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Abstract

In today's constantly changing and unpredictable business environment, organizations and employees are required to show resilient behaviors. While there is emerging research on leadership styles and employee resilience, there remains a notable gap in understanding the impact of authentic leadership. Specifically, there is a need to explore how individual components of an authentic leader can enhance the resilience of their employees.

A mixed method approach with respondents across different industries working towards building innovation was conducted to investigate our research question. Our study reveals that highly resilient employees exhibit minimal variation in desired leadership behaviors, and identified nine clusters of leaders' behaviors that highlight the profound impact of authentic leadership on employee resilience. We offer a framework for understanding the specific behaviors through which different dimensions of authentic leadership influence resilience, shedding light on the underexplored impact of each dimension. Additionally, it reveals the dynamic synergies among authentic leadership dimensions and highlights the enabling role of self-awareness and internalized moral perspective.

Our study contributes and complements to the research on authentic leadership and employee resilience. Furthermore, the study provides practical implications for leaders in innovative organizations, guiding them in promoting employee resilience through specific behaviors. It also enhances employees' understanding of their experiences with leaders, aiding them in navigating relationships and assessing the impact of leaders' behaviors on their own resilience.

1.0 Introduction

1.1 Background

The complexities and heterogeneity of the business environment are constantly increasing due to globalization, advancements in technology and digitalization, as well as strong competition. Organizations are required to swiftly and frequently implement large-scale changes such as downsizing, mergers, and acquisitions in order to survive and thrive (De Meuse et al., 2011; Gordon et al., 2000). In addition to market demands, an increase in the number of environmental disasters presents new challenges and uncertainties that necessitate adaptability and strategy planning (Lee et al., 2013). These are just a few examples of the Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) environment that businesses operate in today (Codreanu, 2016). This requires organizations to possess and continuously enhance fundamental resilience capabilities to endure and thrive (Seville, 2018).

Resilience is defined as the ability to recover from adversity and resume normal operations, indicating the robustness of organizational systems and infrastructure (Kuntz et al., 2017; Lengnick-Hall et al., 2011; Sutcliffe & Vogus, 2003). Employees play a crucial role in organizations, and according to Hameed and Waheed (2011), the success of an organization is determined by employee performance. This led to the expansion of the concept of resilience to the individual employee level. Scholars have concluded that an individual's ability to adapt to changes determines their reaction to adversity, implying that fostering organizational resilience necessitates an investment in employee resilience (Kuntz et al., 2017; Van den Heuvel et al., 2015). Employee resilience has received an increasing amount of attention from researchers due to its positive impact on organizational environment by significantly reducing the negative impact of job insecurity, mitigating job stress, and facilitating for individuals to become more energetic when working on multiple projects (Wang et al., 2022). Resilient employees can anticipate adversity, take a proactive approach, and minimize the impact of stressful events on themselves by effectively utilizing their psychological resources (Shin et al., 2012). However, additional research is needed to investigate how employee resilience can be developed and improved in the workplace (Lengnick-Hall et al., 2011).

Given the inherent stresses accompanying working in a VUCA setting, it is critical for organizations to understand the elements that can enhance or erode the resilience of their employees. One of those elements is leadership. Research has shown that in order to foster employee resilience development, a suitable leadership style is essential to create a supportive organizational context for employees (Crane & Hartwell, 2018; Ou et al., 2014). The impact of leadership on employee engagement is well documented (Carasco-Saul et al., 2015), and Kahn (1990) found that leadership has the greatest potential to influence followers by providing a supportive environment in which the follower feels safe to fully engage in tasks. It was discovered by Bakker et al., (2007) and Saks (2006) that when supervisors exhibit relationship-related behaviors towards employees, they observed higher levels of engagement from employees. Due to its dynamic capabilities with advanced levels of cognitive, emotional, and moral development, authentic leadership is perceived as a suitable leadership model for resilient organizations (Zehir & Narcıkara, 2016).

Moreover, an innovative environment is essential for overcoming various challenges. Innovation is widely recognized for being present during times of growth and prosperity. Many organizations must engage in continuous innovation processes in order to pursue market opportunities and maintain a competitive advantage (Liu, 2017). It enables businesses to meet market demands while also keeping up with digital transformations. Companies undergo continuous change as a result of innovative processes. As research shows, resilient employees are better able to deal with adverse, stressful situations in a constantly changing workplace (Senbeto & Hon, 2020; Bardoel et al., 2014), indicating that resilient employees can be more effective in addressing change. Supporting this proposition, a study by Hamel and Valikangas (2003) shows that the relationship between resilience and innovation is supplementary. As any change process is dependent on the support received from the employees, studies suggest that resilience can positively improve organizational capacity in building and serving innovation (Akgün & Keskin, 2014; Caza & Milton, 2012). This allows for the possibility of narrowing whether authentic leaders can promote employee resilience in a context where challenging settings are continuous.

1.2 Problem background

While many empirical studies have found that authentic leadership is associated with employee resilience or closely related constructs (Mao et al., 2022; Wang & Xie, 2020; Rashid et al., 2019; Amunkete & Rothmann, 2015; Liu et al., 2015; Rego et al., 2012), it is important to note that these studies considered authentic leadership as a core construct or one unified variable. This indicates that, despite using different versions of the Authentic Leadership Questionnaire (ALQ) by Avolio, Gardner and Walumbwa (2007), they did not break it down to smaller components. This can be explained by Walumbwa et al. (2008) and Kernis & Goldman (2005) who discovered empirical evidence in which the dimensions of authentic leadership are not dependent on one another and have high convergent validity. As a result, assessing authentic leadership as a higher order construct may be of greater significance. Rego et al. (2012) argue that viewing authentic leadership as a core construct is conceptually acceptable as the dimensions are governed by leaders' self-regulatory processes. However, Neider and Schiriesheim (2011) developed the Authentic Leadership Inventory, which uses the same dimensions as the ALQ to assess authentic leadership. Validation studies discovered that these components are distinct and produce a good assessment of authentic leaders when combined (Stark, 2020). To understand the unique aspects of this construct, future research should consider using separate dimensions of authentic leadership rather than an aggregated measure (Neider & Schiriesheim, 2011). To the best of our knowledge, there are currently no studies that have investigated the relationship between authentic leadership components and employee resilience, particularly in the context of innovative businesses. Thus, we want to address this knowledge gap through investigate and provide insights into the following research question:

"How can the different dimensions of authentic leadership influence employee resilience in Norwegian innovative businesses?"

Our study focuses solely on innovative businesses operating in Norway. By focusing on understanding the leader-follower relationship, we go beyond previous research and contribute to the field. We will specifically investigate how employees perceive their leaders and how they believe different aspects of leaders' authenticity influence them. This research aligns with the recommendations of Alvession & Einola (2019) and will contribute to the development of authentic leadership.

2.0 Literature review

2.1 Authentic leadership

The literature on leadership theories is abundant, encompassing both academic and popular sources, and many of the theories presented have similarities and overlaps. Among the theories proposed are servant leadership (Spears, 1996), transformational leadership (Bass & Steidlmeier, 1999), charismatic leadership (Conger, 1989), and more recently authentic leadership (Avolio & Gardner, 2005). Luthans and Avolio (2003) suggested that authentic leadership best represents the ethical and moral convergence of positive organizational behavior and transformational leadership (Schulman, 2002). They argued that authenticity is best represented in the type of positive leadership that is required in modern times, such as during environmental changes, when rules no longer apply, and when leaders are transparent regarding their intentions (Luthans & Avolio, 2003). As a result, authentic leadership is thought to incorporate essential elements of the proposed leadership forms (Avolio & Gardner, 2005) and thus provides a valuable foundation for investigating the relationship between leadership and employee resilience.

Although the earliest philosophical conceptions of authenticity within the leadership literature emerged in the 1960s (Gardner et al., 2011), the theory of authentic leadership reemerged as a focus of interest in the social sciences in the early 2000s and has been slowly gaining acceptance due to an increase in high-profile corporate scandals (Walumbwa et al., 2008; Avolio & Gardner, 2005; Luthans & Avolio, 2003). Multiple corporate scandals and an uncertain economy have necessitated the adaptation of positive leadership (Puni & Hilton, 2020; Avolio & Gardner, 2005; Luthans & Avolio, 2003), raising concerns about the reliability of established leadership styles in delivering authentic transformational leadership (Puni & Hilton, 2020).

In a situation where society and organizations look to leaders for hope and direction, there has been a resurgence of social science research and reflection regarding an authentic leadership development strategy that is relevant and required for desired outcomes (Avolio & Gardner, 2005; Cooper et al., 2005). However, the requirement for effective leadership extends beyond the areas of politics (Luthans & Avolio, 2003). With the emergence of new technologies, increased competition, and an uncertain economic and ethical landscape, all levels of an organization are

experiencing a decline in optimism and trust (Luthans & Avolio, 2003). With the current environment, there has been a need for a leadership development approach that is more authentic, relevant, and capable of producing positive outcomes (Avolio & Gardner, 2005; Begley, 2001). By prioritizing the restoration of confidence, hope, and optimism in difficult times, organizations can effectively meet challenges and demonstrate resilience by quickly rebounding from catastrophic events (Avolio & Gardner, 2005).

According to Luthans and Avolio (2003), authentic leadership is characterized by a leader's ability to act in alignment with their true self. This requires self-awareness and the consistent integration of one's genuine thoughts and beliefs into their actions. Authentic leaders operate based on a defined set of values, possess a strong sense of identity, and lead by example (Gardner et al., 2005). Previous research in this field has also discovered a connection between authentic leadership and a variety of critical organizational outcomes, including follower performance and attitude (Novitasari et al., 2020; Walumbwa et al., 2008). Walumbwa et al. (2008) found that organizational leaders who are aware of and act in accordance with their genuine values and beliefs, and who facilitate the same for others, are more likely to have higher levels of well-being among their employees. Positive leadership styles have been shown to have a positive influence on follower performance (Mumford et al., 2023). Thus, authentic leaders have the potential to increase employee engagement and satisfaction while also strengthening the employee's identity (Novitasari et al., 2020).

Various scholars have proposed numerous definitions of authentic leadership in the literature (Gardner et al., 2005; Luthans & Avolio, 2003; Begley, 2001). Walumbwa et al. (2008), on the other hand, introduced a redefined version of the concept that builds on the developmental approach of Luthans and Avolio (2003) while incorporating essential components from earlier conceptualizations. *"A pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development"* (Walumbwa et al., 2008, p.94).

This updated definition has been widely adopted and recognized as a generally accepted definition of authentic leadership (Gardner et al., 2011). This definition captures the essential components of authentic leadership, which can be thought of as a higher order global construct which has connections to organizational behavior, psychology, and leadership (Puni & Hilton, 2020; Avolio et al., 2018; Rego et al., 2016; Walumbwa et al., 2008). It also captures the commonly accepted view of followers and their role in the development and demonstration of authentic leadership (Avolio & Gardner, 2005).

However, scholars (Cooper et al., 2005; Shamir & Eilam, 2005; Sparrowe, 2005) have previously expressed concerns about the broad scope of the definition, which they claim creates measurement challenges in research. Alvesson and Einola (2019) argued that dominant versions of positive leadership score higher on appearing good and reflecting people's interests than a qualified understanding of organizational life and the value of manager-subordinate relation. This stands in contrast to the positive portrayals found in authentic leadership literature. They also argued that over-emphasizing the person of the leader can worsen the situation (Alvesson & Einola, 2019). This can be supported by the findings of Nyberg and Sveningsson (2014) who stated that it can be challenging to regard oneself as an authentic leader, forcing leaders to work on their identity to bridge divergent discourses. Consequentially, the efforts to practice authenticity can result in identity struggles that force managers to create metaphorical selves to cope with the struggles (Nyberg & Sveningsson, 2014). Despite these concerns, the concept merits further exploration due to its ability to resonate with the need for authenticity in organizations and address contemporary organizational challenges.

2.1.1 Self-awareness

Self-awareness is as stated by Carden et al. (2022) frequently regarded as a critical component of effective leadership. In the field of authentic leadership, self-awareness is a process in which individuals seek to understand themselves, including their own strengths and limitations (Walumbwa et al., 2008; Ilies et al., 2005; Avolio et al., 2004). In accordance with Ilies et al. (2005), self-awareness is the awareness of one's knowledge, values, beliefs, experiences, and motives. Avolio et al. (2004) and Eagly (2005) found that self-aware and value-driven leadership behavior influences followers' attitudes, behaviors, and performance

favorably through their hope, trust, and positive emotions. Despite the focus on personal values, Eagly (2005) stated that authentic leaders cannot promote values that are purely self-centered or that only reflect a personal morality. The followers' cooperation or identification with the leader's objectives is not always guaranteed, even when a leader is communicating their values and beliefs. Bass and Steidlmeier (1999) stated that an authentic leader is one who embodies a genuine commitment to being true to oneself and to others. As a result, authentic leadership requires both commitment to one's values and the ability to effectively communicate and impart them to subordinates.

Gardner et al. (2005) introduced a process model aimed at fostering the growth of an authentic leader, which places significant emphasis on promoting self-awareness in both leaders and followers. The model comprises four key components: values, identity, emotions, and goals. Luthans and Avolio (2003) argued that a leader who wants to cultivate authentic leadership must be aware of the environment in which these components are used. The process model by Gardner et al. (2005) facilitated the development of the leader's self-clarity, self-views, and self-certainty, enabling them to prosper self-knowledge and shape their identity. By developing these four elements of self-awareness, leaders can become more authentic in their interactions with others and inspire their followers to achieve their goals (Gardner et al., 2005). These qualities of an authentic leader are defined by Gardner et al. (2005) as trustworthiness, accountability, fairness, and respect for others. They view themselves as role models, but they also acknowledge their weaknesses and work to overcome them by developing participative relationships with their followers (Avolio & Gardner, 2005).

Self-awareness is characterized by several scholars as a multiplicity of views and thinking (Sutton, 2016; Nutt Williams, 2008; Walumbwa et al., 2008). While Kernis (2003) argues that self-awareness is a process in which individuals discover their own strengths and weaknesses, other scholars emphasize the leader's ability to transparently transfer qualifications, values, and ambitions to followers (Northouse, 2013; Gardner et al., 2005). However, Avolio et al. (2004) suggested that although a trusting and participatory dynamic is crucial, it may not suffice in fostering a strong relationship between a leader and their follower. This viewpoint is consistent with the findings of a 2006 research study by the United States Army which revealed that leaders possessing technical competency were incapable of

forging connections with their subordinates due to their lack of self-awareness (Montgomery, 2007). This deficiency can lead to negative outcomes such as poor communication and hostile work environment. Leaders who are self-aware, on the other hand, can recognize the diversity of their team and how decisions affect their followers. This enables them to solicit feedback from their subordinates and use it to improve their perception of themselves. Leaders who are self-aware are better able to adapt to changing environments and leverage information to maximize performance in the given context (Walumbwa et al., 2008; Gardner et al., 2005).

2.1.2 Internalized moral perspectives

According to Ryan & Deci (2003), the concept of internalized moral perspective can be understood as an intrinsic and harmonious self-regulation process. Leveraging their self-awareness, authentic leaders portray internalized moral perspective and self-regulation by staying consistent with their principles, values, and ethics despite difficulties and able to convey that to others through their actions and behaviors (Ilies et al., 2005). As described by Walumbwa et al. (2008, p. 92) *"Authentic leadership includes a positive moral perspective characterized by high ethical standards that guide decision-making and behavior"*.

The dimension of internalized moral perspectives is considered as an essential component of authentic leadership (Walumbwa et al., 2008; May et al., 2003). Gardner et al. (2005) define internalized moral perspective as the process by which individuals guide their own behaviors using internal moral standards and values rather than external pressure from peers, organization, or society. This involves establishing personal standards, recognizing any inconsistencies between these standards and outcomes, and subsequently taking steps to resolve such inconsistencies. This indicates that followers perceive authentic leaders' actions and behaviors to be consistent with their stated beliefs and ideologies, thereby improving the relationships between leaders and followers (Ilies et al., 2005). Thus, authentic leadership may be able to influence employee resilience through positive modeling, demonstrating the significance of living in accordance with one's values. They can also instill a strong sense of purpose in their employees, which can encourage them to find meaning in their work and strengthen their resilience. Moreover, leaders with a strong internalized moral perspective and balanced

processing are more likely to empower employees to act on their own values and beliefs, making employees feel more autonomous and in control of their work.

2.1.3 Relational transparency

The concept of relational transparency is widely recognized as a fundamental principle of authentic leadership. It is one of the four pillars of authentic leadership and contributes to transparency in the leader-employee relationship (Taştan & Davoudi, 2019; Walumbwa et al., 2008). Stakeholder theory by Freeman (1984) emphasizes the importance of leaders not only attending to the interests of their stakeholders but also considering the needs of workers, customers, and suppliers while remaining transparent in their interactions with them. In fact, research by Valsania et al. (2012) suggested that employees internalize a leader's belief and values through their moral character and transparent behavior. As specified by Avolio and Gardner (2006) and Luthans and Avolio (2003), relational transparency is defined as the willingness to openly share information, and a key characteristic of transparency is maintaining relationships with employees based on sincerity and honesty.

Being relationally transparent refers to the act of presenting one's genuine self to others with honesty and openness (Avolio & Gardner, 2006). The literature in this domain frequently refers to Harter's (2002) definition of authenticity, which emphasizes the important of thoughts and emotions to be in alignment with actions. This includes willingness to share one's feelings, motivations, and inclinations with others in a suitable manner. Kernis (2003) characterizes this behavior as self-regulating. Relational transparency, as defined by Northouse (2013), includes open communication and the development of authentic leadership in which individuals share both positive and negative aspects of themselves. Walumbwa et al. (2008) emphasize the proclivity of authentic leaders to openly reveal their goals, values, and weaknesses. Transparent individuals are truthful in their speech, actions, and commitments, and they make no attempt to hide their true selves in order to impress others. As noted in the works of Walumbwa et al. (2008) and Ilies et al. (2005), this approach fosters dependable and trustworthy relationships based on shared values among actors linked in a hierarchical structure. By practicing relational transparency, an authentic leader fosters a stable and consistent environment.

Gardner et al. (2005) argue that this allows the leader to send clear signals to their followers regarding their own beliefs and values.

Authentic leadership, in contrast to transformational and charismatic leadership, does not rely solely on verbal persuasion or the use of impression management to inspire followers (Gardner & Avolio, 1998). Although authentic leaders build enduring relationships and lead with a purpose, Walumbwa et al. (2008) stated that they might not be described as charismatic or inspirational by others. The process in which followers internalize beliefs may be based less of inspirational appeals, symbolism, and other forms of impression management (Walubmwa et al., 2008). As argued by Avolio and Gardner (2005) it is rooted in the congruence of between the words, character, attitude, and thoughts of the leader. They also argued that the authentic approach of the leader creates authenticity among followers, where genuine attitude attracts others to achieve the same authenticity. According to Gumusluoglu and Ilsev (2009), there exists a positive relationship between the likelihood of follower to contribute innovative ideas and their perception of the leader's positive reaction. While followers tend to share their ideas and contribute to innovation, it is also crucial that the leader's reaction is transparently communicated for their followers to facilitate a conducive environment for idea sharing. Leaders who are able to encourage and stimulate followers' creativity and innovativeness by providing an honest and transparent environment, embody a crucial trait of an authentic leader (Avolio & Gardner, 2005)

2.1.4 Balanced processing

One salient facet of authentic leadership involves balanced processing. Northouse (2013) describes the construct as a self-regulatory behavior in which an individual engages in unbiased analysis of available information. Prior to making a decision, it is important to conduct an objective evaluation of all relevant information (Walumbwa et al., 2008), including examining opinions that are opposed to their own perspectives. Although the perspective of others may challenge an individual's established beliefs, Walumbwa et al. (2008) argued that the construct is seeking alternative perspectives that can enrich decision-making. Balanced processing has also been described by Gardner et al. (2005) as a mechanism for gathering and interpreting self-relevant data. This includes both positive and negative aspects, in

order to foster individual growth and development. It implies that leaders with authentic characteristics have the ability to consider various perspectives on the issue at hand and have a thorough understanding of the situation prior to reaching a decision (Raziq et al., 2019; Walumbwa et al., 2008).

Previous research has found a strong association between balanced processing and overall job satisfaction (Rodriguez et al., 2017; Wong & Laschinger, 2013). This trend can be attributed to leaders who actively seek diverse input and opinions, including both positive and negative viewpoints, before making a decision. In accordance with organizational creativity literature for enhancing employees' creativity, managers and organizations should build a positive context in the workplace (Müceldili et al., 2013). It is also argued by Müceldili et al. (2013) that authentic leaders raise positive emotions from employees by creating a positive, supportive, fair, and transparent interactions. This indicates that leaders who adopt an inclusive approach can create an environment that encourages open communication, encourages subordinates to express their ideas, and embraces challenges to facilitate productive discussion (Wong & Laschinger, 2013). Müceldili et al. (2013) found that as a leader's analytical and fair decision-making qualities increase, creativity within the organizational also tends to increase.

Balanced processing is an important factor in the development of multifaceted, innovative solutions within an organization. Authentic leaders are able to enhance innovation through building confidence, creating hope, raising optimism, and strengthening resilience (Müceldili et al., 2013). Through their relationship with their followers, they have an effective role in increasing the innovativeness in the organization. Avolio & Wernsing (2008) support this by expressing that leaders who are unaware of their own and their team's decision-making biases may fail to leverage the benefits of diversity and adaptive conflict to promote innovation. Thus, leaders possessing a high level of balanced processing also signal their acceptance of diverse perspectives and flexibility, allowing followers to be more adaptable and courageous in the face of change. If organizations select leaders with authentic features, in accordance with Müceldili et al. (2013), they suggest that it will increase organizational innovativeness.

2.2 Employee resilience

The concept of employee resilience has been proposed by scholars to focus empirical research on individual resilience in organizational settings on the context of work-specific resilient behaviors (Tonkin et al., 2018; Kuntz et al., 2017). Early definitions of resilience suggests that it is the ability to recover from adversity and restore normal functioning systems (Kuntz et al., 2017; Seery et al., 2013). Hodliffe (2014, p. 10-11) conceptualized employee resilience as *"the developable capacity of employees, facilitated and supported by the organization, to utilize recourses to positively cope, adapt, and thrive in response to changing circumstances."* More recent perspectives on resilience also argue that resilience is not solely limited to crisis management but can also develop in a stable transformational environment to ensure readiness to change (Kuntz et al., 2017; Carvalho & Areal, 2015; Van der Vegt et al., 2015; Lee et al., 2013; Lengnick-Hall et al., 2011). The fact that employee resilience is demonstrated not only in the face of adversity and major crises at work, but also through proactive development of personal and workplace resources, is essential to this study. Individual resilience has been defined by researchers as a personality trait, developable capacity, or a process (Hartmann et al., 2020; Kossek & Perrigino, 2016; Richardson, 2002). It is evident in behaviors indicating resource identification and utilization, as well as learning and change-oriented behaviors and the ability to apply these resources (Näswall et al., 2019; Caniëls & Baaten, 2019; Kuntz et al., 2016).

The following section will elaborate on reviewed resilience measures that address not only daily challenges at work, but outside of the work context, which is also considered necessary for resilience (Näswall et al., 2019; Pangallo et al., 2015). To investigate resilience mechanisms, Hartmann et al. (2020) propose that behavior measurements are best suited to reflect what individuals actually do in response to adversity. These behaviors have been found to be influenced by personality traits, culture value orientation, personal resources, personal emotions, and work demands (Hartmann et al., 2020). Cameron and Brownie (2010) discovered that personal resources and the ability to manage work demand effectively positively correlate with resilience. According to Kuntz et al. (2016), an organization's role in ensuring that personal resources are manifested to support stress coping and the development of workplace resources is crucial. Moreover, Lyons et al. (2015) found that people who have strong self-evaluation of their career

competencies, as evidenced by emotional stability, self-efficacy, and internal locus of control are more resilient and satisfied with their career. Personal resources are thus important in this study, given that the implementation of resilience building initiative such as this has been shown to have a positive relationship with the development of resilience in employee. Therefore, the dimensions of self-efficacy, internal locus of control, and reflective ability will be elaborated.

2.2.1 Self-efficacy

Self-efficacy is context specific and is particularly important when individuals face adversity (Cassidy, 2015; Bandura et al., 2001). Self-efficiency is defined as the ability to develop motivation and envision challenging goals in life, which influences both private and professional decision-making (Schwarzer & Warner, 2013; Markman et al., 2002; Betz & Klein, 1996). Scholars argue that self-efficacy serves as a personal resource, enabling individuals to be more persistent and motivated in the face of work challenges (Lyons et al., 2015; Yang & Danes, 2015 Guo et al., 2012). Due to resilience often being defined as the ability to cope adaptively with stressors, self-efficacy beliefs can promote resilience and have been conceptualized as a component of resilience (Schwarzer & Warner, 2013). A resilient person in a demanding situation has the ability to bend without breaking and quickly recover from a setback, as well as reject negative thoughts concerning their capabilities (Ozer & Bandura, 1990), which is consistent with the work of human adaptive systems (Schwarzer & Warner, 2013).

Individuals who have a high level of perceived self-efficacy have trust in their own abilities in the face of adversity, see problems as challenges rather than threats, motivate themselves, and persevere when confronted with difficult situations (Schwarzer & Warner, 2013; Bandura, 1997). Individuals with lower perceived self-efficacy, on the other hand, are more likely to experience self-doubt and the inability to complete a difficult task, and they are more likely to give up when confronted with environmental demands (Schwarzer & Warner, 2013; Lunenburg, 2011). Thus, self-efficacy is an important characteristic in developing competence in the face of adversity, particularly in the role of an authentic leader (Schwarzer & Warner, 2013), emphasizing the importance of managers providing professional development tools for their employees. According to Schwarzer and Warner (2013), one of the first tasks of an authentic leader is to increase the self-

efficacy of their followers. An authentic leader helps their followers recognize their own capabilities by expressing confidence and trust in them (Schwarzer & Warner, 2013; Gardner & Schermerhorn, 2004).

2.2.2 Internal locus of control

Locus of control is a cognitive set of factors that has been found to influence resilient outcomes in people who face adversity (Munoz & Brown, 2017). Locus of control is in accordance with Stevenson et al. (2011) a personality trait that influences an individual's belief in their ability to achieve happiness and health in their pursuit. It also relates to the perception that outcomes are a result of their own decisions. According to Rotter (1966) this perception of locus of control can be explained as the degree to which an individual develops the expectations that their behavior will be associated with internal or external reinforcements. He also proposed that people with an internal locus of control were more likely to believe they controlled their own behavioral outcomes (Rotter, 1966). Lefcourt (1976) provides a slightly different perspective on the concept of internal locus of control, stating that an individual's perception of their own actions and behaviors are the primary predictors of the outcome they encounter. This entails that the perceived control is a generalized expectation of internal reinforcement control. In accordance with Kormanik & Rocco (2009), individual's response to unpleasant stimuli is influenced by their perception of the stimuli and their belief in their ability to cope with it.

Leontopoulou (2006) argues that the perception of internal control is often associated with resilience, as the more internal control a person receives in their life, the more they will approach adverse situations in a calm and mentally healthy manner. The internal factor contains multiple dimensions that correspond to the extent to which one perceives that outcomes are in his or her control and is found to be positively related to resilience (Stevenson et al., 2011; Thompson & Wierson, 2000; Zimmerman, 2000), while external locus of control is found to be negatively associated with career resilience (Lyons et al., 2015). Both Stevenson et al. (2011) and Zimmerman (2000) highlight the importance of perceiving internal control for empowerment. They suggest that having an internal locus of control is associated with increased social action and lower levels of psychological stress.

2.2.3 Reflective ability

Reflective ability is another key characteristic of resilient behavior (Stevenson et al., 2011). Reflective thinking ability has proven itself to be an important component of emotional intelligence, where Kinman and Grant (2010) argue that people with high emotional intelligence and developed reflective abilities are more resilient. Reflective ability includes the capacity to describe and expand one's understanding of events by recognizing different perspective and experiences. It also involves acquiring knowledge that can inform future behavior (Karnieli-Miller et al., 2021). Reflection, in accordance with Carmeli et al. (2021), assists employees in understanding why and how an issue or mistake happens. Along with this, Näswall et al. (2015) discovered that encouraging people to learn from their mistakes and constantly re-evaluate their performance leads to a better level of resilience. In the notion of building resilience through reflection, Fixsen and Ridge (2012) also stress the importance of sharing experiences through support in coping with challenging situations. Carmeli et al. (2013) suggest that mistakes and failures are a part of the learning process. They argue that through trial and error, employees become more aware of complexities and changes, enabling them to develop improved coping strategies. Research by Karnieli-Miller et al. (2021) demonstrates that reflective ability is critical in the development of good communication skills. In this regard, the dimension of balanced processing is particularly relevant to fostering reflective ability. In contexts where valuing diverse opinion through balanced processing is important, having reflective abilities becomes crucial. Reflective abilities enable individuals to be aware of other's needs and carefully examine information that will achieve the optimal outcome.

3.0 Methodology

This chapter addresses the methodological framework employed to address the research question posited in the study. Firstly, we provide a thorough overview of the sampling requirements and research measurements. Following that, we explain methodological choices for data collection and the procedures used in analyzing both quantitative and qualitative data. Finally, we discuss the research quality of the study, as well as its ethical and practical implications.

3.1 Research design

The research design describes the overall strategy for how the research question will be answered and how the study is structured (Saunders et al., 2015). The purpose of the thesis is to provide new empirical evidence by exploring the impact of authentic leadership dimensions on employee resilience. We have therefore chosen to pursue our research using a mixed method approach, with an emphasis on qualitative research and induction. Tashakkori and Creswell (2007, p. 4) defines mixed method as *"research in which the investigator collects and analyzes data, integrates the findings, and draw inferences using both qualitative and quantitative approaches in a single study."*

We applied an explanatory sequential design to explore possible mechanisms in which authentic leaders influence their employees' resilience. Such design is useful if you want to gain a basic understanding of a phenomenon or contribute to further understanding (Saunders et al., 2015). To investigate the gap of empirical research in the field of authentic leadership and employee resilience, it is necessary to conduct an empirical study as a part of the thesis. An empirical study will provide a better understanding of the reliability of our findings, when looking into authentic leadership and employee resilience dimensions that we deem important and possibly related to each other. According to Bell et al. (2019), the explanatory sequential design is beneficial when quantitative research alone cannot fully explain broader patterns or findings. In such cases, collecting and analyzing qualitative data is necessary to further elaborate on the quantitative findings.

Through applying survey approach in the quantitative research, we were able to isolate the employee resilience factor, access our target participants, and generate a smaller, representative, and purposeful sample consisting of two groups

with a noticeable gap in resilient levels. Subsequently, we conducted 10 semi-structured interviews as part of our qualitative research. The analytical categories for interviews were developed in response to the demands of the material collected (Schmidt, 2004). In order to answer the research question of the study, it is crucial to collect the interviewees' own reflections and experiences. Thus, it can be difficult to prepare completely structured questions in advance. With unstructured interviews, however, there are opportunities to explore unforeseen topics, and the interviewees are allowed to reflect freely. There are very little predetermined boundaries as to the topics (Fylan, 2005). We wanted to compare the interviewees' opinions in the analysis and are therefore dependent on a certain structure in the interviews. We wished to compare the interviewees' viewpoints on some fixed themes, so we conducted semi-structured interviews with a set of questions and a good idea of which topics will be covered, but with room for discussion to vary (Fylan, 2005).

This allowed us to get a comprehensive examination of leaders' authentic behaviors in the workplace and their effects on employees. By using this design, we were able to discover similarities and differences between two groups with varying resilience levels, as well as gain a better understanding of the potential links between authentic leaders and resilience capabilities of their subordinates.

3.2 Sampling

The primary objective of our research is to examine and gain a comprehensive understanding of the impact that authentic leaders have on the level of resilience demonstrated by employees. As the employee's point of view is of our interest, we chose individuals that needed to satisfy the three criteria listed below:

- The respondent must be employees, and not holding executive roles.
- The respondent must work in a company in Norway or has headquarters in Norway.
- The respondents' job must be dominantly innovative in nature, or they must have much engagement with innovative work or projects.

We created a concise questionnaire which could be completed within five minutes and is divided into three parts:

1. Validation questions: The validation questions ensure that the respondents meet the specified inclusion criteria.
2. Employee resilience assessment: These questions employed a validated measure known as the EmpRes scale, which will be discussed further in the following section. The questions were to ensure a measure of an individual's employee resilience based on the scale.
3. Requesting follow-up interview participation: The final section kindly requested the respondents' email addresses in order to contact all respondents with their results along with some practical tips on how to improve employee resilience based on literature. We were also able to request the respondents' willingness to participate in a follow-up interview in this manner.

The survey can be found in Appendix 1. This design allowed us to carefully select preferred participants by imposing necessary conditions while still allowing for some flexibility. It allowed for the inclusion of people from various organizations, industries, and backgrounds, which was beneficial for the exploratory nature of our research.

To select respondents for our survey, we used a non-probability sample approach, employing convenience sampling and snowball sampling methods. This combination enabled us to maximize our contact with appropriate respondents within the constraints of our study. Furthermore, snowball sampling allowed us to increase the number of respondents by leveraging the networks of the selected participants (Bell et al., 2019). The participants helped us connect with coworkers who might be an appropriate match for our work.

The questionnaire sample and analysis were used to select participants for our interview study. Our objective was to separate the respondents into two distinct groups, representing the high and low performers. Individuals in the same cluster should be relatively similar or have minimal variation in their EmpRes scores. However, the average EmpRes scores should differ significantly between the two clusters. This required a sufficient number of survey responses to enable the formation of clusters with significant differences. As a result, our survey was purposefully designed to be concise and straightforward, allowing for a high response rate. The use of the nine-item EmpRes scale and the application of a 7-

point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*) were crucial in allowing for a wide range of variations.

The interviews were semi-structured, which is appropriate for our study's exploratory approach because it allows for the recognition of variables' interactions. Semi-structured interviews have an advantage over structured interviews in that they allow for a closer examination of participants' daily thought processes, allowing for a more nuanced expression of their opinions and perspectives (Fylan, 2005). Furthermore, given our specific interest in exploring the influence of authentic leadership dimensions on individual resilience, this approach allowed us greater flexibility, permitting follow-up clarifications, while still maintaining a focus on the study's objectives.

Our target sample size for interviews was ten respondents, with an equal distribution of five respondents from each group. However, given the anticipated data variability among respondents, we allowed for minor variations in the final sample size. An interview guide (Appendix 2) was created to assist in the comparative analysis of respondents' responses.

3.3 EmpRes Scale as a measure of employee resilience

The Employee Resilience Scale (EmpRes) was developed in response to the increasing need for an employee-specific measure of resilience (Hodliffe, 2014; Näswall et al., 2013). Näswall et al., (2013) define the conceptualization of employee resilience as a process in which individuals cope and successfully deal with change, as well as learning from it to adapt accordingly and thrive in a new environment by providing enabling factors. This description incorporates Luthans' (2002) descriptions of resilience being a developable capacity, rather than a stable personality trait (Näswall et al., 2015). The conceptualization of employee resilience served as the foundation for the creation of EmpRes, and in accordance with Näswall, Kuntz & Malinen (2015), the purpose of the scale is to monitor employee resilience levels and identify areas that contribute to employee resilience development. Furthermore, researchers are also encouraged to use the EmpRes scale to investigate the relationship between employee resilience and other theoretical constructs (Näswall et al., 2015).

While Hodliffe (2014) initially tested a 14-item scale of the EmpRes, a revised report by Näswall et al. (2015) suggested a 9-item scale. These included organizational variables as well as work-related outcome variables:

Table 1: Employee Resilience Scale (EmpRes) Items

No.	Item
1	I effectively collaborate with others to handle challenges at work.
2	I successfully manage a high workload for long periods of time.
3	I resolve crises competently at work.
4	I learn from my mistakes and improve the way I do my job.
5	I re-evaluate my performance and continually improve the way I do my work.
6	I effectively respond to feedback at work, even criticism.
7	I seek assistance at work when I need their support.
8	I approach managers when I need their support.
9	I use change at work as an opportunity for growth.

The revised 9-item scale consist of a one-factor structure that has a reliability score of .91 (Näswall et al., 2015), and the model is intended to assist organizations in identifying the supportive and effective factors that are needed to prepare employees for future change. Multiple scholars has used the EmpRes scale to measure the relationship between leadership behavior and employee resilience (Franken et al., 2020; Kakkar, 2019; Zhu et al., 2019; Kuntz et al., 2017), and found that assessing the relationship between organizational factors and employee resilience is important for identifying how organizations can facilitate for resilience development and evaluating resilience for individuals in the workplace.

3.4 Data collection

The study is based on two types of data collected through a survey and interviews. The data collection procedure will be described in greater detail below.

3.4.1 Quantitative data

A well-conducted survey can provide insight into people's opinions and behaviors. The responses can help to say something about the generalizability of the findings from the interviews. If the results from the survey correspond with recurring findings from the interviews, they can be used to make more confident statements about the rest of the population. Prior to distributing the survey, we asked three potential respondents and our thesis supervisor to review the survey. Based on the

feedback during the review, necessary improvements were made to ensure clarity and appropriateness of the questionnaire. The final version of the survey had five questions and was expected to require less than five minutes to complete.

We utilized Qualtrics survey software to distribute and track the questionnaire. Email correspondences were also used to reach out to potential respondents. These emails provided a brief explanation of the study's purpose, included a non-personalized link, and kindly requested to share their email within their respective network. Furthermore, we conducted targeted LinkedIn searches to reach out to individuals who demonstrated potential suitability for our study. The survey was open for one month and was closed when we received a sufficient number of responses to meet our predetermined sample size goal.

We received a total of 36 responses on the questionnaire. Prior to analyzing the data, we removed the respondents who did not fully comply with the established conditions, and who did not complete the whole survey. Out of the 36 employees who participated in the survey, we received a total of N=26 responses who fulfilled the necessary requirements of being in a non-executive or non-managerial role, working for a Norwegian organization, as well as working in a profession dominated by innovation.

The objective of the quantitative research was to identify individuals with high and low performance in employee resilience scores for follow-up interviews. All respondents who provided their email addresses received an email in which we summarized the survey results, disclosed their personal score and its relation to the entire sample, and offered some suggestions on how to improve their workplace resiliency. We included an invitation to the follow-up interview in the email for individuals in the respective groups. The invitation disclosed a recap of our study, how we planned to conduct the interview, and how we would analyze the data. The template can be found in Appendix 3. We also sent two reminder emails to potential interviewees after not hearing from them for a week. One potential respondent declined the follow-up interview, and three others did not respond despite the reminder emails. As a result, we increased the size of the clusters and sent more email invitations until we had a sufficient number of respondents who agreed to participate.

3.4.2 Qualitative data

A total of ten interviews were conducted in relation to the thesis. A pilot interview with a respondent was conducted prior to the interviews to evaluate the effectiveness of the interview guide and ensure the appropriateness of the questions. Following this pilot, no changes were made to the questions. It was evident that the content and order of questions in the guide was helpful in facilitating the conversation and encouraging interviewees to speak about their experiences, thus we kept the pilot interview in the primary data collection, making it an essential component.

To add structure to the interviews, we created an interview guide (Appendix 2) with different questions that would give more insight into the respondent's previous experiences with leaders. Within each topic, there is a set of guided questions that have been prepared with regard to the purpose of the study. We took advantage of the opportunity to ask relatively closed questions before following up with open questions to further explore the topic and allow the interviewees to elaborate. This method provides us with not only the respondents immediate perception of the topic, but also insights into the factors that contributed to those perceptions and how they affect the interviewees.

We prioritized anonymity because several of the questions in the interview encouraged interviewees to share their own opinions about behavior and attitudes. We held one-on-one meetings, and the interviews took place online using the Microsoft Teams platform. We therefore included information at the start of the meeting about how we will transcribe the recordings and destroy files upon completion, that no personal identifiable information of the participants would be included in any report, and that participants hold the rights to withdraw from the study at any time. We believe this contributed to the interview subjects feeling safe and unsupervised, and to ensure that we had attentive conversations with the interviewee. This way, we could go into greater detail regarding certain topics while still remaining flexible.

All interviews were conducted in English with both authors present. We briefly restated the scope of the study, topics covered, data handling processes, and interviewees' rights, and got the interviewees' consent before starting the interview. The final interview guide contains six top-down questions that require respondents to think broadly about their experiences with leaders before delving into more

specific examples. One author took the responsibility of posing the main questions, allowing the other author to concentrate on asking follow-up questions. The authors devided the work in transcribing interviews, and then reviewed all transcriptions together. All respondents are coded anonymously using alphabetical identifiers, with respondents A to E are in the high resilient group, and respondents F to J are in the less resilient group.

3.5 Data analysis

The analysis methodology used is determined by the data to be analyzed. We will start by explaining how we analyzed the quantitative data. Following, we will discuss how we analyzed the qualitative data. Selecting a purposeful sample was the main objective for the quantitative part of our study, in order to place emphasize and go into further detail with the qualitative analysis.

3.5.1 Quantitative data analysis

Standard Microsoft Excel was used as the main tool for calculating descriptive statistics, independent t-test, and Analysis of Variance (ANOVA). As the first step, we removed validation questions data from the master spreadsheet exported from Qualtrics to structure our data. We then calculated the EmpRes score of each respondent by summing all nine individual item scores. Following that, we were able to produce descriptive statistics result, which gave us an overview of the distributions of the EmpRes score.

In the next step, we sorted respondents based on their EmpRes scores in a descending order. The top five respondents became the "higher group", while the bottom five respondents became the "lower group". The original higher and lower groups are different from the final ones due to non-responses and decline from original potential interviewees. To check if the means of these two groups are statistically significant, we conducted an independent t – test and a one-way ANOVA. These analyses help to confirm that our selected sample matches our expectation and purpose.

3.5.2 Qualitative data analysis

Thematic analysis was used to analyze qualitative data in order to identify common themes, ideas, patterns, or topics that reoccur in the data. This type of analysis is suitable for our study because it can capture the diverse perspectives of respondents,

as well as allow for comparisons and extractions of differences and similarities. We applied inductive reasoning, and the process of analysis consisted of three levels: initial coding, open coding, and focused coding. In initial coding, we started by reading through the transcripts to familiarize, then re-organized the data based on established narrative questions. After that, we conducted open coding. We identified, highlighted, and numbered concepts and units of meaning in each set of re-organized data. Both authors discussed and agreed on which phrases, sentences, or sections of texts were important in explaining the interview respondents' perspectives, thoughts, and experiences. This helped to ensure that both authors could work with the same source of data. Subsequently, we moved to focused coding. Each author independently categorized similar codes into clusters before reviewing the homogeneousness within the clusters and assign names to them together. During this process, we employed a constant comparison approach to make sure the distinctiveness of the clusters. As a result, we actively relocated individual codes and created or deleted clusters as needed. This iterative process was carried out for each main questions and each group of respondents. After that, we compared the clusters emerged between higher and lower groups, identified similarities and differences, as well as chose the most representative code for each cluster to report. Additionally, we reassessed and renamed the themes as necessary during this phase.

3.6 Quality of the data

In this section of the thesis, we will critically evaluate the research quality associated with the interviews. We will also conduct an evaluation of the survey's validity and reliability.

In accordance with Sinkovics et al. (2008), quantitative research is fundamentally concerned with reliability, validity, generalizability, and objectivity. These principles are applicable to qualitative studies as well, but it is argued by Sinkovics et al. (2008) that the relevant conditions are more obscure in qualitative research. The issues at stake in qualitative data differ fundamentally from those in quantitative research, necessitating the use of different terminology to describe the various concepts (Rolfe, 2006; Koch & Harrington, 1998).

Qualitative studies are to a greater extent concerned with relevance (Guba, 1981), so the issues of validity in qualitative studies should not be linked to 'truth'

or 'value', but rather to 'trustworthiness'. Trustworthiness can be further divided into *credibility* (Polit & Beck, 2012), which corresponds with the concept of internal validity; *dependability*, which relates to reliability; *transferability*, which relates to external validity; *confirmability* (Gary Rolfe, 2006; Graneheim & Lundman, 2004; Lincoln & Guba, 1985). Credibility is defined by Guba and Linoln (1989) as the degree of agreement between the reality we present and what the respondents truly mean, as well as the degree of plausibility in our explanations. Transferability is referred to the extent to which developed theory will be applicable in other contexts. It is determined by how much the salient conditions overlap or match (Connelly, 2016; Sinkovics et al., 2008). The primary focus of the dependability criteria is the extent to which the findings are stable over time. Confirmability corresponds to the objective for quantitative studies and is concerned with whether the research has been tainted by our attitudes and opinions. In summary, these criteria will describe the trustworthiness of the study.

3.6.1 Credibility

As previously stated, credibility is concerned with the extent to which the reality we describe matches the reality that the respondents intended to describe, as well as the plausibility of our explanations (Polit & Beck, 2012). Patton (2015) stated that studies with only one source are more vulnerable to errors including loaded interview questions and bias from researchers. This is a weakness of our thesis that we have tried to minimize through the testing phase of our interview, and investigator triangulation.

We made an effort to summarize and repeat statements throughout the interviews to ensure that we had correctly interpreted and understood the respondents. Following the interview sessions, we were able to rewatch the interviews multiple times to ensure an accurate interpretation of the participants' statements given that we recorded the interviews. We informed all of the respondents about the possibility of us asking them for a follow-up question after the interview in case there would be needed clarification on a statement. It is recommended by Sinkovics et al. (2008) to allow responders to comment on their own statements to ensure that we understood the message as they intended it, so that the analysis is not influenced by our own opinions and perceptions as researchers. Unfortunately, we were unable to do so during the interview given that

we had ensured the respondents that the interview would be brief. However, in accordance with Lincoln and Guba (1989, p. 239), member checks are *"the single most critical technique for establishing credibility"* and are an important component of our research process. We sent the finalized transcriptions to the interviewee and asked them to review it and let us know if there was any problem with our interpretation of the interview, as well as requesting some additional information to improve our data analysis. In accordance with Creswell and Miller (2000), it allows researchers to ensure the accurate portrayal of participants' voices by giving the participants the opportunity to confirm or deny the accuracy and interpretation of data, which adds to the qualitative study.

Following the interviews, we analyzed the responses of the participants and engaged in additional reflection to ensure mutual understanding. Archibald (2016) states that in the context of mixed method research, investigator triangulation is a collaborative strategy with significant potential. It involved analyzing the interview data individually and then discussing the level of agreement on the findings collectively (Denzin, 2017). Given the opportunity for two researchers in the same study could provide multiple perspectives improved the quality of our research. As explained by Denzin (2017), this type of triangulation can provide confirmation of findings as well as different perspectives sought to broaden the topic of interest.

3.6.2 Transferability

The contextual nature of qualitative research means that careful consideration must be given to the transferability of its findings to other sociocultural settings (Kuper et al., 2008). Yin (2003) highlights the significance of replicability should not solely reproduce the exact findings but enable the replication of the same study once more. To improve transferability, we made efforts to engage a diverse range of respondents from various companies and industries. This increases the likelihood that the findings will be applicable in a broader context. It is important to note, however, that the research is limited to Norwegian companies and industries.

3.6.3 Dependability

Dependability is referred to as the degree to which the same outcome would be obtained if the study were repeated. Yin (2003) highlights the importance that is it not the findings themselves that should be reproduced but enabling the replication of carrying out the study once more. The purpose of achieving dependability is to

reduce errors and bias in the study, and the consistency of data will be achieved when the steps of the research are verified through examining items such as raw data and process notes (Golafshani, 2003; Campbell, 1996). This will lead to the consistency of data being attained.

Given that the study is exploratory with an inductive research methodology, the data largely controls the variation of the study. Thus, it will be difficult to claim dependability as a result. We cannot guarantee that information gathered by other researchers will be identical to our information. This is primarily due to uncertainty related to whether the same interview subjects will be available when the study is repeated and considering that the respondent's explanations and answers will typically be influenced by their context at that particular time. The methodology section functions as a methodical guide that other researchers can follow to replicate our study. The chapter is therefore a crucial step in ensure a high level of dependability for the study (Sinkovics et al., 2008).

3.6.4 Confirmability

Confirmability primarily refers to the idea that researchers present the data objectively without being influenced by their biases while drawing conclusions (Cope, 2014), and that we as researchers have enough distance from the data to observe and evaluate it objectively (Sinkovics et al., 2008; Guba, 1981). It should be possible for other researchers to determine whether our findings and results are reasonable by examining our data (Hamberg et al., 1994). This require a methodology so systematic and methodical that the researcher continuously has to question the findings, reconsider, and critically review the material (Hamberg et al., 1994).

We made several efforts to ensure confirmability. Firstly, it was important that we were aware of cognitive biases that may arise in the interview process (Saunders et al. 2016). We made a point of not focusing too much on authentic leadership by refraining from using terminology that could be considered leading. However, in some cases, we may have potentially given leading questions to the respondent. We also made an effort to investigate alternative explanations from the interview object when possible. Furthermore, the interview subjects were informed about the process and their anonymity prior to the interviews in an effort to reduce interviewee bias in light of the concerns for lack of confidentiality that might arise.

3.6.5 Validity and reliability: Quantitative data

Validity and reliability should be carefully considered when conducting a survey for quantitative data to avoid misleading responses (Saunders et al., 2015). *Validity* can be defined as the extent to which a concept is accurately measured (Bell et al., 2019. In the form of *construct validity*, it refers to the extent to which the survey measure what we want them to measure (Saunders et al., 2015). Measurement is described as an important preoccupation for quantitative research (Watson, 2015). To ensure construct validity we have used a pre-existing and validated scale of measures. Numerous scholars have used this instrument to investigate various aspects of the subject, which ensures the validity of the measures to a certain extent. However, it lacks widespread adoption and distribution as a questionnaire, and it is therefore vulnerable to potential criticism. Nonetheless, creating a new questionnaire from scratch may also result in criticism and issues with validity and reliability.

The *reliability* of a survey refers to its robustness and ability to produce consistent results at different times and under different conditions (Saunders et al., 2015). Considering that the EmpRes Scale are already validated through previous studies, we can look to the earlier research conducted regarding internal consistency. Internal consistency estimates the degree to which the items on a test jointly measure the same construct (Henson, 2001), and is strongly linked to reliability (Tang et al., 2014). The revisited study by Hodliffe in 2014 tested the EmpRes Scale and revealed a high Cronbach's alpha in two out of three samples, suggesting that the items within the scale consistently measure the same construct. This indicates that a good level of internal consistency in the used measure.

3.7 Ethical considerations

We were conscious of the ethical and practical concerns throughout the whole process in working with our project. In accordance with supervisors, the project followed regulations in accordance with BI Norwegian Business School based on Norsk Senter for Forskningsdata (NSD) and complied with their personal data processing guidelines. To protect their privacy, all personal data is anonymized, encrypted, and stored in accordance with BI's guidelines. The video recordings were deleted upon transcription, respondents voluntarily contributed, and they received sufficient information about the process (Appendix 3). We want to

emphasize that all respondents were free to refuse to answer questions, withdraw statements, or leave the study at any time.

We accommodated all respondents' schedules and were mindful that the project should not take up unnecessary time. As a result, we kept the interviews as brief as possible, and we made it clear to each respondent that we did not want the interview to last for more than 50 minutes. Taking the foregoing into consideration, we believe that we largely comply to the general ethical rule that the research design should not expose the research interviewee to any risk of harm, pain, embarrassment, or other disadvantages.

4.0 Results

4.1 Quantitative results

Table 2 presents the quantitative results of our study, involving a final sample size of 26 participants. The average EmpRes score obtained is 53, with a standard error of approximately 0.91. The highest recorded score is 62, which is only 1 point below the maximum possible score. Conversely, the lowest score recorded is 45. The median score aligns with the average, while the mode value is 55, with four respondents sharing the same score. The standard deviation and sample variance are approximately 4.66 and 21.68, respectively, suggesting that the data points generally do not deviate significantly from the mean.

Table 2: Combined descriptive results

Statistics	All	Higher group	Lower group
Count	26	5	5
Mean	53	59.2	48.6
Standard Error	0.91	1.07	0.98
Median	53	59	50
Mode	55	-	50
Standard Deviation	4.66	2.39	2.19
Sample Variance	21.68	5.7	4.8
Minimum value	45	56	45
Maximum value	62	62	50
t-test and ANOVA results			
T - statistics			7.32
F – statistics			53.51
p-value			< 0.05

The sizes of the two groups are equal (N=5). The higher group has an average score of 59.2, while in the lower group it is 48.6. The standard error of the higher group (~1.07) is slightly higher than that of the lower group (~0.98). The higher group also holds a higher standard deviation (~2.39 compared to 2.19), which suggests that there is a greater spread of values. This is due to the difference between the high group which ranges between the highest at 62 and lowest at 56, and the lower group with 50 as the highest and 45 as the lowest.

Although the sizes of the two groups were too small to ensure a normal distribution and there is a difference between variance, we still conducted a t-test

analysis and a one-way ANOVA. We received a t-statistic of approximately 7.35, an F-statistic of approximately 53.5, and a p-value less than 0.05. This provides evidence that there are meaningful differences between the two groups, however, this conclusion may not be reliable due to the violations mentioned.

4.2 Qualitative results

Table 3 provides an overview of our respondents. It features their professional experience, highest education level, gender, industry, interview duration, and individual EmpRes scores. This information was gathered either during the interview's introduction or through email communication with the respondents.

Table 3: Interview respondent overview

Identifier	Professional experience	Highest education	Sex	Industry	Interview duration	Score
Higher group						
A	5 - 10 years	PhD	Female	Aquaculture	41 minutes	62
B	5 - 10 years	Master	Female	Digital	49 minutes	61
C	10+ years	Master	Male	Healthcare	43 minutes	59
D	3 - 5 years	PhD	Male	Academia/ Digital	38 minutes	58
E	1 - 3 years	Master	Female	Consulting	33 minutes	56
Lower group						
F	3 - 5 years	Master	Male	Energy	39 minutes	50
G	5 - 10 years	PhD	Male	Healthcare	38 minutes	50
H	1 - 3 years	Master	Female	Consulting	30 minutes	50
I	5 - 10 years	PhD	Male	Aquaculture	46 minutes	48
J	10+ years	PhD	Female	Textile	50 minutes	45

The higher and lower groups appear to be comparable. Both groups have respondents with a range of professional experience, spanning from early career individuals with 1-3 years of experience to highly experienced individuals with more than 10 years of experience. All respondents hold a master's degree or higher, ensuring a high level of educational attainment across the board. Additionally, there is a balanced representation of both female and male respondents, and a diverse range of industries, including aquaculture, digital, healthcare, academia, energy, consulting, and textile, which indicates a broad sample of professional fields. Interview durations varied between 30 and 50 minutes, with the majority falling between 35 to 45 minutes.

4.2.1 How leaders influence employees

Table 4 presents a comprehensive analysis of the qualitative findings pertaining to Question 1. It outlines the notable differences and similarities expressed by participants regarding the leaders' influence on the employee.

Table 4: Narrative results for question 1

Question 1. In what ways have your leaders influenced you?		
Higher group	Similarities	Lower group
Take control when needed *"If something is out of control, leaders or managers will take care of stuff."*- Respondent B	Being a role model *"When it comes to career, he's my idol."* – Respondent D	Shelter employees from distractions *"Clearly doing what the project leader supposed to do, which means sheltering his team from business crap and letting us work."* – *Respondent G*
Positive and enthusiastic *"He's a very positive guy, optimistic."* – *Respondent D*	Being autonomous *"She gave very open hands to work."* – *Respondent E*	
Being approachable/informal *"She didn't really feel like a manager even, she felt more like a friend."* – *Respondent E*	Provide guidance *"Giving the exposure early on, setting high expectations, but also a high level of guidance and follow up from the beginning has been really useful"* – *Respondent F*	Adaptive to employees' level of experience *"Being able to meet the employee where he or she is in their current experience level."* – *Respondent F*
	Knowledgeable *"He's good at everything. He is good at programming, he's the team manager, he is even the sale person."* – *Respondent D*	Inclusive *"He made sure I was included in these activities and meetings that otherwise easily could have bypassed me"* – *Respondent F*
	Acts of caring *"He showed that he cared about your life."*- Respondent D	

The analysis of the qualitative data reveals an intriguing finding. Almost all of the respondents acknowledge having or having had their leaders as role models. This opinion is shared amongst four people from the higher group and three people from the lower group out of the total sample. Additionally, a difference between the two groups is that the lower group emphasizes the leader's role in sheltering employees from distraction. This disparity stands out due to its action-oriented nature, whereas other differences such as leaders being described as 'inclusive' or 'positive and enthusiastic' are more soft characteristics that are often expected in a leader.

4.2.2 Employees' relationships with current leaders

Table 5 contains a comprehensive analysis of the qualitative finding pertaining to Question 2. It describes the notable differences and similarity expressed by the participants in their relationships with their current leader.

Table 5: Narrative results for question 2

Question 2. Can you tell us about your relationship with your current leader?		
Higher group	Similarities	Lower group
Exceptional relationship	Very good relationship	Reliable
"My current leader has been the best so far in my history of leader's relationship." – Respondent B	*"I feel like we have a good, respectful relationship."* - Respondent E	*"She's extremely reliable."* – Respondent I
		Trustworthy
Help employees to improve essential skills	Low power distance	*"She's very much on my side, and we trust her that she has our backs in the way that she will defend us."* – Respondent I
"She helps me to identify the gap of competence or skills that I need to develop." – Respondent B	*"It's also that he has an authority, but at the same time he treats me like an equal."* - Respondent H	
	Admiration	Provide clarity and structure in time of uncertainties
Involve employees in decision making	*"She is very, very driven. I really admire her."* – Respondent E	*"He's able to find out what's tangible, and what can we actually work with right now, to establish a more secure case."* – Respondent F
"It's more often that he comes to me when he has problem than the opposite way."- Respondent D	Focus on strength-based development	
	"He knows my good side and what I can help with, and he asks for my help with those things that he knows that I like to work with." – Respondent H	
	Honest and open discussions	
	"We're on the level where I really believe in just putting my cards on the table." - Respondent E	
	Foster personal connections through genuine acts	
	"I don't drink coffee, I drink tea. After three days there she had noticed that, now she makes me tea." – Respondent J	

A notable resemblance that emerges between the higher group and the lower group is their shared emphasis on strength-based development. This result emphasizes the importance of leaders in both groups recognizing and appreciating the strengths of their employees' abilities. There is clearly a shared understanding in the need of capitalizing on individual abilities to develop a good relationship. Another similarity between the two groups is the leader's ability to be honest and facilitate open discussions.

A notable distinction between the groups is their general relationship with their leader. While both groups have a positive relationship with their current leader, numerous respondents in the higher group are the only ones who consider their current leader as the best leader that they have ever had. Another unique attribution of the higher group is their interaction with leaders who assist them in developing fundamental skills and competences. The lower group, on the other hand, were the only respondents to emphasize their leader's ability to provide clarity and structure in times of uncertainty.

4.2.3 Leaders' helpful behaviors

Table 6 illustrates a detailed analysis of the qualitative findings related to Question 3. It describes the significant differences and similarities expressed by participants regarding how their leaders adequately assisted them during times of uncertainty at work.

There are parallels in that both groups emphasize their leader's ability to provide guidance for them. There is a strong emphasis from the high group, with four respondents mentioning how their leaders assist them in their responsibilities, whereas just one individual from the lower group addresses this topic. It also occurs commonalities among the groups in terms of how their leaders listen to and take their employees' difficulties seriously. While all respondents in the lower group expressed gratitude for their leader's availability, only one respondent in the higher group emphasized the same topic.

A noteworthy contrast that distinguishes the higher group from the lower group is in how their leader assists them in overcoming issues. The higher group points out that their leader is exceptional at observing and noticing the problems that the employees are experiencing, without the employees first bringing this up to the leader.

Table 6: Narrative results for question 3

Question 3. Can you describe a situation when your leader helped you to overcome uncertainties at work?		
<u>Higher group</u>	<u>Similarities</u>	<u>Lower group</u>
Observative	Facilitate open discussion	Consistent positive behaviors
"I was doing too many hours at that point almost always. So, I guess she just got the sense of it there." – Respondent E	*"If there is a challenge that I can't handle alone, we just sit and talk together and discuss in an open way." – Respondent D*	*"I was trying to pay attention to how he actually behaves, and it seems like a pattern." - Respondent G*
Have a comprehensive overview	Listen to my concerns and take it seriously	Provide reassurance
"She has a rather good overview of what exactly is happening around this team, which reduces uncertainty." – Respondent B	*"He was very grateful that I reached out. [...] but he also wants me to reach out when things get difficult." - Respondent H*	*"It was these advisors I had at the time who always said, "but you can do that, and it's normal and everybody struggles, and this is really hard, and you know it's just fine"." - Respondent J*
	Show availability	
	"Despite of her busy schedule, which all leaders have, she makes time to kind of support me in time." – Respondent B	
	Provide directions	
	"So I think this is how she helps me really [...] when I have uncertainties or unknowns, that: OK, let's go step by step." – Respondent B	

Additionally, another commentary made only by the higher group is on how their leaders are able to have a comprehensive overview of the issues at hand. In regard to the lower group, statements that differentiates them from the higher group is their need for reassurance from their leaders.

4.2.4 Leaders' non-helpful behaviors

Table 7 provides a thorough examination of the findings related to Question 4. It highlights the significant differences and similarities expressed by respondents regarding their leaders' inadequate support during times of uncertainty at work.

Table 7: Narrative results for question 4

Question 4. Can you describe a situation when your leader was doing something that was not helping you?		
<u>Higher group</u>	<u>Similarities</u>	<u>Lower group</u>
Fail to communicate leaders' perspectives/opinions	Lack of availability	Insufficient communication of expectation
"He just wanted to challenge to not make the trial happen [...] he didn't straight say that, but the way he did [behaved] means that." - Respondent A	*"He's not always available [...] it takes him like two or three months before he gave me the review." – Respondent D*	*"I was missing that immediate feedback on how to move forward [...] Sometimes this direct communication is not as smooth as you would hope." – Respondent I*
Show little interest in employees' work	Insufficient clarifications on how/why decisions are made	Fail to provide training
"He never ever touched my paper and never oversaw it." – Respondent C	*"I wouldn't expect an apology or something, or an excuse, but just maybe an acknowledgement that it took a long time." - Respondent I*	*"This leader didn't give me enough teaching and support in the beginning." – Respondent H*
Lack of encouragement	Dismiss employee emotional reactions	
"I didn't get any good energy in response." – Respondent E	*"I've also been told quite a bit [...] I shouldn't overreact, and I shouldn't be emotional, and I shouldn't be this or that." - Respondent J*	
	Failure to understand employees' perspectives	
	"One time I was having a conversation to make my point to my manager, he was not understanding that point at all." – Respondent B	

The qualitative analysis reveals an important pattern in the setting of leaders' non-helping behavior. There was a persistent concern in which the employee reflects on their dissatisfaction in expressing that leaders do not devote enough time for their employees as desired across the two groups. This perceived unavailability of leaders is a recurring subject, indicating employees' frustration and disappointment with their leaders' availability. Both groups also commonly discuss the failure in which their leaders are unable to understand the employees' perspectives. This includes not devoting enough time to a task, jumping to conclusions, not asking enough questions, and imposing their opinions on employees.

A prominent difference is the higher group group's reflection on the leaders' inability to communicate their perspectives and opinions. While it is acceptable for leaders and employee to have opposing viewpoints, it is critical for leaders to be able to explain their position. The lower group also mentioned failed communication, however, in this case, the issue was more about the leader's expectation not being communicated clearly enough.

4.2.5 What leaders can do differently

Table 8 provides an in-depth examination of the qualitative data of Question 5. It explains the important differences and similarities expressed by participants with regard to their expectations for improved leadership support.

Table 8: Narrative results for question 5

Q5. What would you like your leader to do differently to help you overcome challenges at work?		
<u>Higher group</u>	<u>Similarities</u>	<u>Lower group</u>
Stand up for employees	Spend more time understanding the problem	Show more availability
"But outside the team, we should stand up for the team members." – Respondent A	*"I would appreciate if they could spend some more time, 5 minutes is OK, to listen to the reality, to understand what's really happening better." – Respondent B*	*"Being able to free up more time in their own schedule would be the number one thing that would be helpful." – Respondent F*
Effective decision-making		
"Got to make a decision as quick as possible, rather than letting the situation afloat forever." – Respondent B		Support for career development
Show encouragement	Provide support fit to employees' level of experience	*"I feel ready to keep learning and that's something where I would hope that a manager would be there for someone." - Respondent I*
"(When) presenting your ideas, I would like (it) to more kind of receiving." – Respondent E	*"Depending on my seniority, I was struggling with different types of problems that require different approach [...] So when you start your career, somebody who is showing you the way." – Respondent G*	
Have expertise in the field		
"(I wish to) have a manager that actually specialized in technology, or not technology, but in my field." – Respondent C		Improve communication
		"She's not very good at communicating at messages and then being clear about what she wants." – Respondent H
Provide more clarifications		
"Helping me to see this clarity towards the goal, or what we are trying to achieve is something that I really would like my managers to do." – Respondent B		

A striking commonality emerges from the study of the qualitative data regarding the final question: both groups express a shared desire for their leaders to invest more time in understanding the specific challenges at hand. This agreement across groups underlines the desire for leaders to devote adequate time to gain a complete understanding of the situation and embracing the employee's point of view. Another notable pattern noted is the employees' desire for leader to assist in a way that is appropriate for their level of experience. This shared viewpoint amongst the groups emphasizes the importance for leaders to adjust their guidance to each employee's specific need.

A prominent difference between the two groups is the higher group who express a need for having a leader with experience in the field that they are managing. In contrast to the other suggestions, which are unique to each group, this one is more action-oriented than 'show encouragement' and 'show more availability'. It showcases the desire to have a leader who can not only manage, but also has a great deal of experience or knowledge in relation to the tasks that employees should perform.

5.0 Discussion

5.1 Main findings

5.1.1 Desired leaders' behaviors and employee resilient behaviors

Upon comparing our qualitative findings to the existing literature on employee resilience, we found that there are great connections between desired leadership behaviors and the capabilities associated with resilient employees. Initially, our focus was on three specific personal resources of resilient employees: self-efficacy, internal locus of control, and reflective ability, as outlined in this thesis. However, establishing a direct connection between each desired leadership behavior and the personal resources of employees posed a challenge during our analysis. This difficulty arose from the fact that inferring the personal resources of respondents, solely from their narratives, proved to be a complex task. While the narratives provided valuable insights into the experiences and perceptions of employees, determining the specific personal resources underlying their resilience behaviors proved challenging due to the subjectivity and multifaceted nature of personal resources. Consequently, we opted for a broader perspective on employee resilience, and mapping each desired leadership behavior into three categories of employee resilience behaviors instead of specific personal resources. According to Kuntz et al. (2017), employee resilience behaviors can be divided into three groups of behaviors: adaptive, networking leveraging, and learning. Examples of these groups are portrayed in Table 9 below (Kuntz et al., 2017, p.225).

Table 9: Employee resilient behaviors

Resilient behavior	Behavior examples
Network leveraging	Collaborating with peers, managers, and other teams (internal or external to the organization) to handle unexpected challenges that arise at work
	Seeking support from managers as needed
	Seeking and exchanging resources from peers and managers
Learning	Utilizing mistakes as learning tools
	Continually reevaluating performance to improve work processes
	Seeking and utilizing feedback at work, including negative feedback, to improve work processes
Adaptability	Effectively managing resources to address high workload when needed
	Engaging in effective crisis management
	Utilizing change that impacts one's role to engage in personal and professional development

By adopting this revised approach, we successfully aligned our study with existing literature and gained a more comprehensive understanding of the complex connections between desired leadership behaviors and employee resilience. Analyzing the narratives shared by our respondents regarding their experiences with their leaders allowed us to infer employee behaviors and uncover valuable insights. As a result, we were able to create Table 10, which presents an overview of nine clusters of behaviors and characteristics that employees desire from their leaders. This table was developed through a detailed analysis of our qualitative data, providing a rich understanding of the specific leadership behaviors and qualities that employees value and seek in their leaders. A more detailed version of the table is provided in Appendix 4.

Table 10: Groups of desired leaders' behaviors and employee resilient behaviors

No	Leadership behavior/characteristic group	Relation to employee resilient behaviors
1	Build trustful and respectful relationship	Network leveraging
2	Show availability and approachability	Network leveraging
3	Foster an open and honest environment	Network leveraging
4	Promote inclusiveness	Network leveraging, learning, and adaptive
5	Promote autonomy	Adaptive and network leveraging
6	Promote learning and development	Learning
7	Be of service for others *1. Help employees to navigate during adversity* *2. Provide individualized support for development*	Network leveraging, learning, and adaptive
8	Foster a sense of purpose	Network leveraging, learning, and adaptive
9	Have knowledge/expertise employees can rely on	Network leveraging

Our findings reveal a commonality among employees with different resilience levels in their wish for leaders to exhibit behaviors primarily connected to network leveraging behaviors. Among the 21 themes highlighting similarities between higher and lower resilient groups, 15 are primarily associated with employee network leveraging behaviors. This finding aligns with our expectations, considering that our interview questions specifically prompted respondents to share their experiences with leaders in time of difficulties. We were also pleasantly surprised to find that learning behaviors emerged organically in both groups, even though our interview questions did not specifically inquire it. These two finding align with recent perspectives on resilience, which argue that employee resilience encompasses behaviors associated with identifying and utilizing resources, as well

as learning and development (Näswall et al., 2019; Caniëls & Baaten, 2019; Kuntz et al., 2016). Thus, we confirm that during times of uncertainty, employees naturally exhibit network leveraging behaviors and actively seek leaders who can effectively accommodate and support them in such endeavors. Furthermore, our finding reveals the proactive nature of resilient employees in seeking opportunities for learning and skill development within their interactions with leaders.

Our findings indicate that there were relatively few desired leadership behaviors specifically related to employee adaptive behaviors. This finding aligns with our focus on leader-follower relationships and our interview questions, which primarily sought to generate responses on respondents' experiences with their leaders and the quality of those relationships, rather than focusing directly on the respondents' personal abilities to manage change or navigate crises. Therefore, this finding does not contradict existing literature, which highlights that resilient abilities primarily involve recovering from adversity and restoring normal operations (Kuntz et al., 2017; Seery et al., 2013).

Interestingly, no notable differences were found between the two groups of respondents. This finding suggests that, among highly resilient employees, there may be minimal variations in the desired leadership behaviors expressed. Furthermore, it is important to highlight that the desired characteristic of *"Having knowledge/expertise that employees can rely on"* is highly valued by employees. However, since it does not represent any specific behavior of leaders, we will not further include it within the context of our discussion.

5.1.2 Desired leaders' behaviors and authentic leadership dimensions

Analyzing the connection between groups of desired leadership behaviors and the four authentic leadership dimensions yielded several key findings, which are illustrated in Figure 1.

Firstly, leaders' self-awareness and internalized moral perspective mainly serve as a foundation or an enabler for all desired leaders' behaviors, indicating that they do not necessarily have a direct connection to employee resilient behaviors. This explains why we did not identify specific desired leadership behaviors explicitly linked to these two dimensions, given our focus on employees' narratives. Employees' narratives tend to primarily highlight observable behaviors rather than delve into the leaders' underlying self-awareness or moral perspective, as both self-

awareness and self-regulation are internal, cognitive, introspective processes that occur within the leaders' mind (Walumbwa et al., 2008; Ilies et al., 2005; Avolio et al., 2004). However, our empirical findings reveal that many respondents made reflections and observations that can be connected to their leaders' self-awareness and internalized moral perspectives. While employees may not explicitly seek for them as desired behaviors, the presence of indirect connections in their narratives indicates the potential impact of leaders' self-awareness and moral self-regulation on employee resilient behaviors.

Figure 1: Connections between desired leadership behaviors and authentic leadership dimensions
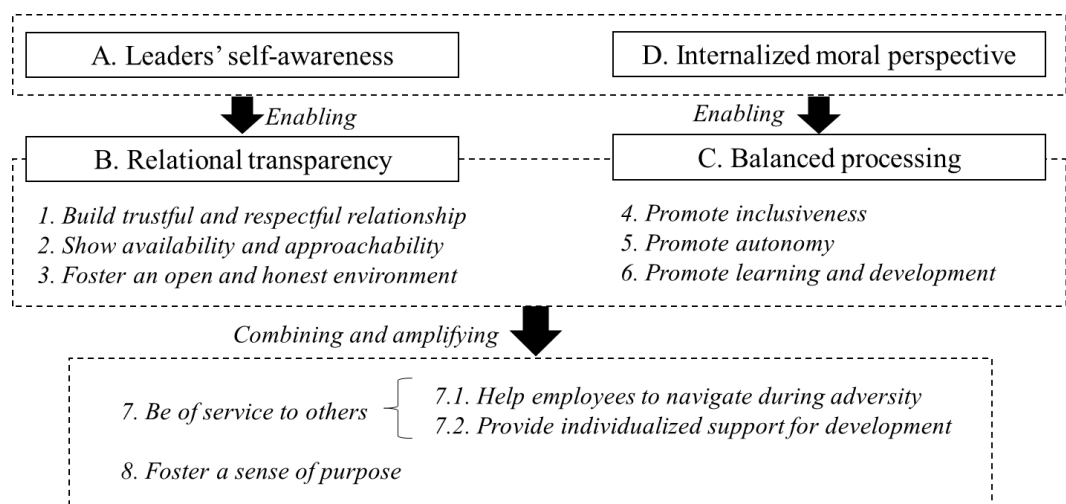
Secondly, our analysis revealed a two-level framework for understanding desired leaders' behaviors that enhances employee resilience. At the first level, we identified six behaviors that align with the dimensions of relational transparency and balanced processing. The behaviors associated with relational transparency primarily focus on cultivating positive leader-follower relationships, which is logical considering their strong connection to employee network leveraging behaviors. On the other hand, the behaviors associated with balanced processing relate more to decision-making processes and promotion of learning.

The second level included the identification of two key behaviors*: "Be of service to others"* and *"Foster a sense of purpose."* These behaviors are the result of combining and amplifying the first-level behaviors. *"Be of service to others"* encompasses two groups of behaviors: *"Help employees to navigate during adversity"* and *"Provide individualized support for development."*

In the following section, we will further examine the influence of authentic leadership dimensions on employee resilience by exploring the desired leadership behaviors that stem from individual dimensions as well as the combined effects resulting from their interactions.

5.2 Leader's self-awareness

The empirical findings show that the leader's self-awareness is reflected in their ability to facilitate other behaviors that can promote the resilience of their followers. This signifies the potential but indirect impact that self-awareness has on the employees. Participants occasionally reflected on their leaders' ability to acknowledge and leverage their strengths and weaknesses.

Respondent H argued that the leader recognized their strengths and encouraged them to pursue their interests further, allowing them to maximize their potential. In accordance with Garner et al., (2005), it is evident that the leader understands that resilience is more than just overcoming adversity; it is also about utilizing strengths and using them effectively. By encouraging employees to work on developing their interest and providing opportunities for autonomy, the leader is empowering the team to build their strengths. This indicates that the leader is confident in his ability to lead the team forward and in the face of adversity. This is also a helpful behavior for increasing the resilience of the employee, where the leader facilitates for individuals to be more persistent and motivated in the face of work challenges (Guo et al., 2012; Lyons et al., 2015; Yang & Danes, 2015). These are actions of a leader who portrays a strong self-awareness and who has the potential to build up resilience in the employee.

> *"Yeah, I'm very interested in change management, […]and I like to present. I think it's very fun with presentations, and he knows that, and he's seen me presenting. So, he encourages me to work more with change management. He says that I can be really good at it, that I can maybe be an expert in it, and I can actually go and present this topic to external customers". – Respondent H*

Respondents B and C, however, stated that their leaders were unable to assist during uncertain times, indicating a lack of self-awareness demonstrated by their leader's actions. While respondent C acknowledged that he has worked with managers who

has portrayed themselves as smarter than their employees, respondent B is vocal about experiences with a manager who overestimated their own abilities by acting as both a team member and a manager. The leader's overestimation of their ability was also reflected through their actions in which the leader dismisses the efforts of the employees. Avolio et al. (2004) and Eagly (2005) argue that self-aware leadership behaviors influence the follower's performance favorably through the leader's positive emotions. A dismissive behavior indicates that the leader is not aware of the impact that is imposed on his employees, where in accordance with Luthans & Avolio (2003), it can be argued that a leader with a strong sense of self-awareness would be aware of the emotional impact a certain behavior would reflect on others.

> *"One of the biggest problems that I despise, and I am also vocal about it is that when the management actually thinks that they are smarter than you"*
> *– Respondent C*

Although there were a few narratives in the collected data that mentioned leaders' self-awareness, it is evident that leaders with low self-awareness are often unaware of their biases and influenced by their emotions. This hinders their ability to actively seek and objectively assess different opinions from their employees before making decisions, which is an important aspect of balanced processing. Furthermore, the narratives offer valuable insight into the dynamics of leader-follower relationships, thereby providing valuable data regarding relational transparency. It is apparent that leaders with high self-awareness are more conscious of their actions and impacts, enabling them to offer encouragement, attuning to the emotions of their followers, and willing to participate in meaningful dialogue with others.

5.3 Internalized moral perspectives

Our findings show that the dimension of internalized moral perspective is better reflected in other influencing behaviors as an enabler. Leaders who possess a high level of internalized moral perspectives have a well-defined set of ethical principles and values that guide their decisions and actions. Seeing as the alignment of behaviors with this internal compass is a cognitive process for leaders, employees do not often explicitly mention whether leaders remain consistent with their moral perspective. However, when employees were asked to share their experiences and

perceptions of their leaders, we discovered a few instances in their narratives that reflected elements of internalized moral perspectives. These elements included leaders' trustworthiness, dedication, and passion for their jobs.

Respondent I shared their perspective on the trustworthiness of leaders, highlighting the indication that their leader genuinely aligned their actions and behaviors with their own ethical principles and values. According to this follower, the leader's trustworthiness originated from her consistent defense of the team of researchers who adhered to the principle of conducting scientific work.

> *"It's always a clash between doing it scientifically correct and being fast and making money. So, this current manager, she's very much on my side, and we trust her that she has our backs in the way that she will defend us against the marketing and product managers and businesspeople that want to make things faster. Yeah, so there is a lot of trust there." - Respondent I*

This instance highlighted the leader's compliance with her moral compass even in the face of challenges encountered in a commercial environment. Despite external factors such as other organizational functions, the leader remained persistent in upholding her core beliefs, which centered around conducting scientific research in an ethical manner. Moreover, several respondents shared insights regarding their leaders' remarkable dedication and passion for their work, which serves as a visible manifestation of the strong alignment between their internal core values, self-identity, leadership roles, and actions. The admiration and respect expressed by many respondents emerged from their leaders' drive, ambition, energy, and track record of accomplishments. One noteworthy example was provided by respondent B, who highlighted her leader's commitment to continuous learning.

> *"She continues learning about leadership and also innovation, which is kind of what we do in this department. She subscribes to a lot of articles and books, and newsletters. And if she finds something good, she forwards it to the team members." - Respondent B*

These examples illustrate the effective alignment of leaders' actions with their values, highlighting the fulfillment of both their own interests and the needs of their constituents based on consistent core values (George, 2003). This observation aligns with the notion presented by Ilies et al. (2005) regarding the importance of

consistency between leaders' actions and decisions and their guiding compass, which leads to long-term positive effects. In the given cases, the followers' trust in their leaders was influenced by the leaders' uncompromising commitment to their moral principles and values, reinforcing their trustworthiness. Trusting leaders has a positive impact on employee resilience, as it creates an environment that encourages network leveraging behaviors. This involves seeking support and collaborating with leaders (Kunzt et al., 2017), as employees recognize that their leaders consistently uphold high standards of conduct. Furthermore, this suggests that leaders who carry strong internalized moral perspectives often embrace a service-oriented mindset. Their behaviors are guided by their core values, which are aligned with those of their employees and the organization as a whole. As a result, these leaders engage in actions such as providing development tools for their employees, thereby enhancing their self-efficacy (Schwarzer & Warner, 2013). This aspect is also relevant in fostering more network leveraging behaviors, as employees know that leaders are willing and capable of providing assistance.

While there may be limited instances of internalized moral perspectives in the narratives, it is evident that leaders who follow their principles and values gain trust and credibility from their followers. This fosters honesty, integrity, and transparency in relationships, which are crucial in relational transparency. Although the narratives do not offer in-depth insights into leaders' decision-making processes, internalized moral perspectives require leaders to consistently assess discrepancies between external and internal values (Ilies et al., 2005). This suggests that such leaders are more likely to engage in unbiased assessments of different viewpoints, a crucial aspect of balanced processing and its associated influencing behaviors.

5.4 Relational transparency

5.4.1 Build trustful and respectful relationships

The empirical findings are in accordance with Freeman (1984) and indicate that the leader's ability to demonstrate relational transparency appears in leader's efforts to build a trusting and respectful relationship with their employees. In correspondence with Luthans and Avolio (2003), the findings indicate a dominant view in which those who experienced a trusting and respectful relationship with their leader perceived this positive interaction through the leader's ability to be sincere and honest.

The majority of respondents agreed that their relationship with their current leader was generally very good. Respondents B and C, however, claimed that the leaders they have now are the best leaders they have ever had. In correspondence with Walumbwa et at. (2008), their leaders are portrayed as the best leaders due to their personality, passion, and in their way of being a leader, which implies that they are also truthful in their speech and commitment. This indicates that leaders who were identified as exceptionally good leader does an outstanding job of showing their true self to the employee, fostering a dependable and trustworthy relationship (Ilies et al., 2005), which is reflected in the good and mutual relationship. These examples indicate that the leader holds a high degree self-awareness, seeing as the leaders has succeeded in cultivating a positive work environment. The employees clearly felt supported, valued, and appreciated leading to increased workplace satisfaction.

> *"My current leader has been the best so far in my history of leader's relationship. I have had many leaders, but she is specifically very good. I'm assuming because of her personality and her passion, is one thing, as a leader is one thing." – Respondent B*

In accordance with Harter (2002), most of the respondents value a trusting relationship. A trusting relationship is evidently the result of leaders who are truthful in their intentions (Luthans & Avolio, 2003) which for the respondents showcased in different ways. Respondent I trusted the leader to always have their backs when it came to defending them in the workplace against other parts of the organization when they simply needed uninterrupted time to complete their tasks. Similarly, respondent H believes that the leader's trust in the respondent has been critical in the respondent's ability to complete tasks. In accordance with Gumusluoglu and Ilsev (2009), respondents demonstrate a positive relationship with their leaders, and it has the potential to result in employees contributing to innovative ideas.

The empirical findings show that a higher self-efficacy is present when trust was a fundamental part of the relationship. For instance, a trusting relationship allowed employees to work uninterrupted by challenges higher up in the organization. Employees were confident in their own ability to complete a task as a result of the trusting relationship with their leader, whereas low self-efficacy is

typically present in a challenging environment where individuals are more prone to giving up and being unable to complete difficult tasks (Schwarzer & Warner, 2013). Furthermore, a trusting relationship indicates that they are more likely to have higher self-efficacy, which is a valuable characteristic to have in order to improve employee resilience.

Trust in the relationship is a direct reflection of a leader's self-awareness. Self-aware leaders will recognize the importance of fostering trust in the workplace. They are aware of their own strength and weaknesses, and they also have a realistic understanding of how their actions and behavior affect others (Garner et al., 2005). Understanding that fostering a trusting relationship with their employees leads to a fruitful and positive relationship illustrates their higher level of self-awareness.

> *"He's also given me a lot of trust. And I think that's what has been very important because I feel that I can be able to do this task." - Respondent H*

> *"She's very much on my side, and we trust her that she has our backs in the way that she will defend us against the marketing and product managers and businesspeople that want to make things faster. Yeah, so there is a lot of trust there." - Respondent I*

The empirical findings also show that acts of caring from the leader was favorable by most of the respondents. The majority was positively influenced by their leader in how they are able to show caring behaviors.

> *"He showed that he cared about your life." – Respondent D*

5.4.2 Show availability and approachability

In correspondence with previous research (Müceldili et al., 2013), the empirical findings suggest that people who received gratitude from their leaders felt supported and valued, leading to positive interactions based on transparency and support. Many of the respondents argued that showing availability was one of the crucial characteristics of their leader when they needed assistance in overcoming adversity at the workplace. The literature of relational transparency does not directly touch upon the topic of availability; however, our findings indicate a strong connection between the transparency by the leader and their ability to show

availability. While the literature emphasizes the importance of trust and openness (Avolio & Gardner, 2006), the findings show that this trust enables leaders to be aware of their employees' needs and are able to make informed decisions regarding resource allocation. However, this pattern is in line with Avolio and Gardner (2005) who argue that relational transparency is rooted less in impression management, and more in the characteristics of the leader. As an example, respondent B expressed gratitude towards the action-oriented leader in which the leader indicated their availability.

> *"Despite of her busy schedule, which all leaders have, she makes time to kind of support me in time." – Respondent B*

However, the findings also reflects that some leaders were unable to show the degree of support to which the employees would have appreciated. Given that respondents work in a highly innovative field, the findings indicate that leaders were unable to provide the necessary resources or emotional support to employees needed in that particular setting. Respondent D and I both argue for lack of availability through their experience in which their leaders are unable to attend to the interests of their employees, in contrast to Freeman (1984).

> *"He's not always available. I mean, even when I send a paper draft to him, it takes him like two or three months before he gave me the review. Because he is super busy, right?" – Respondent D*

> *"That emails wouldn't get responded to, and there was no clear feedback on how to move forward with certain big decisions." - Respondent I*

These cases are examples of leaders' unwillingness to openly share information and maintain a good relationship with their employees when they were faced with adversity. By looking at transparency which enables leaders to show availability, it could be argued that the action-oriented ability was not present. This can imply that the challenges might be rooted in between the words, character, and attitude of the leader (Avolio & Gardner, 2005). It is evident that providing the right tools for employees will increase their development, whereas leaders who have failed to provide action-oriented efforts made it more challenging for employees when faced with workplace challenges. Thus, the leaders could promote a higher level of

resilience in the employees by enhancing the action-oriented supportive efforts from the leader. The leaders who enable proactive development of workplace resources may be able to foster the locus of control amongst employees (Munoz & Brown, 2017), in which an active and available response from the leader has the ability to increase the individual's belief in their confidence to perform a certain task at work.

5.4.3 Foster an open and honest environment

The empirical findings show that the presence of honest and open discussion plays a role in the development of effective leadership. Having already established that the majority of the respondents have a good relationship with their leaders, we see that honest and open discussion is a factor that contributes to this relationship (Avolio & Gardner, 2006). Respondent I and A both reflect on their experiences in how improvements to make an open and honest environment has shown itself to be a great facilitator for a better working environment. Respondent I, who initially struggled with an employee due to misunderstandings of expectations, explained how their leader facilitated a solution by handling the situation in an honest manner. Similarly, respondent A said that they had a difficult relationship with their manager, which they were able to resolve after several rounds of discussions together. In accordance with Kuntz et al. (2017), our findings show that trust in the relationship with their leader is essential to share information and overcome hurdles together. The respondents showed ways of using the trust in leveraging their networks efficiently to solve a difficulty they were faced with at work.

> *"I think we're on the level that I really believe in just putting my cards on the table. I said that this is really awkward, you know, and we just talk about it, and that's there is kind of the environment for that."* - Respondent I

> *"At the beginning I was a bit struggled with my manager, however, like after very open discussions together then we get to know the way how to adapt each other so it's become better and better."* - Respondent A

Similarly, respondent D highlights that open discussions do not only contribute to building a good relationship and effective leadership with subordinates, but also serve as a valuable tool for leaders to help employees overcome challenges. According to the respondent, when faced with a problem he could not solve

independently, he felt comfortable approaching his leader for assistance rather than experiencing a decline in work performance. This demonstrates that an open an honest environment can contribute to good cooperation within their network. Respondent D further asserts that he has confidence in expressing his needs, which enables leaders to conveniently provide the necessary resources or expertise for the employee's success. By promoting such openness, leaders are in a unique position to influence the resilience of their employees. Hartmann et al. (2020) argue that behavioral measurements are the most suitable to reflect what individuals do in response to adversity. Considering respondent D's willingness to seek support from leaders, it serves as a positive indication that employees who trust their leaders with their needs and goals have the potential to enhance their resilience. This proactive approach by employees is likely to increase their reflective ability. Moreover, when leaders provide assistance by sharing experiences and explaining the reasons behind the incident, it has the potential to significantly improve employee's reflective thinking (Fixsen & Ridge, 2012). This indicates that leaders who foster this trust and open environment can have a positive impact on the employee's ability to think critically and have reflective abilities.

> *"Normally I'd like to deal with challenge myself, but if there is a challenge that I can't handle alone, we just sit and talk together and discuss in an open way." – Respondent D*

While several respondents demonstrated that they had an open and honest relationship with their leader that helped them in times of uncertainty, respondent B stated that their leader was unable to understand the viewpoint of the employee. The missed opportunity for understanding and addressing the concern of the employee may be caused by lack of an open and honest environment. If the leader had approached the situation in an open manner with a willingness to find a solution, it could have resulted in a more supportive and positive work environment.

> *"One time I was having a conversation to make my point to my manager, he was not understanding that point at all." – Respondent B*

5.5 Balanced processing

5.5.1 Promote inclusiveness

Leaders with balanced processing recognize the importance of conducting objective evaluations by seeking alternative opinions from others (Walumbwa et al., 2008). However, the empirical findings show that their commitment to balanced processing goes beyond collecting and unbiased analyzing data given the enabling effects from their self-awareness and internalized moral perspectives. This is demonstrated by our findings in which leaders promote inclusiveness within their organizations by involving employees in challenging decision-making processes or ensuring the inclusion of newcomers.

An example provided by respondent D highlights the behavior of their leader, who actively sought diverse inputs and viewpoints when considering whether to dismiss a technician from the team. However, what stood out in Respondent D's reflection was that the leader did not only gather a broader range of perspectives before making a decision (Gardner et al., 2005), but also openly shared their emotional burden associated with the prospect of terminating someone's employment:

> " Firing someone that you hired from abroad is a very hard decision because you can destroy that person's career [...] Just share the burden, right? I mean, the emotional burden." – Respondent D

This instance showcases the leader's self-awareness, as they openly acknowledge their emotions and feelings regarding the challenging situation. It also reveals a self-regulatory process driven by internalized moral perspectives, as the leader contrasts their decisions with their moral values. These dimensions play an enabling role in the balanced processing of information, establishing a more robust decision-making process. Previous research has indicated that leaders with high balanced processing abilities have the capacity to consider multiple perspectives on a given issue (Razig et al., 2019) and align their behavior and decisions with their guiding principles (Ilies et al., 2005). However, our findings shed light on the challenges leaders face in objectively evaluating all viewpoints and aligning them with their moral core, particularly in emotionally charged situations. The enabling effects of

self-awareness on balanced processing are also shown in another example of a leader who ensures the inclusion of newcomers.

> *"A leader who made sure that he took me to the meetings he attended. I was able to shadow him and see the ways that he worked, and the other members of the team worked. He made sure I was included in these activities and meetings that otherwise could have easily bypassed me." – Respondent F*

The leader's decision to involve the respondent in meetings and activities indicates a recognition of the value of diverse perspectives, which is the main objective of balanced processing. Moreover, by shadowing the leader and observing the team dynamics, the respondent gained firsthand exposure to the different ways each team member works. This exposure can help the respondent understand the varied perspectives and approaches within the team, leveraging the benefits of diversity and reducing biases, which is crucial in promoting innovation (Avolio & Wernsing, 2008).

By promoting inclusiveness, leaders play an important role in enhancing employee resilience through fostering open communication, encouraging the expression of ideas, and embracing challenges (Wong & Laschinger, 2013). This direct link to employee resilience is rooted in the enhancement of reflective abilities and learning behaviors. Specifically, promoting inclusiveness enables employees to develop their reflective abilities, which involve identifying and analyzing different perspectives and experiences (Karnieli-Miller et al., 2021). This, in turn, empowers employees to approach challenges with a more adaptive and learning-oriented mindset. Furthermore, promoting inclusiveness also facilitates network leveraging among employees. When employees feel included and valued, they are more likely to seek support and collaborate with others to navigate challenges. Inclusiveness also contributes to greater employee engagement when faced with difficult situations. This engagement enables employees to bring their diverse perspectives, skills, and knowledge to effectively tackle complex problems and changing circumstances, which directly links to their adaptive behaviors.

5.5.2 Promote autonomy

While previous literature relies on the relational aspect of authentic leadership to suggest that authentic leader supports self-determination of followers (Ilies et al.,

2005), empirical findings suggest that balanced processing also resonates with behaviors that promote autonomy. Leaders who engage in balanced processing actively seek out diverse and even contradictory opinions (Walumbwa et al., 2008), thus they understand the significance of autonomy in allowing individuals to express their opinions without constraints. As a result, these leaders naturally promote autonomy among their employees, recognizing that it facilitates the gathering of robust information and diverse opinions when making decisions. By fostering an environment of autonomy, leaders encourage a broader range of perspectives, enabling more comprehensive and well-informed decision-making processes. This connection between leaders promoting autonomy and its impact on employees can be seen through the reflection of respondent I, who expressed a sense of freedom in their work environment.

> *"So, for example, my manager here. When I was hired, you're hired for the expertise that you were hired for, and that isn't questioned, whether you know what you know. So, whether I'm doing my job is never checked on, it's just expected, and in a way that [is] freedom." – Respondent I*

In this instance, the respondent highlighted how their manager trusted their expertise and did not question their capabilities, creating a sense of freedom to perform their job without constant oversight or micromanagement. This autonomy not only enhances employees' self-efficacy but also reinforces their internal locus of control, as they perceive themselves as having the ability to influence their work outcomes, which subsequently improves their resilience capabilities.

Moreover, it is important to note that while autonomy is valued, our findings also indicate that employees desire leaders who can take control when necessary. Respondent B highlighted the role of leaders as "career saviors" who intervene and manage situations that employees cannot control on their own. This suggests that leaders who balance between providing autonomy and taking control demonstrate a high level of self-awareness and balanced processing. They have the capacity to accurately assess when their involvement is necessary and when employees should be given autonomy. This finding aligns with previous research indicating that behaviors reflecting self-awareness and balanced processing are crucial in empowering employees. Such behaviors enable employees to take on more responsibility, assume ownership, and exhibit adaptive behaviors (Wong &

Laschinger, 2013). By effectively balancing autonomy and taking control when needed, leaders foster a sense of empowerment among employees, thus enabling them to exhibit more adaptive behaviors and enhance their resilience capabilities.

5.5.3 Promote learning and development

Empirical findings indicate that leaders, through balanced processing, foster learning and development in their employees, aligning with previous research which states authentic leaders focus on follower development (Luthans & Avolio, 2003). For example, respondent B described how their leader considered diverse perspectives to assess their team's competencies and make decisions on improving job performance.

> *"We have identified what kind of skills and competence are required to perform our jobs in our team, which is innovation. [...] And so how our conversation goes is that: "OK, where are you now?" And I say: "My self-assessment is that I'm at intermediate level and I want more practice opportunities to become this advanced level". [...] And then she thinks: OK, so there this, this, this opportunity, and this is how you can apply these skills and practice." – Respondent B*

This instance demonstrates how the leader seeks diverse opinions to improve team performance and contrasted her own assessments with the self-assessments of followers, leading to her decision to assist followers in improving their weaknesses through learning and practice opportunities. Therefore, it is evident that balanced processing plays a crucial role in shaping leaders' behaviors that promote learning and development. This is especially recognized when these behaviors can enhance collective performance and decision-making process. Continuous learning enhances followers' self-efficacy, belief in their ability to handle problems (Schwarzer & Warner, 2013), and internal locus of control, the belief that they have control over their actions and outcomes (Rotter, 1966). Acquiring knowledge for future behavior guidance is also part of reflective ability (Karnieli-Miller et al., 2021). By encouraging learning, leaders enable followers to exhibit more learning behaviors and improve their personal resources, fostering resilience.

Although the promotion of follower development does not automatically imply developing them into leaders, as emphasized by Walumbwa et al. (2008), our

findings provide valuable insights into the underlying reasons behind this phenomenon. While leaders with balanced processing support follower development, the extent of this support depends on the alignment of leaders' and followers' core beliefs. Respondent I, for instance, discussed the lack of support for career development from a leader who exhibited both high balanced processing and internalized moral perspectives.

> *"I've been doing essentially the same job for five years. Of course, it changes but the overall responsibilities are the same. I feel ready to keep learning and that's something where I would hope that a manager would be there for someone." - Respondent I*

In this instance, the respondent expressed the belief that their leader failed to understand their drive for professional growth beyond financial incentives. This suggests a misalignment between the leader's perception of follower's career development, which is primarily linked to monetary rewards, and the follower's broader motivations. Despite the leader's balanced processing, she was unable to provide career development support due to conflicting internalized moral perspectives. Additionally, we can infer that this leader may have had insufficient self-awareness, failing to recognize the impact of leaders on followers and accepting individual differences in beliefs about career development. This indicates that the impact of balanced processing on employee resilience, through promoting learning and development, can either be diminished or amplified by the enabling effects of internalized moral perspective and self-awareness.

5.6 The collective impact of authentic leadership dimensions

5.6.1 Being of service to others
Based on the empirical findings, the behavior that employees most desire in their leaders can be summarized as "being of service to others". This involves assisting employees in navigating challenges and offering individualized support to facilitate their development. Employees express a desire for leaders to support them in both everyday circumstances and difficult times by engaging in timely, concrete, and tailored actions. As previously mentioned, both relational transparency and balanced processing encompass various helpful behaviors, which can be enhanced

or diminished by self-awareness and internalized moral perspectives. However, while leaders may advocate for these behaviors, they may not follow through in actively assisting their employees with concrete actions. This was evident in the previous case of failing to support career development. As a result, incorporating all four dimensions of authentic leadership is crucial so that leaders can consistently prioritize the needs and interests of others. This indicates that the presence of all dimensions is necessary for leaders to exhibit service-oriented behaviors. This concept is exemplified in the following reflection by respondent G.

> *"If I request something, he provides. [...] if I needed knowledge, where to find something or some documentation, he either gave me the information or he pointed out to whom I should contact. If I need a piece of equipment, he just buys it." - Respondent G*

5.6.1.1 Help employees to navigate during adversity

The empirical findings reveal that desired leadership behaviors are strongly associated with providing various forms of support to employees during challenging circumstances. These behaviors include maintaining a comprehensive overview, offering guidance, providing clear directions, making decisions effectively, and providing more clarifications regarding decisions. A notable reflection from respondent F highlights the significant role played by all four dimensions of authentic leadership.

> *"So, in the face of a very uncertain scenario, he's able to find out what's tangible, and what can we actually work with right now, to establish a more secure case. That's something I value. That I could go to him and say this is super uncertain, I don't know how to move forward. Then he can sort of break down the issue and give me what's tangible, what are the topics that I'm actually able to work with." - Respondent F*

In this case, the leader demonstrated a high level of relational transparency. As evidenced by the employee's statement, he can approach the leader openly in time of uncertainty. This did not only indicate that the leader showed his availability, but also that they had a trusting relationship and an honest environment in which the follower could openly admit that he was unsure about how to handle the situation. Furthermore, the leader's ability to identify tangible aspects of the situation

indicates their capability to seek diverse perspectives and objectively analyze information before making decisions, demonstrating a strong sense of balanced processing. Despite not being explicitly mentioned, the leader's self-awareness played a crucial role in their ability to understand the follower's need for assistance and guidance in addressing the issue. The leader's self-awareness also enabled them to recognize their strengths and empowering them by providing the necessary support. Similarly, signs of internalized moral perspectives were evident in the leader's dedication and readiness to provide timely support, implying that actions they take to help others are consistent with their core values. Leaders who lack these dimensions may overlook the followers' concern or possibly be unable to provide the same level of support as described in this case.

Looking at a contradicting example described by respondent J, it is evident that when followers approach leaders and seek help to navigate challenges, lacking a dimension of authentic leadership will lead to insufficient support.

> *"I come to my boss and say: "You know I really have problems with writing this report, I don't know where to start". And then the boss can say: "Yeah, look, we have lots of these similar reports. Just take a look here, and you can use the same introduction and use that to getting started". If I really indeed have a problem with writing, finding the right words, then that's the help that I needed. But is that really the problem? Or is it that the results are crap and that I don't know…that I really don't want to show that to the customer? Or I think that we are not done? Or I have to write the report together with another person and there's some trouble with the collaboration? What is actually the issue? So, the question that the leaders should ask is many questions. What is actually happening? Why are you struggling? Why do you think you struggle with writing this report? And then you know what most leaders do? It's like automatic reactions: "But that's fine we can just extend the deadline for a week.""* - Respondent J

This narrative showed the absence of balanced processing through the leader's automatic reaction to extend the deadline without further inquiring the follower's opinion. This evidently demonstrates the preference for quick fixes instead of engaging in a comprehensive and objective analysis of relevant information prior to reaching a conclusion. This example highlights a lack of relational transparency,

as the leader failed to thoroughly understand the follower and the challenge she was facing. This suggests a weakened leader-follower relationship and an environment in which the follower was unable to speak openly about the true nature of her problem. There is no clear indication of the leader's self-awareness or internalized moral perspectives, but it is likely that both are quite limited because the leader failed to recognize their impact on their employees and act accordingly. Even if these dimensions were more present, the absence of balanced processing and relational transparency would still hinder the leader's ability to understand the follower's difficulties and provide appropriate support. Assisting employees in navigating challenges requires the coexistence and interplay of all four dimensions of authentic leadership. These behaviors would encourage employees to be more resilient, particularly by actively seeking support from their leader and collaborating to resolve workplace adversities.

5.6.1.2 Provide individualized support for development

Leaders demonstrating service-oriented behaviors are capable of offering tailored support for development. The empirical findings suggest that due to variation in employees' level of experience, tailored support is necessary for their individual development. This is exemplified by the reflections of respondents G and H.

> *"So that when you start your career, somebody who is showing you the way. Proper leader. Now it's a bit different because I know what's going on, so to whatever company I go, it's more or less the same. There are patterns that I understand now. So now I expect the leader to deliver me the tools and the means to my work, and if possible, shelter me from unnecessary crap." - Respondent G*

> *"It's maybe because we're still fresh, so we're like explaining and coaching in that way, that she maybe takes me to meetings and shows me how the project thing is set up." - Respondent H*

Respondent G had significant experience and emphasized the importance of leaders providing the necessary tools and resources required for their work, as well as shielding them from unnecessary challenges. This indicates that more senior employees expect leaders to show support for development by providing the means

to excel. However, respondent H, who is relatively inexperienced, highlights the need for more coaching and guidance from leaders. These examples illustrate that different employees have varying needs in terms of support and development. Thus, leaders need to recognize these differences and provide individualized support to meet the unique needs of their employees.

In order to recognize such differences and needs, leaders need to leverage all dimensions of authentic leadership. Having a high level of self-awareness will enable leaders to recognize their own strengths, biases, and limitations. This is needed to view each employee with an open mindset and accept that individuals have different needs. In turn, this enables them to practice relational transparency and build a trustful and respectful relationship as well as an honest environment, making it easier for employees to request their unique needs for development. Balanced processing enables leaders to acquire a profound understanding of the areas in which their followers need to enhance their skills and capabilities. Finally, internalized moral perspective enables leaders to align their actions with their core values, and genuinely invest in their employees' growth.

5.6.2 Foster a sense of purpose

Empirical research indicates that employees desire leaders who can promote a sense of purpose and motivation in their day-to-day work and during challenging times. Previous research has shown that when employees find purpose in their work, they have better work and life outcomes, such as resilience, pride, satisfaction, commitment, engagement, achievement, connection, and excitement (Dhingra et al., 2021). The reflection of respondent J provides a vivid illustration of the positive impact of leaders fostering a sense of purpose in their followers.

> *"Also being reminded of why you're doing what you're doing. For example, you're doing things that are hard and then somebody, the leader, reminds you this is the big vision, that's the big picture. Then that's liberating and motivating. If it's more personal, I guess then the feeling is the same as with any other person that is supporting you, which is basically feeling that you matter, and that you're not alone. [...] For these more often, these smaller non-spectacular things, they simply make me happy, and grateful." – Respondent J*

All dimensions of authentic leadership create a powerful synergy, resulting in the follower experiencing a profound sense of purpose, elevated emotion, and a strong sense of satisfaction with her work. The leader's ability to perform seemingly insignificant acts such as reminding their employees of the bigger picture, and how their work contributes to it, proved to have an enormous impact. Yet, it is crucial to acknowledge that these "smaller non-spectacular" behaviors require significant effort and groundwork to be truly effective. The act of reminding the follower about the organization's vision and the significance of her work is complex and relies on the integration of all dimensions of authentic leadership. Firstly, the leader must have a deep understanding of the organization's purpose and how it aligns with their core values. Without a high level of internalized moral perspectives, it would be challenging for the leader to comprehend and effectively convey this purpose. Additionally, the leader must possess a strong sense of self-awareness to recognize the importance of communicating this purpose to employees, understanding that it can foster fulfillment and improved performance. Moreover, a high degree of balanced processing is necessary for the leader to objectively assess the alignment between the employee's purpose and the organization's purpose before emphasizing the significance of her work and its impact. And finally, relational transparency came into play through a trustful and respectful relationship between the follower and the leader, making the message more genuine and impactful. The absence of any dimension of authentic leadership is likely to result in interactions that feel insincere and lack a meaningful positive impact on followers.

6.0 Limitations and implications for future research

The study's findings should be interpreted in light of its limitations, as limitations provide valuable information for potential future research in this field (Bell et al., 2019). It is important to address that all of our measures for both quantitative and qualitative data relied on self-reports. Although self-reports are commonly used in organizational research, there are several issues associated with their use, and because our research was limited to using single-source data, it raises concerns about common method biases (Podsakoff & Organ, 1986). When both measures are derived from the same source, any flaw in the source will most likely contaminate both results in the same manner or direction (Podsakoff & Organ, 1986). Despite our efforts to decrease bias, there is no guarantee that the participants rate themselves correctly in terms of soliciting their perceptions of job attitudes, the supervisor's behavior, and other factors that affects the self-report (Podsakoff & Organ, 1986).

The most prominent limitations in regard to this thesis is the sample size. Although we focused on collecting a selective sample that would fit our requirements, we acknowledge that a large sample size with a more representative number of respondents has the potential to yield a different result (Bell et al., 2019). Our questionnaire had N=26 respondents from a variety of industries, which could have a larger satisfactory response by including more respondents holding a non-managerial position. Considering that we ended up with a sample size in which every individual scored relatively high in terms of resilience, collecting a larger number of respondents for future research could allow for a sample with a more evenly distributed level of resilience. Additionally, as we investigate the setting of innovative firms, we are also more aware that leaders in these settings are generally more concerned with dealing with adversity in the workplace. Including other organizations and industries that do not place a strong emphasis on innovation could also help our sample size and findings, as respondents' levels of employee resilience is likely to vary more. Taking other countries into account would also almost certainly result in a different outcome.

We did not want to force the respondents to provide us with any personal data, so not all items were filled out by every respondent. We specifically requested their email address in order to contact them for an interview at a later date. As a consequence, we were able to keep all of the respondents for the questionnaire but

unable to invite some of them, who did not provide us with their email address, for a follow-up interview. Out of the 26 questionnaire respondents and a one-on-one interview with 10 respondents from the questionnaire, we can conclude that generalizability is difficult. In light of this limitation, it is imperative for future research to increase the sample size for more robust and reliable results. Additionally, the inclusion of participants from various countries would likely result in a more representative sample.

Another limitation of the thesis is its sampling flaw. Due to the scope and timeframe of the thesis, we collected respondents through convenience sampling. We acknowledge the possibility of the sampling to be biased due to the possibility of not fully presenting the population from which the sample have been drawn (Sousa et al., 2004; Freedman et al., 1997). In accordance with Sousa et al. (2004), a convenience sample typically also recruit those individuals who feel strongly about the issues in question. Thus, drawing conclusion about the population presents itself difficult.

The study's findings make no assumptions about causality. In choosing a cross-sectional study, it entails that the data was collected at a single point in time. (Bryman & Bell, 2015). In accordance with Podsakoff et al. (2003), there should be no universal conclusions drawn from the results with a study design limited to only one data source. Seeing as we have chosen a cross-sectional study, we suggest that the relationships found in the study should be investigated with a longitudinal research method that could further investigate the relationship between the dimensions of authentic leadership and employee resilience.

Another limitation is the potential difficulty in establishing a trusting atmosphere between the interviewers and the participants. When we, as interviewers, ask respondents about their previous and current leaders, the fear of coming across as unprofessional in their elaboration is a potential challenge. This may cause the respondents to reply in ways that are not entirely consistent with the reality. Although we were under the impression that the respondent trusted us to keep this information private, we cannot be certain about how much valuable information to our thesis was exchanged. It is also crucial to acknowledge the possibility of researcher's bias in relation to data collection, and the potential misinterpretation of the respondents' narrative despite our efforts to mitigate the possibility of such outcomes.

7.0 Conclusion

This study aimed to explore *"how the dimensions of authentic leadership influence employee resilience"*. To answer this question, we adopted a mixed method approach, including a questionnaire and semi-structured interviews with 10 employees in non-executive roles in innovative firms in Norway. Purposeful sampling was employed to gather data on participants' resilience levels, enabling us to select two distinct groups for further investigation. Through semi-structured interviews, we gained insights into the follower-leader relationship and identified behaviors that were perceived as helpful or unhelpful during times of uncertainty. By analyzing the narratives and drawing on existing literature of authentic leadership and employee resilience, we examined how desired leaders' behaviors connect to authentic leadership dimensions and impact employee resilience.

Our study reveals nine clusters of leaders' behaviors that clarify the profound impact of authentic leadership components on employee resilience. We found that resilient employees naturally exhibit network leveraging behaviors and actively seek leaders who can effectively support them during times of uncertainties. They are also proactive in seeking opportunities for learning and development within their interactions with leaders. Notably, there was no significant differences between the two groups of respondents, indicating the minimal variation in desired leadership behaviors in highly resilient employees.

Our study further developed a two-level framework that explains how authentic leadership dimensions influence employee resilience through desired leadership behaviors. At the first level, we identified three behaviors aligned with relational transparency including building trustful relationships, showing availability and approachability, and fostering an open and honest environment. Three behaviors associated with balanced processing were identified, encompassing the promotion of inclusiveness, the provision of autonomy, and the promotion of learning and development. Our study highlights the role of self-awareness and internalized moral perspective as enabling factors that can either diminish or amplify the impact of these behaviors on employee resilience. At the second level, two key behaviors *"Be of service to others"* and *"Foster a sense of purpose"* result from the combination and amplification of the first-level behaviors, representing the synergistic effects that arise when all dimensions of authentic leadership come into play.

7.1 Contributions to theory

These findings have provided valuable insight. First, our study contributes to the research on authentic leadership and employee resilience by offering a framework for understanding specific leadership behaviors that serve as the mechanisms through which different dimensions of authentic leadership influence employee resilience. Previous research had predominantly focused on examining the impact of authentic leadership as a cohesive concept. As a result, we provide new insights by investigating the previously unexplored influence of individual dimensions of authentic leadership on employee resilience. Secondly, by analyzing rich and diverse narratives, the study adds to the literature on authentic leadership by providing insights into the dynamics and synergies of authentic leadership dimensions. We reveal the enabling role of self-awareness and internalized moral perspective dimensions in amplifying and diminishing behaviors associated with the other two dimensions, as well as the collective impact when all dimensions are utilized. Lastly, the study offers additional insights regarding highly resilient employees working in various innovative organizations and notable similarities in their preferences for leadership behaviors in challenging times.

7.2 Practical implications

This study offers several practical implications and values for both leaders and employees working in innovative businesses. It highlights the impact of authentic leadership on employees by providing insights into the specific behaviors that leaders can adopt or avoid, to enhance their follower's ability to withstand challenges. As a result, it offers valuable guidance for leaders in innovative organizations who aim to drive and enhance resilience in their organizations. The study suggests that organizations should identify specific behaviors that can either foster or hinder employee resilience and reflect upon the rationale behind them. This study can thereby encourage leaders to reflect on their actions and make necessary adjustments. Moreover, by decoding leaders' behaviors through the lens of authentic leadership dimensions, our study provides employees with a deeper and more nuanced understanding of their experiences with leaders. This assists employees in evaluating their leaders' authenticity and understanding how the leaders' behaviors affect their own resilience. It assists employees in navigating their relationships with leaders, especially when faced with adversity.

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Appendix 1: Questionnaire form

Block 1 – Introduction and consent

We would like to express our gratitude for your participation in this study as a part of our master's thesis at BI Norwegian Business School.

Our research aims to examine how leaders can promote employees' capabilities to handle and overcome difficulties and uncertainties at work.

We use this questionnaire and in-depth interviews to collect data. Your valuable input will greatly enhance the validity and depth of our findings.

The questionnaire should take less than 5 minutes to complete, and all responses will be kept strictly confidential. At the end of the questionnaire, you will be asked to provide your email address. We will use this to send you a summary of your results and some suggestions to improve your capabilities to handle uncertainties. Additionally, we may use your email to invite you for a follow-up interview. The interview will be conducted online for approximately 45 minutes and be recorded.

You will be completely anonymous in the thesis. Only the students and the supervisor will have access to the data collected in this questionnaire and recordings from the interviews. Upon completion of the study (by the end of June 2023), all data will be deleted.

Participation in the study is voluntary. If you choose to participate, you can withdraw your consent at any time without giving a reason.

Should you have any questions or concerns, please do not hesitate to reach out to xxxx (xxxx@bi.no), yyyy (yyyy@bi.no), or our supervisor, Dr. Scott G. Isaksen (sgiaway@cpsb.com).

Please indicate your consent to participate in this study.
- ☐ I consent (1)
- ☐ I do not consent (2)

Block 2 – Background information

Q1. Does your job contain any of the characteristics below? Please choose all applicable choices.
- ☐ Require you to take risks, experiments and think outside of the box (1)
- ☐ Require you to constantly pushing the boundaries of what's possible (2)
- ☐ Require you to finding new ways to solve problems (3)
- ☐ Require you to create or innovate products or services (4)
- ☐ Require you to seek out new opportunities and ideas (5)
- ☐ Require you to embrace changes and uncertainties (6)
- ☐ All characteristics above are not applicable for my job (7)

Q2. Are you currently employed in a non-executive/ non-managerial role within your organization?
- ☐ Yes (1)
- ☐ No (2)

Q3. Do you currently work for a company that is based in Norway or has a subsidiary office in Norway?
- ☐ Yes (1)
- ☐ No (2)

Block 3 – Employee resilience

Q4. The following questions address how you manage challenges that arise as part of your role. Your honest and accurate self-assessment is very important to us. Please indicate your response to each question using the scale below.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
1. I effectively collaborate with others to handle unexpected challenges at work (1)	○	○	○	○	○	○	○
2. I successfully manage a high workload for long periods of time (2)	○	○	○	○	○	○	○
3. I resolve crises competently at work (3)	○	○	○	○	○	○	○
4. I learn from mistakes at work and improve the way I do my job (4)	○	○	○	○	○	○	○
5. I re-evaluate my performance and continually improve the way I do my work (5)	○	○	○	○	○	○	○
6. I effectively respond to feedback at work, even criticism (6)	○	○	○	○	○	○	○
7. I seek assistance to work when I need specific resources (7)	○	○	○	○	○	○	○
8. I approach managers when I need their support (8)	○	○	○	○	○	○	○
9. I use change at work as an opportunity for growth (9)	○	○	○	○	○	○	○

Block 3 – Closing

Q5 Thank you for completing this survey. Your responses will help us better understand how to support employees like you who may be experiencing adversity in the workplace.

We will send you a summary of your results and some recommendations to improve your capabilities to handle uncertainties at work. Additionally, we may be interested in following up with some participants to learn more about their experiences and perspectives. We may use your email to invite you to a follow-up interview. It will be conducted online, recorded and take approximately 45 minutes. We make sure that you will be completely anonymous in the thesis.

 Please provide your email address below.

_____

Appendix 2: Interview guide

I.   Introduction

"Thank you for participating in our study. The purpose of our study is to examine how leaders can promote employees' capabilities to handle and overcome difficulties and uncertainties at work. As mentioned in the survey and interview invitation email, the interview will last for approximately 45 minutes. We make sure that your name and identifying information will not be reported in any publications. Also, the interview will be recorded with Teams' function. Recording files will be destroyed upon transcription. No other person will have access to the data except for our supervising professor, Dr. Scott G. Isaksen. Your participation is voluntary, so you can withdraw at any time without giving any reasons. Before we start the interview, do you have any questions for us?"

II.   Main questions

0. Can you tell us a little bit about yourself?

1. In what ways have your leaders influenced you?

2. Can you tell me about your relationship with your current leader?

    a. How do you describe your leader as a person?

    b. Can you give an example of when you see your leader at their best?

3. Can you tell us about a time when your leader helped you to overcome uncertainties at work?

    a. What did your leader do to support you? / How did your leader approach that situation?

    b. How do you feel about that experience?

    c. What happened next? / What sort of impact has this had on you?

4. Could you describe a situation when your leader was doing something that was not helping you?

    a. What do you think was not helping? / Why do you think that?

    b. What happened next? / What sort of impact has this on you and others?

    c. What do you wish your leader did differently?

5. What would you like your leader to do differently to help you overcome challenges at work?

    a. Why do you think that will help?

    b. Can you give us an example?

III.   Closing: Is there anything else we did not cover that you want to share?

Appendix 3: Interview invitation email

Hi!

We really appreciate your participation in our initial survey and your interest in continuing to help us with our research.
The purpose of this interview is to understand more about your perspective and the experiences you have with your leaders. This will contribute to our effort in understanding how to provide support to employees in the face of adversity.

The interview will be taken place on Teams. You can join by simply clicking on the link below this invite.

It is expected to last for 45 minutes and will be very informal. We will ask you questions about your relationship with your leaders, your experiences with them, how do you feel and why do you feel that way, and what changes would you like to see.

The interview will be recorded using Teams' function. We make sure that your data will be kept strictly confidential, and your identity will not be revealed in any publications. The recording will be safely deleted upon completion of the study (by end of Jun 2023). After the interview, we may contact you at a later date to clarify certain points. Participation in this research is completely voluntary and you may choose to withdraw from the research at any time.

In case you have any questions or need to reschedule the interview, please feel free to reach out to us.

Thanks, and we are looking forward to talking to you!

Appendix 4: Groups of desired leaders' behaviors with connections to authentic leadership dimensions and employee resilience behaviors

Authentic leadership dimension	Group of desired leaders' behaviors	Helpful/non-helpful leaders' behavior	Similar or unique of higher/lower groups	Predominantly related to employee resilient behaviors
Relational transparency	1. Build trustful and respectful relationship	Acts of caring	Similar	Network leveraging
		Very good relationship	Similar	Network leveraging
		Low power distance	Similar	Network leveraging
		foster personal connections through genuine acts	Similar	Network leveraging
		Dismiss employee emotional reactions	Similar	Network leveraging
		Stand up for employees	Higher group	Network leveraging
		Trustworthy	Lower group	Network leveraging
		Consistent positive behaviors	Lower group	Network leveraging
	2. Show availability and approachability	Show availability	Similar	Network leveraging
		Lack of availability	Similar	Network leveraging
		Be approachable/informal	Higher group	Network leveraging
		Reliable	Lower group	Network leveraging
		Show more availability	Lower group	Network leveraging
	3. Foster an open and honest environment	Insufficient communication of expectation	Lower group	Adaptive
		Improve communication	Lower group	All
		Honest and open discussions	Similar	Network leveraging
		Facilitate open discussions	Similar	Network leveraging
		Listen to my concerns and take it seriously	Similar	Network leveraging
		Insufficient clarifications on how/why decisions are made	Similar	Network leveraging

Authentic leadership dimension	Group of desired leaders' behaviors	Helpful/non-helpful leaders' behavior	Similar or unique of higher/lower groups	Predominantly related to employee resilient behaviors
		Failure to understand employees' perspectives	Similar	Network leveraging
		Spend more time understanding the problem	Similar	Network leveraging
		Fail to communicate leaders' perspectives/opinions	Higher group	Network leveraging
Balanced processing	4. Promote inclusiveness	Involve employees in decision making	Higher group	All
		Inclusive	Lower group	All
	5. Promote autonomy	Being autonomous	Similar	Adaptive
		Take control when needed	Higher group	Network leveraging
	6. Promote learning and development	Observative	Higher group	Learning
		Show little interest in employees' work	Higher group	Learning
		Support for career development	Lower group	Learning
Combined	7.1. Help to navigate during adversity	Have a comprehensive overview	Higher group	Adaptive
		Provide clarity and structure in times of uncertainties	Lower group	Adaptive
		Effective decision-making	Higher group	All
		Provide guidance	Similar	Learning
		Provide directions	Similar	Network leveraging
		Provide more clarifications	Higher group	Network leveraging
		Shelter employees from distractions	Lower group	Network leveraging
	7.2. Provide individualized support for development	focus on strength-based development	Similar	Learning
		Provide support fit to employees' level of experience	Similar	Learning
		Help employees to improve essential skills	Higher group	Learning
		Adaptive to employees' level of exp	Lower group	Learning
		Fail to provide training	Lower group	Learning

Authentic leadership dimension	Group of desired leaders' behaviors	Helpful/non-helpful leaders' behavior	Similar or unique of higher/lower groups	Predominantly related to employee resilient behaviors
	8. Foster a sense of purpose and motivation	Being a role model	Similar	All
		Admiration	Similar	All
		Exceptional leadership	Higher group	All
		Lack of encouragement	Higher group	All
		Show encouragement	Higher group	All
		Positive and enthusiastic	Higher group	All
		Provide reassurance	Lower group	All
Not relevant	9. Have knowledge/expertise that employees can rely on	Be knowledgeable	Similar	Network leveraging
		Have expertise in the field	Higher group	Network leveraging