this might influence employees' readiness towards change. Murphy & Dweck (2010) found that the organization's mindset potentially can influence employees' feelings of trust, commitment and learning.

### **Practical implications**

Investigating aspects that potentially can contribute to employees' readiness towards change is important because organizations need to embrace change to compete in competitive markets, stay innovative, and potentially stay alive during and after rapid changes such as the current situation with COVID-19. Furthermore, the nature of work is fundamentally changing, due to advances in for example digital solutions (Colbert, Yee & George, 2016). Several companies had to adapt fast during this situation, with home office and implementing digital solutions. Both leaders and employees need to accept and adopt, as well as realize the benefits of change.

Employees are known to resist change naturally (Lewin, 1951), thus investigating variables that can facilitate towards employee readiness towards change is important to study further. Both in terms of what leaders potentially can do, as well as employees. This study provided insight into the relationship between transformational leadership and employees readiness towards change, and the moderating effect of growth mindset. Even though this study did not find support for growth mindset as a moderator, the relationship between growth mindset and readiness for change was close to being significant. This is important implications for leaders who often operate as change agents. Knowing that

employee's holding a growth mindset are more open or ready for change, it would be beneficial for organizations to acquire those individuals. Previous research has found that individuals holding a growth mindset better adjust to challenges and change (Dweck, 2006; Rattan et al., 2015).

Another important aspect is the facilitating leaders do during change and change processes, where proactive leadership styles such as transformational leadership, LMX or authentic leadership to mention some, might align better with employees holding a growth mindset. Leaders are often the ones implementing change, as well as the ones making sure employees are on board for the change or challenging times. Thus, there might be valuable for leaders to consider employees mindset when implementing changes. Contrarily to growth mindset, fixed mindset individuals tend to avoid challenges (Dweck, 1986), and do not align as well with transformational leadership as employee's holding a growth mindset. Another interesting finding from this study was the weak relationship between transformational leadership and change readiness, as well as between transformational leadership and growth mindset. Transformational leadership has been found to positively correlate with change. However, this study targeted change readiness during COVID-19, which might impact the results.

Secondly, Dweck & Hogan (2016) investigated the company Microsoft, and how this organization created a growth mindset culture. They focused on effort and learning, rather than talent and performance in their recruitment process, which contributed to hiring of growth mindset employees. By fostering a whole culture built on growth mindset, organizations can make sure that their new onboarded employees align with this culture.

Lastly, this study contributed to look at growth mindset as a buffer for negative outcomes such as stress, during the COVID-19 pandemic. The results from the relationship between growth mindset and perceived stress, did show a negative relationship, however, not a significant relationship. Thus, indicating that employees with a growth mindset can buffer for stress, during a pandemic like COVID-19. Thus, focusing on how employees differ on the continuum growth mindset to fixed mindset is important for organizations and their leaders, both in term of change implementations, rapid changes and possibly buffer for negative outcomes such as stress. Another interesting result is the close to significant relationship between change readiness and perceived stress during COVID-19

(.008). This indicates that employees who score higher on readiness towards change might be more resilient towards stress, in this specific situation.

## **Conclusion**

Change is inevitable in today's organizations. Both implementing new change tools and innovation, as well as unforeseen changes that naturally follows a pandemic like COVID-19. Rowden (2001), states that organizations and their employees need to be in a continued state of change readiness, for change implementations to be successful. Further, leaders are often tasked with initiating and implementing changes, thus highlighting the importance of leadership styles and skills when facilitating readiness towards change amongst employees. Our study contributes to the change readiness literature by establishing the influence of transformational leadership during a specific and rapid change (COVID-19), and the moderating influence of growth mindset. Our results show a positive relationship between transformational leadership and readiness towards change. Furthermore, the interaction term between growth mindset and transformational leadership also accounted for a proportion of the variance in employee's readiness towards. Lastly, there was found a negative relationship between growth mindset and stress. None of the hypotheses was significant, however, the results show that growth mindset do affect both stress and readiness towards change, making it an interesting variable to investigate further in future research.

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## Appendix

Exploratory Factor Analysis				
Item	Components			
	1	2	3	4
GM_3			-.805	
GM_5			-.801	
GM_7			-.794	
GM_8			-.722	
GM1_Rev			-.767	
GM2_Rev			-.727	
GM4_Rev			-.735	
GM6_Rev			-.779	
Stress1_Rev				.775
Stress3_Rev				.596
Stress7_Rev				.402
Stress_2				.705
Stress_4				.646
Stress_6				.802
Stress_8				.851
TL_1		.815		
TL_2		.841		
TL_3		.869		
TL_4		.908		
TL_5		.821		
TL_6		.833		
TL_7		.886		
Change_27	.422			
Change_28	.522			
Change_29	.537			
Change5_Rev	.630			
Change6_Rev	.429			
Change7_Rev	.508			
Change8_Rev	.681			
Change10_Rev	.706			
Change11_Rev	.576			
Change12_Rev	.572			
Change13_Rev	.646			
Change15_Rev	.409			
Change22_Rev	.680			
Change25_Rev	.650			
Change31_Rev	.560			
Change32_Rev	.511			