Gordon Institute of Business Science
University of Pretoria

Examining the impact of leadership behaviours on employee engagement across virtual, hybrid, and regular work environments.

Student Number: 05092711

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

05 March 2024

ABSTRACT

Leaders understand that employee engagement is crucial to their success, so much work has gone into this area, and employee engagement levels globally have been improving. However, the levels of employee engagement can be significantly enhanced. Simultaneously, the increasing prevalence of virtual and hybrid work introduces a work context worth investigating so that leaders know how to respond to achieve the best outcomes for all stakeholders in each work context.

This research aimed to understand how leader behaviours influence employee engagement in each work context. The extant literature shows that the meaningfulness of work is most influential on employee engagement, whilst safety and availability are other crucial antecedents. This quantitative research retained and examined data from 208 out of 232 responses across virtual, hybrid, and regular work contexts. A combination of stepwise multiple linear regressions and moderation analyses were conducted using IBM SPSS software to determine relationships between leadership behaviours, employee engagement, and the extent of virtual work.

As a meta-category, only relations-oriented behaviours were significantly positively correlated to employee engagement in virtual, hybrid, and regular work environments. ‘Empowering' was the specific behaviour that showed consistent positive and significant correlations to employee engagement across virtual, hybrid, and regular work contexts.

KEYWORDS

Leadership behaviours

Employee engagement

Virtual work

Hybrid work

Meaningful work

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

05 March 2024

CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 RESEARCH PROBLEM AND PURPOSE

Employee engagement and Work Engagement are closely related and extensively researched constructs beneficial to organisations (Kwon & Kim, 2020). Research has demonstrated that employee engagement is crucial to unlocking the full potential of a business (Afram et al., 2022). While there is still debate on employee engagement and work engagement definitions, Bailey et al. (2017) view engagement as a psychological state with positive outcomes for individuals and organisations.

Employee engagement is crucial for organisational success and increasingly essential for organisations focused on creating a competitive advantage (Govender & Bussin, 2020). However, many companies, including South African ones, struggle to maintain an engaged workforce (Gallup, 2023; Govender & Bussin, 2020). Recent surveys report poor engagement levels for South African employees amidst the country's hardships. One article reports that only 53% of South African employees are engaged, 27% are neutral, and 20% are disengaged (Opperman, 2023). In a global study, Gallup (2023) reported that whilst engagement levels are improving, most of the world's workforce is still disengaged and considered to be ‘quiet quitting’. The report found that 60% of employees in sub-Saharan Africa were not engaged.

Leadership is a relationship between leaders and followers that seeks to influence the behaviours of followers to achieve mutually beneficial outcomes (By, 2021). Engelbrecht et al. (2017) demonstrated that ethical leadership helped develop trust between leaders and followers, improving their work engagement levels. Leadership is thus one of the mechanisms that play a critical role in influencing employees towards a state of Engagement. Yukl et al. (2019) tested three meta-categories of leadership behaviour and various component behaviours against Job Satisfaction and found positive correlations between some specific leader behaviours and Job Satisfaction. Numerous other studies have found that leader behaviour is related to employee engagement (Bailey et al., 2017). Van Schalkwyk et al. (2010) studied the relationship between empowering leadership behaviour and employee engagement at a South African organisation and found a significant positive correlation.

We need more research that studies employee engagement and leadership more explicitly in virtual and hybrid work contexts. Mutha and Srivastava (2023) are amongst the few examples of such research, whilst most studies, such as Yukl et al.(2019), have not focussed on whether the work context was virtual (mostly away

from the office), hybrid (combination of virtual and regular), or regular (mainly from the traditional office environment).

Kuper (2023) argues that there are multiple benefits of working virtually. While some argue that employees are more productive in the office than they are when working from home, this claim needs to be validated and weighed up against benefits such as the lower cost of employing and retaining virtual workers (Kuper, 2023). Another perspective on this matter is that society is focused more on economic efficiency and gross domestic product, and working from home is perceived as being less effective from this perspective (Kuper, 2023). A fair assessment needs to cater for the outcomes beyond the direct productivity of individuals and incorporate these recruitment implications, such as time-saving for individuals and employee happiness and stress levels, to name just some of the factors (Adami, 2023; Kuper, 2023).

It is also essential to consider studies showing the positive organisational outcomes of improving employee happiness. Krekel (2019) highlights the mounting evidence to support a causal relationship between well-being and productivity. The experimental study by Bloom et al. (2015) shows these relationships in the context of working from home. Employees who worked from home for the 9-month experimental period reported more positive emotions and demonstrated higher job performance outcomes.

Virtual working also presents significant benefits for the environment. Lex (2020) cites significant savings from the reduced emissions related to working from home and ranks this potential for savings higher than other everyday initiatives, such as using more energy-efficient light bulbs. Caulfield and Charly (2022) support the claims of a positive impact on the environment and further indicate the benefits to employees from saving travel time and alternative, more meaningful ways people can invest this saved time. Considering these benefits, we expect that there will be continued interest in virtual and hybrid work opportunities, and more studies need to focus on understanding leadership and engagement in this work context.

As Morrison-Smith and Ruiz (2020) indicated, global virtual teams are a growing phenomenon, contributing to the increasing prevalence of virtual and hybrid work. Factors such as physical distance and managing team members' perceptions can contribute to disengagement in these teams. When an affected team member

becomes disengaged, they can more easily become disconnected from the team without being noticed, whilst their contributions to team efforts deteriorate. This challenge of detecting and dealing with disengagement in virtual and hybrid work contexts makes it more critical that leaders impact employee engagement positively.

Many organisations have had limited success in virtual and hybrid work (Kuper, 2023; Narayanan et al., 2017). In some cases, organisations are questioning the outcomes of their moves to virtual or hybrid arrangements and are reconfiguring these in favour of more time at the office. At the same time, employees prefer more time working virtually than employers offer (Aksoy et al., 2023). These factors indicate that we have room to improve leadership capabilities to manage the virtual and hybrid work environments better and secure the best outcomes from these work contexts.

The research conducted in traditional collocated workspaces has shown that leadership behaviours influence employee engagement, and there is a vast body of literature that guides our understanding of the relationship between various leadership behaviours and employee engagement in the traditional workspace (Aitken & Von Treuer, 2021; Engelbrecht et al., 2017; Van Schalkwyk et al., 2010). However, the effect of these leadership behaviours in virtual workspaces has not been researched as widely, and such research will expand our understanding of the relationship between leadership behaviours and employee engagement within virtual workspaces. Contreras et al. (2020) have indicated that whilst virtual work has been around for a long time, there needs to be more academic work on the best leadership mechanisms in such an environment.

Yukl et al. (2019) raised a concern that requires attention from an academic perspective: much of the research in the last few decades has focused on the outcomes of various leadership styles with few examples of investigation into the effects of specific behaviours. This approach easily masks the effects of specific behaviours on the outcomes of a study. It can sometimes result in undue perceptions of factors that influence employee engagement. There is a need for more studies that investigate the effects of specific behaviours rather than composite leadership styles.

1.1 Summarising the problem and purpose of the study

Organisations across the globe can benefit from improved business outcomes through a keen focus on improving employee engagement levels (Harter et al.,

2002). Leaders within the organisation are the primary instrument available to the executive team to influence the employees towards this desired state of Engagement (Aitken & Von Treuer, 2021; Engelbrecht et al., 2017). However, the work of this leadership team is becoming more complex as the context of work changes, and the growing prevalence of virtual and hybrid work arrangements is a critical factor that can change our leaders' effectiveness (Morrison-Smith & Ruiz, 2020). A better understanding of the relationship between specific leader behaviours and employee engagement can further our understanding of what leaders can do to influence engagement more effectively.

This study will test the relationship between leadership behaviours and employee engagement across virtual, hybrid, and regular work environments. Reviewing the literature will provide a baseline understanding of the various constructs involved in this study. Hypotheses will then be developed and tested quantitatively to better understand how virtual and hybrid team leaders can effectively improve their teams' engagement.

For this study, employees who work in the traditional office environment at least 14 days per month are considered regular workers, with the term traditional being used as appropriate. Those who work four days or less from the traditional office environment are considered virtual workers, and the terms remote or telework are sometimes used. The remaining respondents will work five to 13 days a month from the office and are considered hybrid workers.

2 THEORY AND LITERATURE REVIEW

2.1 Introduction

Engaged employees can benefit their teams and the organisations that employ them while benefiting from a positive personal experience (Bailey et al., 2017; Uddin et al., 2019). Organisations need exceptional leaders who can influence this workforce towards a state of Engagement in which they apply themselves entirely to achieving their goals (Bailey et al., 2017; Engelbrecht et al., 2017). These leaders must also understand the needs of the employees so that they employ leadership mechanisms beneficial to all stakeholders in their attempts to improve employee engagement in their teams (Engelbrecht et al., 2017).

Leaders aim to get employees to be fully absorbed in driving the organisation's goals with vigour and dedication, and this aligns perfectly with the definition that Schaufeli and Bakker (2004) provide for employee work engagement. It is then essential that we review this construct to understand the core antecedents of employee engagement. Meaningful work is included in the review as some of its concepts and antecedents are closely linked with engagement, and this helps to develop an understanding of the factors that are critical for Engagement (Laaser & Bolton, 2022; Schaufeli & Bakker, 2004).

The context of work is changing, and there is an increase in the prevalence of virtual and hybrid working (Aksoy et al., 2023; Morrison-Smith & Ruiz, 2020). These work contexts have been used long before the COVID-19 pandemic and have become more prevalent since they bring various benefits to the business environment (Bloom et al., 2015). The review needs to consider these changes to the work environment and the influence that these changes have on both leadership outcomes and employee engagement.

2.2 Leadership

2.2.1 History of Leadership Theory

Leadership has been studied for over a century, and numerous theories have been developed. Benmira and Agboola (2021) conducted a review and compiled a summary of the past theories into four separate eras, which they titled the "Trait", "Behavioural", "Situational", and "New Leadership" (p. 3).

The standout attribute of leadership theories in the trait era was that leaders were born with these traits and that one could only be an effective leader if they were born with them. Much of the rationale used in this era was based on the leader's physical characteristics (Benmira & Agboola, 2021).

Later theories focussed on what leaders did, and these theories are considered behavioural leadership theories in the behavioural era (Benmira & Agboola, 2021; Seters, 1990). Blake and Mouton's Managerial Grid is a popular model that positions leaders' behaviours in a grid that measures task- and people-oriented behaviours. This era's managerial grid and other theories grouped different behaviours and categorised different sets of behaviours into leadership styles (Benmira & Agboola, 2021; Taucean et al., 2016). Key features of the theories from this era were that (a) leadership behaviours could be learnt, so anybody could learn to be an effective leader, and (b) in many cases, there was a notion that a specific set of leadership behaviours was universally ideal, irrespective of the context.

The situational era introduced contingent and situational leadership theories, suggesting that the leaders' behaviours must be appropriate for the situation (Benmira & Agboola, 2021). The key difference and development from the behaviour era into the situational era of leadership theories are that the situational theories suggest that the effectiveness of leadership behaviours is context-specific and that leadership behaviours that are appropriate for each context will vary (Hersey & Blanchard, 1982). Coaching and two-way communication, for example, may be necessary with new team members who are insecure and require guidance. However, A manager may show better care and respect for the experienced team member by demonstrating trust and delegating tasks with less coaching and two-way communication (Hersey & Blanchard, 1982).

Among the recent developments in leadership behaviour theory is the work by (Yukl, 2012). A proposed taxonomy categorised leadership behaviours into four meta-categories: task-oriented, relations-oriented, change-oriented, and external-oriented (Yukl, 2012). The author provides descriptions and definitions of the meta-categories of leader behaviours and the specific behaviours in each meta-category, thus facilitating the opportunity to study the effects and relationships of either the meta-categories or the specific behaviours. This taxonomy forms the basis for the current study into leadership behaviours.

The most recent development is the new leadership era with theories including Transformational, Servant, and inclusive leadership (Benmira & Agboola, 2021). Still, the behavioural theory of leadership remains relevant and forms the basis for many theories in the new leadership era. Transformational leadership, for instance, prioritises specific behaviours and is focused on facilitating change, inspiring people and supporting their development to enable them to achieve more.

2.2.2 Leadership Behaviours

Behavioural leadership theories have been studied since the 1940s when Kurt Lewin grouped various leadership behaviours and presented Autocratic, Democratic, and Laissez-faire leadership styles (Shafique & Beh, 2017). In these early origins of the behavioural leadership theory, the ideas were still restrictive and aimed at an ideal leadership style for all circumstances (Benmira & Agboola, 2021; Shafique & Beh, 2017).

The managerial grid was a significant advancement of the behavioural theory of leadership, capturing the behaviours of leaders into two key categories: task-oriented and relations-oriented (Seters, 1990). The task-oriented behaviours were those that were focused on getting the job done, whilst the relations-oriented behaviours focused on the people who were doing the jobs. Still, this behavioural model promoted the ideal set of leadership behaviours as high on task- and relations-oriented behaviours for all circumstances. This model was challenged by situational leadership theories, which suggested that leaders needed to use the appropriate behaviours for the circumstances (Hersey & Blanchard, 1982; Seters, 1990).

The model was advanced further over the years, and Yukl (2012) produced a taxonomy of 15 component behaviours distributed across four meta-categories. Table 1 (Yukl, 2012) shows this taxonomy of four meta-categories, three relevant to this study. Task-oriented behaviours comprise clarifying, planning, monitoring, and problem solving and are focused on efficiently applying the organisation's assets towards meeting organisational goals. Relations-oriented behaviours comprise supporting, developing, recognising, and empowering, focusing on improving employee skills, strengthening relationships, and building employee commitment towards supporting organisational goals. Advocating change, envisioning change, encouraging innovation, and facilitating collective learning are the four specific behaviours in the change-oriented meta-category of leadership behaviours. These

are related to encouraging and supporting continuous growth and learning within the organisation to respond to the changing business context.

Table 1 - Hierarchical Taxonomy of Leadership Behaviours

Behaviour meta-category	Component Behaviours
Task-oriented	Clarifying Planning Monitoring operations Problem solving
Relations-oriented	Supporting Developing Recognising Empowering
Change-oriented	Advocating change Envisioning change Encouraging innovation Facilitating collective learning
External	Networking External monitoring Representing

Adapted from “Effective Leadership Behavior: What We Know and What Questions Need More Attention” by G. Yukl, 2012, *Academy of Management Perspectives*, 26(4), p. 68 (https://doi.org/10.5465/amp.2012.0088) Copyright of Academy of Management Perspectives

Much research on the effects of leadership behaviours has been conducted on leadership styles such as transformational and charismatic leadership (Yukl, 2012). The problem with this approach lies in the mechanisms used, which reported only combined results for the meta-categories included in the studies. This leaves the possibility of the effects of some component behaviours being masked by the composite results. Yukl et al. (2019) suggest that studies focusing on a wide range of specific behaviours can improve our progress in understanding leadership's effects within different contexts.

2.2.3 Leadership in the context of this study

The current study will utilise the taxonomy of leadership behaviours presented by Yukl (2012) as a basis for comparing leadership's impact on employee engagement. Consistent with the focus on studies involving a wide range of specific behaviours, this study will incorporate the component behaviours from the proposed taxonomy into the research process.

Behrendt et al. (2017) provide cautions to the taxonomy, highlighting the negative forms of some behaviours represented in the definitions. It is crucial that high and low levels of behaviour are not confused with negative forms of applying a behaviour. A leader who plans the details of a task allocated to an employee can be involved to a lesser or greater extent, which is the behaviour of interest. A negative form of the behaviour, which should be considered separately, will be a leader who generates unrealistic plans.

2.3 Employee Engagement

2.3.1 Employee Engagement is Pivotal in a Competitive World

Employee engagement is critical based on its ability to improve an organisation's competitiveness (Saks, 2019). Govender and Bussin (2020) highlight the need for South African organisations to improve employee engagement as a mechanism for improving operational efficiency and helping achieve their goals. Employee engagement is one of the antecedents of Team Performance (Uddin et al., 2019) and could contribute positively to organisational outcomes through its benefits to team performance. Considering the low levels of Engagement reported globally (Gallup, 2023), organisations that improve engagement levels effectively create a competitive advantage for themselves.

A study by Al-Ajlouni (2020) investigated the relationships between employee engagement, high-performance work systems (HPWS), employee creativity, and organisational innovation. The study found that employee engagement mediated the relationship between HPWS and employee creativity and further showed that employee creativity contributed to organisational innovation. This is closely linked to the work by Tummers & Bakker (2021), which deals with motivated employees contributing to job crafting, which generates resources to counter job demands. Engaged employees will be better at identifying and utilising the resources at their disposal than less engaged ones. Consequently, leaders must focus on behaviours that promote engagement rather than only providing resources to meet job demands.

Meng and Berger (2019) studied the relationship between employee engagement, leadership performance, trust in the organisation, supportive organisational culture, and overall job satisfaction. The study focused on professionals in public relations and found that a supportive organisational culture combined with excellent communications leadership contributed to employee engagement. The study also

found that employee engagement mediated the relationship between its antecedents and consequences, such as overall job satisfaction.

2.3.2 Employee Engagement

While the current literature is valuable and essential to this study, Bailey et al. (2017) point out the inconsistencies among some of the work in this field and prompt a review of some early contributions. The literature on the topic has developed considerably since then, sometimes introducing complexity and new elements such as satisfaction and persistence (Harter et al., 2002; Shuck et al., 2017).

Kahn (1990) wrote about personal Engagement and defined it as the "harnessing of organisation members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). Meaningfulness, safety, and availability are the psychological conditions under which people engage with or disengage from their work roles. These have remained a vital aspect of the literature throughout the last three decades, and their positive relationship to employee engagement was confirmed with quantitative empirical testing by May et al. (2004). More recent studies that demonstrate the vital role of these psychological conditions are Bailey et al. (2019), Blustein et al. (2023), Korczynski and Wittel (2020), and Laaser and Bolton (2022). These factors deserve further review as part of the development of this study.

Work engagement is a closely related construct defined as “a positive, fulfilling, work-related state of mind that is characterised by vigor, dedication, and absorption” (Schaufeli & Bakker, 2004, p. 5). The definition further introduces willingness on the part of the employee, so conditions need to be managed such that the employee becomes willing to behave in this engaged manner. The psychological conditions of safety and availability described by Kahn (1990) must be met for the employee to experience this willingness to apply vigour to their work.

In this definition, work engagement, measured by the Utrecht Work Engagement Scale (UWES), is characterised by three facets: vigour, dedication, and absorption (Schaufeli & Bakker, 2004). Vigour is described as a state of high energy and drive towards getting the job done even when faced with difficulties and obstacles. Dedication refers to the person feeling a sense of pride in their work and seeing it as having meaning and purpose. Absorption refers to being happy and fully immersed in the work. Although distinct, these facets of work engagement closely match the

descriptions that Kahn (1990) provides for the physical, cognitive, and emotional ways that people express themselves in their roles. Interestingly, Bailey et al. (2017) reported that 86% of the studies included in that review had used the UWES as a measure of Engagement, confirming the popularity and relevance of the scale.

Keywords in this definition by Schaufeli and Bakker (2004) introduce crucial factors for this study, which align with findings by Kahn (1990), and these will require further investigation. Dedication is related to the employee's experience being “meaningful, inspiring, and challenging” (Schaufeli & Bakker, 2004, p. 6) and relates well to the psychological state of meaningfulness. Dedication is also associated with significance and pride (Schaufeli & Bakker, 2004), and this requires that the employee experiences a sense of autonomy, which is essential for Engagement.

2.3.3 Core Antecedents of Engagement

2.3.3.1 Meaningful work: Connecting employee engagement and leadership behaviour

The meaningfulness of work as an antecedent of employee engagement is identified from the earliest work by Kahn (1990) and remains prominent in recent literature (Albrecht et al., 2021; Bailey et al., 2017, 2019; Schaufeli & Bakker, 2004). Meaningfulness and purpose of the work are further highlighted in the UWES as a vital feature of the dedication facet of work engagement. May et al. (2004) found that psychological meaningfulness explained a more substantial portion of engagement than safety or availability.

Laaser and Bolton (2022) present a model for meaningful work that is valuable to the current study. Firstly, it identifies the areas of core autonomy, respectful recognition, and derived dignity as crucial drivers of the state of meaningful work. Secondly, whilst considering the context of low-skilled work in this model, the authors show that employees use human agency and the ability to self-organise to create a sense of meaning within the work setting when not provided by the role performed at work. Some component leader behaviours within the relations-oriented meta-category may help leaders support such processes to improve the sense of meaning in the job and, hence, the levels of Engagement.

2.3.3.2 Core Autonomy

Core autonomy is essential for employees to perceive their work to be meaningful since workers desire control over the tasks they choose to do, the scheduling related

to them, and how they perform them (Laaser & Bolton, 2022). Korczynski and Wittel (2020) found that workers in capitalist workplaces create their form of commons through non-worked related activities that they engage in and groups that they form whilst at work. Activities such as the sharing of lunch and the creation of support groups are reported as examples of how employees are choosing to create platforms in which they have the autonomy to act in a manner that they choose within the work setting, and this may compensate for such autonomy being restricted when considering the formal aspects of the job.

Low-skilled work was found to be an area in which work is more organised and structured with higher levels of managerial control and very little autonomy (Laaser & Bolton, 2022). The work context described here can be associated with the task-oriented leader behaviours described by Yukl et al. (2019), and whilst these behaviours are found to be necessary for managerial effectiveness, they will not necessarily have a positive correlation to employee engagement in any of the work contexts being investigated; virtual, hybrid, or regular.

Considering the concept and importance of core autonomy captured by Laaser and Bolton (2022), evaluating leadership behaviours to identify those that might create this condition is essential. 'Empowering', a component behaviour within the relations-oriented meta-category of leadership behaviours, is defined as a behaviour that gives employees higher levels of autonomy and empowers them to make decisions over the work they do (Yukl, 2012). Procedures such as consultation and delegation are used to execute this behaviour so that employees have a voice in decision-making and autonomy regarding the processes they follow in executing tasks (Yukl et al., 2019). It can then be argued that empowering behaviour will have a strong positive effect on employee engagement.

2.3.3.3 Respectful Recognition

A state of respect between an employee and the leader and other stakeholders, such as customers and coworkers, is a crucial driver of meaningful work (Laaser & Bolton, 2022). A sense of pride and dignity is achieved under these conditions, which can be related to the dedication component of work engagement discussed by Schaufeli and Bakker (2004), thereby contributing to high levels of work engagement. A feeling of mutual respect and recognition amongst peers also contributes to a meaningful work experience.

Employer support for employee well-being is a crucial factor of respectful recognition, with more recent models prioritising employee well-being to treat this as an antecedent of high performance, in contrast to older models in human resource management, which have prioritised performance (Guest, 2017). Prioritising employee well-being contributes to the employee's sense of the work being meaningful and allows for a feeling of self-worth (Laaser & Bolton, 2022).

Relating this to the taxonomy of leadership behaviours and definitions provided by Yukl (2012), the relations-oriented meta-category contains three component behaviours that can promote a sense of well-being: supporting, developing, and recognising. Through this contribution to meaningful work, these component behaviours are expected to correlate strongly to Employee Engagement.

2.3.4 Engagement in the context of this study

Employees have various basic human needs that their roles within organisations can meet. Bailey et al. (2019) assert that “the absence of work that is meaningful exposes the individual to harms, since they are unable to satisfy their inescapable need for meaning and to live a flourishing life” (p. 483).

The behaviours that leaders prioritise and how they use these behaviours will influence the employee's experience of meaningfulness and, thus, their level of Engagement. This study can focus on testing the relationships between Engagement and specific leader behaviours that, according to the literature, can respond to these human needs. The Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2004), used to evaluate employee engagement in the current study, includes items that evaluate pride, challenge, meaning, purpose, and inspiration, which are essential for meaningful work and employee engagement.

2.4 The changing context of work

The psychological conditions that influence engagement have been argued to be influenced by the job, on the one hand, and the social environment, as well as personal resources and energy (Bailey et al., 2017). Leaders’ influence over social and personal factors is more significant in the context of increasing virtual and hybrid work levels (Contreras et al., 2020). The new context could drive Engagement positively due to flexible work hours, travel time saved, and more family time (Caulfield & Charly, 2022). However, there is simultaneously a risk of intrusive leadership causing disengagement (Magnavita et al., 2021). Thus, leaders must

understand the relationships between their behaviours and employees' engagement levels in virtual, hybrid, and regular work contexts.

2.4.1 Virtual Workspaces

The development of Information and Communication technologies, combined with opportunities to use these technologies to serve customers better, have resulted in a continuous drive towards more flexible working arrangements, which include virtual workspaces (Contreras et al., 2020). Contreras et al. (2020) also highlighted that the COVID-19 pandemic had accelerated the pace of the move to digital and forced more significant numbers of employees to work virtually. Bloom et al. (2015) provide the example of a company that conducted a 9-month long 'work from home' experiment, which showed productivity gains, cost savings, and improved job satisfaction from the group that worked from home.

There is also evidence that virtual workspaces could have been more successful, and many companies that have attempted this have reverted to conventional office work (Felstead & Henseke, 2017). Narayanan (2017) provided examples, including Yahoo, Hewlett Packard, and Best Buy, who had transitioned part of their workforce to virtual working but then reverted to the office environment after challenges that they faced in the implementation. These examples are dated years before the COVID-19 pandemic, so the attempts were not forced but instead carefully planned initiatives that were meant to create value.

2.4.2 Benefits of Virtual Work

Contreras (2020) mentions multiple potential benefits that can be generated through virtual working and that these benefits are conditional on sufficient support from managers, technology, and peers. Consequently, it will be wise to understand the changes in the working context and attend to these support needs to materialise the benefits. The leadership behaviours shown in Table 1 can be linked to these areas, with relations-oriented behaviours being the most apparent regarding manager support. Problem-solving could be a task-oriented behaviour that addresses any technology-related challenges with virtual work. 'Facilitating collective learning' could be a change-oriented leader behaviour that facilitates peer support.

The work context is changing from multiple perspectives, including the continuous introduction of new technologies and new ways of using these technologies to improve organisational performance (Guest, 2017). This is generally viewed

positively due to the benefits it can bring from flexibility and access to information, which can contribute positively to employee well-being (Contreras et al., 2020; Guest, 2017). As technology advances, making it easier for people to connect and work from more widely distributed locations, we can expect an increase in the prevalence of virtual and hybrid work (Henry et al., 2021). Consequently, leaders need to accept this new work context and focus more on understanding the challenges, such as the mechanisms needed to ensure employee engagement in a virtual work context and addressing these.

2.4.3 Adverse Effects of Virtual and Hybrid Work

The extent to which virtual interaction replaces direct interaction impacts various relationships between employees and other stakeholders, and these relationships, in turn, impact job satisfaction (Golden, 2006). This impact on job satisfaction further correlates to job and organisational engagement, so engagement levels are also at risk if these relationships are weakened (Saks, 2006). Golden (2006) found that employees who worked in a virtual work environment tended to pay special attention to maintaining relationships with their managers, and this could help mitigate some risks related directly to task completion. The relationships between coworkers, however, were significantly weakened in scenarios with excessive telecommuting or where employees were exclusively in a virtual work environment.

The potential for some adverse outcomes related to virtual work must be managed to avoid the negative impact on employee well-being (Guest, 2017). Low-skilled work is an example of high levels of managerial control, lower autonomy, reduced respectful recognition, and, consequently, a lesser sense of meaningful work (Laaser & Bolton, 2022). In the traditional work environment, these workers have developed coping mechanisms such as informal work groups and other workplace routines that compensate for the nature of their work (Korczynski & Wittel, 2020; Laaser & Bolton, 2022). However, these mechanisms may fall away or become less practical to implement when transitioning into a virtual work environment, which is typically dispersed.

The changing context creates the risk of work overload because employees can be fully connected to work from home at any time, leading to work-home interference (Guest, 2017). Similarly, leaders are empowered to intrude into the employees' time and space through these technologies and possess an increased ability to monitor work activities with greater ease. Monitoring is a component behaviour of the task-

oriented meta-category of leadership behaviours, which needs to be used in moderation as the necessity of this behaviour is linked to the employee's skill and level of commitment (Yukl et al., 2019). Employee well-being, sense of work being meaningful, and employee engagement can all be negatively impacted if surveillance is used excessively.

2.4.4 Virtual and Hybrid Work in the context of this study

The relations-oriented behaviours that have been discussed and are expected to have a positive relationship with employee engagement in the traditional work environment are likely to have the same effect in virtual and hybrid work contexts. The clarifications on the virtual and hybrid work contexts do not raise conflicts regarding the core antecedents of employee engagement, so factors such as meaningfulness of work, autonomy, and respect will be equally important in the hybrid and virtual work environments.

Introducing new technologies and ways of interacting with dispersed teams causes a change for leaders and employees. Although the core antecedents of employee engagement are not expected to change across different work contexts, both employee perceptions and leader abilities to execute behaviours that are intended may be impacted, and this could present as a moderating effect that the work context has on the relationship between leadership behaviours and employee engagement.

2.5 Conclusion

The literature indicates that employee engagement depends on meaningfulness, safety and availability (Bailey et al., 2019; Kahn, 1990). Meaningfulness and its associated attributes of autonomy and empowerment feature consistently in the literature and appear to be the most critical aspect of employee engagement (Bailey et al., 2019; Blustein et al., 2023; Kahn, 1990; Laaser & Bolton, 2022). The need to experience this feeling of meaningfulness is so great that people who find themselves in jobs that do not offer this experience of meaningfulness develop alternative coping mechanisms to address this void. The literature strongly points to relations-oriented behaviours, particularly empowering behaviour, as crucial for employee engagement despite the work context.

Task-oriented behaviours are essential for managerial effectiveness (Yukl et al., 2019). However, after reviewing the literature on these behaviours, there is no apparent link to the antecedents of employee engagement in the positively worded

task-oriented behaviours. This category of behaviours may still positively correlate to employee engagement through indirect effects such as improving individual and team performance and ensuring employees feel safe based on the value they create for the organisation. A conflicting effect of task-oriented behaviours will be the excessive use of these behaviours to the extent that employees feel disempowered and undermined through the overuse of behaviours such as planning and clarifying. Considering these conflicting perspectives, task-oriented behaviours are not expected to have more than a weak correlation to employee engagement.

Change-oriented behaviours have also been helpful for managerial effectiveness (Yukl et al., 2019), and some studies have shown significant positive correlations to job satisfaction (Øygarden et al., 2020). The leader's change-oriented behaviours are likely to be more noticeable during a change intervention, and the employee's level of engagement in that situation is likely to be affected by the leader's behaviours and other situational factors that may cause change fatigue or change-cynicism (Ouedraogo & Ouakouak, 2020). While these factors will raise concerns for a cross-sectional study, we can still expect a significant, weak, positive correlation between leader change-oriented behaviours and employee engagement.

Figure 1 is a summary of this review's conclusions from the perspective of the meta-categories of leader behaviours. The expectation is that the relations-oriented behaviours, particularly empowering behaviour, will have the most substantial relationship with employee engagement. The other categories of behaviours have an essential role within the organisation and are expected to affect employee engagement positively. However, this will be a weak relationship since these other behaviours do not respond directly to the employees' need for meaning. The needs of the employee transcend the work context. However, considering the experience managers and employees need to develop in the new work contexts, this is expected to moderate the relationship between leader behaviours and employee engagement.

Relations-oriented behaviours are expected to substantially and positively correlate with employee engagement in virtual, hybrid, and regular work environments. On the other hand, task—and change-oriented behaviours are expected to have weak positive correlations with employee engagement in all three work contexts.

Yukl et al.(2019) indicate that further research is required on the component behaviours within the meta-categories of leadership behaviours. This study

considers this call and evaluates which specific behaviours will significantly impact employee engagement. Empowering behaviour is expected to be the specific behaviour that shows the highest significant positive correlation to employee engagement due to its contribution to the human need to experience autonomy and feel valuable (Bailey et al., 2019; Laaser & Bolton, 2022; Meng & Berger, 2019).

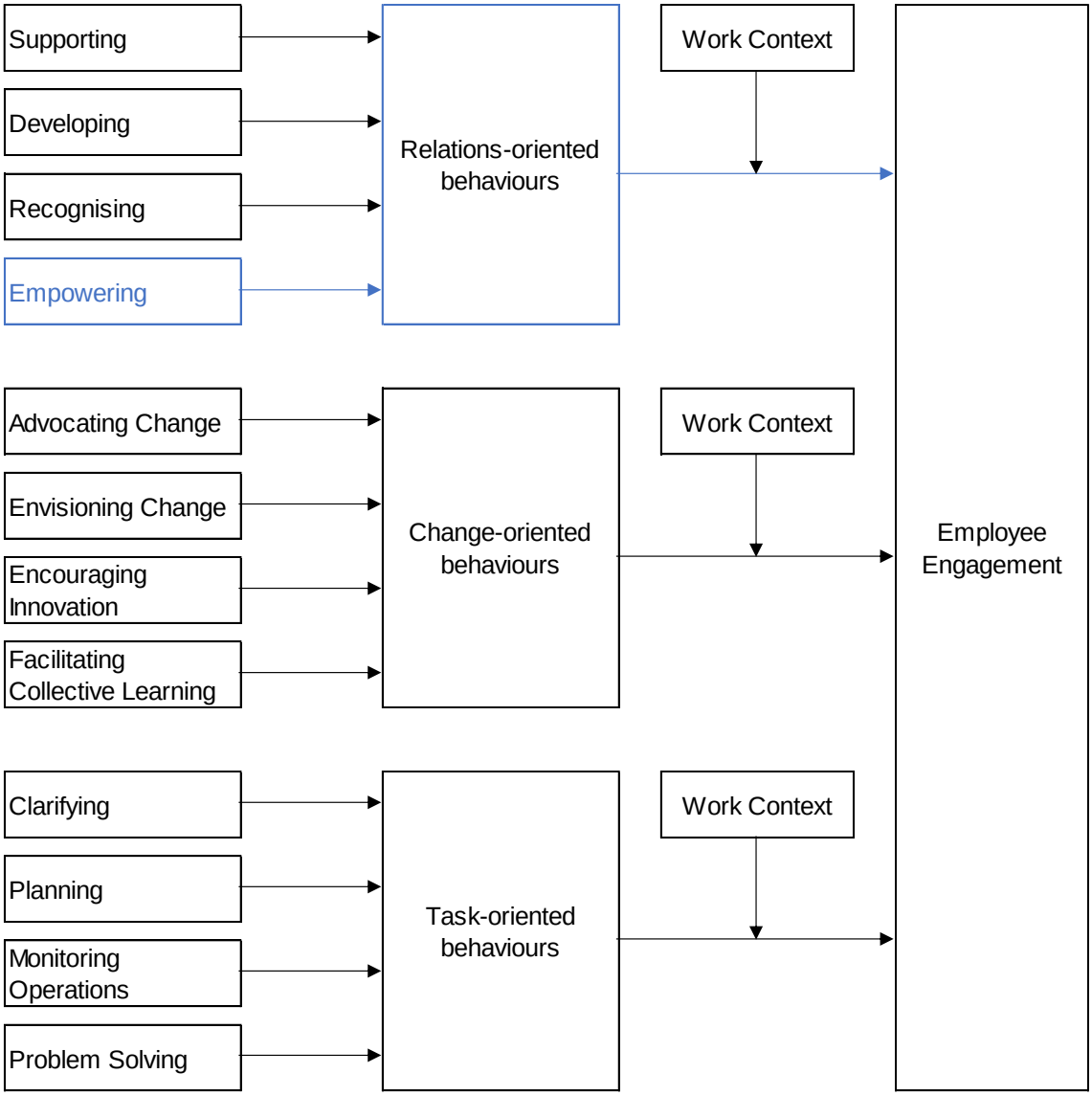

Figure 1 - Relationship between Leadership Behaviour Meta categories and Employee Engagement

3 HYPOTHESES

3.1 Research Questions and Hypotheses

3.1.1 Research Question 1:

What component behaviours have the highest correlation to employee engagement?

3.1.1.1 Hypothesis 1:

Of the four relations-oriented behaviours, empowering behaviour has the most substantial relationship to employee engagement in virtual, hybrid, and regular work environments.

3.1.2 Research Question 2:

Which leadership behaviours have presented higher levels of employee engagement within virtual, hybrid, and regular working environments?

3.1.2.1 Hypothesis 2a:

Relations-oriented behaviours correlate positively with employee engagement in virtual, hybrid, and regular work environments.

3.1.2.2 Hypothesis 2b:

Task-oriented behaviours have the weakest correlation to employee engagement in virtual, hybrid, and regular work environments.

3.1.3 Research Question 3:

Do leadership behaviours have a different correlation towards employee engagement in different work contexts?

3.1.3.1 Hypothesis 3:

The work context moderates the strength of the relationship between leadership behaviours and employee engagement.

4 RESEARCH METHODOLOGY

4.1 Introduction

The hypotheses identified in Chapter 3 were tested using the Research methodology outlined in this Chapter. These hypotheses were developed after a review of the extensive literature and using Kahn's (1990) model as a foundation for understanding employee engagement.

4.2 Research Design

The study used a non-experimental, quantitative research design. The analysis used a stepwise multiple linear regression design to find relationships between variables within hypotheses 1, 2a, and 2b (Salimi, 2011).

Moderation analysis is commonly used in the social sciences, often in complex models such as the study by Meng and Berger (2019). The current study uses a more straightforward moderation analysis to test hypothesis 3.

4.3 Philosophy

The research used a positivist philosophy to objectively study the relationship between the variables in each hypothesis. The positivist philosophy was chosen because it aligned with the research design, which was correlational and quantitative (Saunders & Lewis, 2018).

4.4 Approach Selected

The approach is deductive. This research focused on a study of the literature to develop hypotheses related to the topic and with variables that could be assessed against a hypothesised relationship. The research methodology and methods were structured to create conclusions from this hypothesis through scientific study (Saunders & Lewis, 2018).

4.5 Methodological Choices

The deductive approach with the positivist philosophy was ideal for quantitative research to test hypotheses developed from a literature review (Saunders & Lewis, 2018).

4.6 Strategy

This correlational study focused on measuring the relationship between the different variables in the study (Saunders & Lewis, 2018). Employee engagement was a standard dependent variable in each of the hypotheses and was measured against a different independent variable in each case. Hypothesis 1 used the specific behaviours from the relations-oriented meta-category as independent variables: supporting, developing, recognising, and empowering. The independent variables for hypotheses 2a and 2b were the relations-, task-, and change-oriented leader behaviours. Hypothesis 3 used the PROCESS 4.2 macro for IBM SPSS to conduct a moderation analysis. The dependent variable was employee engagement, while the moderating variable was the measurement item that captured the respondents' average number of days working in the traditional office environment. Three instances of the moderation analysis were conducted, once each for relations-, task-, and change-oriented leader behaviours.

4.7 Time Horizon

The research was cross-sectional and conducted at a specific point in time. The participants provided feedback on their perceptions of their leader's behaviours and the participant's levels of Engagement as perceived at the time of completing the survey (Saunders & Lewis, 2018). This approach is suitable to test correlations between variables of interest but cannot be used to demonstrate changes related to the variables over time.

4.8 Population

The population for this research involved employees in virtual, hybrid, and regular workspaces. Virtual and hybrid workers could perform their tasks from traditional offices but use technology to facilitate their work at a more convenient location for a portion of their work week.

The population was limited to South Africa to estimate the population size and obtain participants. The study needed to differentiate between respondents from virtual, hybrid, and regular work contexts. For this study, virtual workers were defined as those who worked from a traditional office environment at most four times a month on average. Respondents with more than 14 office days per month were considered in the category of regular. The remaining respondents ranged from 5 – 14 office days each month and were considered Hybrid.

4.9 Unit of Analysis

The unit of analysis for this study was the individual employee. In instances where organisational outcomes or team outcomes are measured, a different unit of analysis is recommended, whilst personality or motivation are more appropriately measured at the individual level (Kalwani & Mahesh, 2020).

4.10 Sampling Method and Size

The extent to which virtual and hybrid work is utilised in South Africa and globally constantly changes. Whilst literature demonstrates that hybrid and virtual work prevalence is consistently increasing, our current context includes the impact of the COVID-19 pandemic. Many organisations were forced to implement virtual and hybrid work policies at the pandemic's peak. The current situation is a mix of organisations moving back to regular office work on a full-time basis, whilst some businesses who had already done this are making a fresh attempt to benefit from hybrid work arrangements. This constant change made it difficult to estimate the proportions of the country's employed population who worked in each context.

Without a clear indication of the distribution of South Africa's working population across the virtual, hybrid, and regular modes of work, it was best to use a non-probability sampling technique (Saunders & Lewis, 2018). Further, this study focused on virtual, hybrid, and regular workers; the sample of concern was the virtual and hybrid workers. From this perspective, snowball and self-selection sampling were used, focusing more on targeting virtual and hybrid workers.

A similar research conducted at a petrochemical laboratory attracted 169 respondents (Van Schalkwyk et al., 2010). A different global survey of working arrangements by Aksoy et al. (2023) surveyed workers from virtual, hybrid, and regular office environments. That study attracted 1065 respondents from South Africa, substantially more than the current study. However, considering the use of a professional survey firm in that study, the 232 original respondents obtained for the current study can be considered substantial.

4.11 Measurement Instrument

Surveys were issued to potential respondents via a link shared over multiple platforms. The measurement instrument was set up in Microsoft Forms and was distributed to potential respondents using Microsoft Teams, email, WhatsApp, and

LinkedIn. The demographic questions were a mixture of multiple choice and free text responses, whilst the items related to the study variables used Likert scale responses.

Section 1 of the instrument collected six demographic responses that allowed the relevance of the respondents to this study to be checked. Section 2 of the instrument had three items to test the attention of the respondent and a further 59 items related to the variables in the study. Of the 59 items, 17 that measured employee engagement were taken from the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2004). The remaining 42 items catered to the 12 specific behaviours related to relations-, change-, and task-oriented leader behaviours and were developed from the definitions of each behaviour provided by Yukl (2012).

Fifty-eight items related to employee engagement and leadership behaviours were measured on a Likert scale ranging from zero (never) to six (always). The question 'How much emphasis does your manager place on explaining objectives, priorities, and deadlines?' was the only item measured on a Likert scale that ranged from one (extremely low) to five (extremely high). The survey measurement items are included in 'Appendix 1 –Survey Questions'. Table 33 shows the Demographic questions. Table 34 shows questions for relations-oriented behaviours. Table 36 shows questions for change-oriented behaviours. Table 37 shows questions for task-oriented behaviours. Table 35 shows the questions related to employee engagement, including 17 items from the UWES (Schaufeli & Bakker, 2004) and 3 author-defined items.

4.11.1 Employee Engagement

The Utrecht Work Engagement Scale (UWES) developed by Schaufeli and Bakker (2004) was used to measure engagement. The scale comprised questions on vigour, dedication, and absorption as subcomponents of employee work engagement. However, these were combined for analysis purposes, considering the hypotheses in this study only required a combined measure of employee engagement. Although this scale was developed specifically to measure work engagement, the test items are suitable for measuring employee engagement and have been used for this purpose in many studies cited in the review by Kwon and Kim (2020).

4.11.2 Leadership Behaviours

A review of the literature provided numerous perspectives on conceptualising leader behaviours. The work by Yukl (2012) has received some criticism in recent years. However, it remains a valuable and detailed resource for the taxonomy of leader behaviours and its detailed definitions for both the meta-categories of leadership behaviours and the component behaviours. This detailed work guided the survey questions developed to measure the prevalence of various leadership behaviours. The final questionnaire comprised between 2 and 4 questions per component behaviour, all derived from the definitions of the component behaviours presented by Yukl (2012).

4.11.3 Pilot Testing of the Measurement Instrument

Pilot testing of the questionnaire was necessary so that any errors were identified with a select group of participants before publishing the survey, thereby minimising the risk of detecting deficiencies in the questionnaire at a later stage (Saunders & Lewis, 2018). Pilot testing was conducted between 27 November 2023 and 4 December 2023. Seven of the ten issued surveys were completed, and feedback was obtained during this period. The work mode for these responses was changed from ‘Virtual’ to the code ‘PTR’, which allowed the data to be retained within the dataset and easily excluded from further analysis.

The first edit required after pilot testing involved correcting inconsistent formatting, which made some questions challenging to read. The second change was a recommendation to randomise the sequence of the questions more broadly to avoid respondents selecting a value based on their perception of a leader's behaviour, for example (Stantcheva, 2023). The demographic questions were retained at the beginning of the survey, whilst the sequence of all remaining questions was randomised. The final edit included three attention-checking items, which instructed the respondent to select a specific option. This recommendation was due to the length of the questionnaire and is discussed further as part of the quality controls.

4.12 Data Gathering Process

Data was collected using anonymous surveys broadly distributed through social and professional networks. Survey links were circulated to the potential participants via Microsoft Teams, email, WhatsApp, and LinkedIn. The collection method introduced the risk of attracting responses from candidates that might not fit the study criteria.

This was managed through demographic questions that captured details such as whether the respondents resided in South Africa and their work mode.

4.13 Analysis Approach

IBM SPSS was used to conduct a statistical analysis of the collected data. Stepwise multiple linear regression was utilised for hypotheses 1, 2a, and 2b. This method is selected for its ability to identify the most predictive independent variables in the first iteration of the regression analysis before adding further independent variables into the model (Salimi, 2011). The work mode was used as a selection variable to test the relationships separately for each mode of work in the study.

Hypothesis 3 was tested using PROCESS v4.2 macro for IBM SPSS. In addition to collecting data on the respondents' work mode, the survey also asked: ‘On average, how many days per month do you work from a traditional office environment?’. The responses were standardised to a scale ranging from zero to six to match the scale used for the other survey questions before it was used as a moderating variable. The analysis was conducted separately for relations-, change-, and task-oriented behaviours as independent variables, with employee engagement as the dependent variable in each instance.

4.13.1 Validity and Reliability Testing

The construct validity of the sample was tested with a bivariate correlation of the item total scores for a measurement scale to each item in that measurement scale. The items with a significant correlation to the item total score were accepted as part of the scale (Øygarden et al., 2020).

Reliability was used by calculating Cronbach’s alpha to determine the internal consistency of the different measurement scales (Kalkbrenner, 2023).

4.13.2 Data Transformations

The raw data was downloaded from Microsoft Forms and stored in a Microsoft Excel file, where initial data review and cleansing were managed before transferring the data into IBM SPSS for further transformation and analysis. Data transformation was required to prepare the data for statistical analysis. The information presented in this section shows the process followed whilst working with the data, including details of the coding used for computed variables in the following report sections.

4.13.2.1 Column Headings

The column headings were replaced to facilitate easy sorting for the data processing. The first two digits of each heading were an alphabet followed by a number to facilitate data sorting. This sequence code was followed by a code of two or three letters describing the data category in each column. The key to these codes is shown in Table 2 below and facilitated the ease of working with the data when calculating means for the various research items. The remainder of the column title comprised the research question, which allowed the coding to be checked and validated easily to ensure no errors were introduced whilst transforming the data.

Table 2 - Coding for column headings

Column prefix	Description
Def	Default survey platform questions
Dem	Demographic
EV	Employee work engagement – Vigour
ED	Employee work engagement – Dedication
EA	Employee work engagement – Absorption
EE	Employee Engagement
RS	Relations-oriented Behaviour – Supporting
RD	Relations-oriented Behaviour – Developing
RR	Relations-oriented Behaviour – Recognising
RE	Relations-oriented Behaviour – Empowering
CA	Change-oriented Behaviour – Advocating change
CNV	Change-oriented Behaviour – Envisioning change
CNC	Change-oriented Behaviour – Encouraging innovation
CF	Change-oriented Behaviour – Facilitating collective learning
TP	Task-oriented Behaviour – Planning
TC	Task-oriented Behaviour – Clarifying
TM	Task-oriented Behaviour – Monitoring
TPS	Task-oriented Behaviour – Problem solving
Focus	Exclude – used to maintain/regain respondent attention

4.13.2.2 Days at the office

The survey used a free text field for responses to the question: ‘On average, how many days per month do you work from a traditional office environment?’. Most responses were numerical values as expected, but the data also included text such as ‘None’, ’20 days’, and ‘4 times a month’. This data was processed manually in Excel to ensure that all rows showed a numerical value.

The first step was removing duplicates to arrive at a set of unique strings considerably fewer than the complete data set. Next, an appropriate numerical value was allocated to each unique string value from the survey results. The ‘VLOOKUP’ function in Excel was used to create a new column containing the correct numerical value for the number of days each respondent spent at the office per month by comparing the survey response to the manually generated lookup range. As a final step, the values from the actual number of days were converted to a scale which ranged from zero to six, matching the Likert scale results for the other response items.

4.13.2.3 Alignment of Measurement Scales

Three of the research questions required changes to the reported values to align with the remaining data suitably for statistical analysis.

The measurement item ‘My manager tries to ignore signs of a serious problem for as long as possible’ relating to the leader's Problem Solving behaviour is worded such that a higher rating will indicate a lesser extent of this behaviour. The inverse was true for the other two items that measured Problem Solving behaviour. The responses to the question had to be reverse-coded while preparing the data for analysis.

The second question requiring editing measured Clarifying as a component behaviour in the task-oriented meta-category of leadership behaviours. The measurement item ‘How much emphasis does your manager place on explaining objectives, priorities, and deadlines?’ was measured on a 5-point Likert scale that was better suited to the wording of this question. The responses were adjusted to align with the other measurement items on a 7-point Likert scale.

The third column was changed to reduce the number of characters and to make the data more straightforward to work with from a visual perspective. A demographic question was used to determine whether a respondent worked in a virtual, hybrid, or regular work environment. The options that the respondent could select were extended phrases, including a description of the work environment, e.g. 'Virtual/Remote Work Environment (<5 office days per month)'. The phrase was crucial in the survey to ensure respondents were clear on the definitions used in this study for each work mode; however, the terms virtual, hybrid, or regular replaced these during analysis and were sufficient.

4.13.2.4 Calculated Values

The final step of data transformation involved calculating mean values for each construct and subconstruct in the study. These variables were created using the Compute Variable function in SPSS, with column headings being coded as per Table 3 and the input measurements for calculating mean scores being selected according to the coding shown in Table 2.

Table 3 - Codes and Descriptions for Construct and sub–Construct Mean Scores

Code	Description
cEE_Mn	Employee Engagement
cRO_Mn	Relations-oriented Behaviours
sRS_Mn	Relations-oriented Behaviour – Supporting
sRD_Mn	Relations-oriented Behaviour – Developing
sRR_Mn	Relations-oriented Behaviour – Recognising
sRE_Mn	Relations-oriented Behaviour – Empowering
cCO_Mn	Change-oriented Behaviours
sCA_Mn	Change-oriented Behaviour – Advocating change
sCNV_Mn	Change-oriented Behaviour – Envisioning change
sCNC_Mn	Change-oriented Behaviour – Encouraging innovation
sCF_Mn	Change-oriented Behaviour – Facilitating collective learning
cTO_Mn	Task-oriented Behaviours
sTP_Mn	Task-oriented Behaviour – Planning
sTC_Mn	Task-oriented Behaviour – Clarifying
sTM_Mn	Task-oriented Behaviour – Monitoring
sTPS_Mn	Task-oriented Behaviour – Problem solving

Validity testing required a column with the Item Total Score (ITS) for the measurement items that constituted the scale for each construct and subconstruct in the study. The names for the columns were created with the term 'ITS' followed by an underscore and then the code from Table 2 which related to the specific measurement scale. The value in this column was the sum of the individual item scores per respondent for all the related columns based on the coding convention. For example, ITS for empowering behaviour was the sum of the scores for the four measurement items with RR in the column name.

4.13.3 Excluded Measurement Items

Four measurement items related to task-oriented behaviour represented negative forms of task-oriented behaviour. Although these questions were based on relevant literature (Yukl, 2012), they had to be excluded to maintain the integrity of the data in terms of task-oriented behaviours since reverse coding would not be appropriate

in this instance. The negative form of Planning behaviour removed was ‘My manager makes plans that are superficial or unrealistic’. The negative form of Monitoring behaviour removed was ‘My manager is intrusive and excessively focused on monitoring the status of work that has been allocated to me’. The two items measuring negative forms of Clarifying behaviour were ‘My manager sets vague or easy goals’ and ‘My manager gives instructions that are excessively detailed and that make me feel micromanaged’, and these were also removed.

The measurement instrument contained three author-defined measurement items for measuring employee engagement. After closer review, these were found to overlap with the items already sourced from the UWES. Considering this overlap and that the UWES is commonly utilised to measure employee engagement, these items were excluded from all analyses (Kwon & Kim, 2020).

The first seven rows of data were from respondents who agreed to be part of a pre-test and to provide feedback. Three changes were made to the survey after the pre-test. Although the primary measurement items for the survey had not been adjusted, the responses from the pretest were excluded since these respondents could identify the categories to which each question belonged. The data was initially retained but coded as ‘PTR’ in the column representing the respondent’s work mode to allow easy exclusion during analysis in IBM SPSS.

Five of the respondents indicated that they were from outside of South Africa. These records were removed from the data sample, considering that these records comprised less than 2,5% of the dataset, whilst the remaining data was exclusively from South Africa, approximately 97,5%.

A further 12 records were removed from the dataset for quality reasons. These respondents had responded incorrectly on at least two out of three measurement items included to test the respondent's level of attention to the questions. The mechanism used is discussed further in the section 4.14 – Quality Controls.

4.14 Quality Controls

The survey instrument was constructed to include sufficient demographic and work-related data to allow any responses from respondents who did not meet the population criteria to be excluded from the analysis. A critical research element was distinguishing between virtual, hybrid, and regular workspaces. Respondents were

asked about their current work mode and had to choose from three options, including descriptions. The virtual option was described as ‘Virtual/Remote Work Environment (<5 office days per month)’, the hybrid option was described as ‘Hybrid Work (5-13 office days per month)’, and the regular option was described as ‘Regular / Collocated work environment (>14 office days per month)’.

Behrendt et al. (2017) identify risks in past assessment processes as the assessments were based on the followers' perceptions of leadership behaviours but could not be guaranteed to reflect the leaders' behaviour accurately. This risk is mitigated by using more objective measurements in the survey instrument for assessing leadership behaviour. The survey questions were also randomised to minimise the effects of response bias (Stantcheva, 2023).

Although the introduction to the survey was explicit concerning the topics of interest, the questions were randomised to minimise the likelihood of respondents associating questions with specific categories being measured. This approach was taken to limit the occurrence of respondents providing ratings based on their perceptions of the overall leader behaviours. Other measures included questions that measured the negative implementation of some leader behaviours and introduced a reversed scale application.

The survey length introduced a risk of respondents losing interest and not giving sufficient attention to the questions and statements they were responding to. This risk was managed with a recommendation from Zickar and Keith (2023) to add attention-check items at strategic points across the survey instrument. These items took the form of an instruction to the respondent: Survey item 12 stated ‘Please select “Always”’, Survey item 36 stated ‘Please select “Very Often”’, and Survey item 55 stated ‘Please select “Never”’. The term ‘Focus’ was used in the column headings for these items during coding to facilitate easy identification for analysis. Respondents who selected the incorrect response on more than one of these questions were excluded from the analysis.

Another recommendation to ensure data quality is open-ended questions to test coherence and quality (Zickar & Keith, 2023). This survey instrument included a question asking how many years of work experience the respondent had and another asking how many years the respondent had worked in their current work mode, i.e. virtual, hybrid, or regular. The first indicator was that all values provided were within

the typical range of years a person would be employed. The responses to the first question ranged from 2 – 43, considered acceptable. Of concern were two respondents who reported working for longer in their current work mode than their total amount of work experience. However, both respondents responded correctly to the attention-testing questions, so their respondent IDs were only noted so they could be checked during outlier analysis.

5 FINDINGS

5.1 Introduction

This chapter presents the findings from the research described in Chapter 4. First is a summary of the collected data sample and what was retained for analysis. Next, the construct validity results are presented, covering each construct and each component leader behaviour relevant to the study. The results of reliability testing for each set of measurement items follow this. Finally, the Stepwise Regression and Moderation results for the different hypotheses are presented.

5.2 Sample descriptive statistics

The survey attracted 232 responses, of which 24 were excluded. Seven of these were the responses received as part of pilot testing. Five more responses came from people who were not based in South Africa. The final 12 responses were removed as these failed the attention test described in section 4.14 – Quality Controls, leaving 208 responses suitable for analysis in this study. Figure 2 shows the number of samples and reasons for exclusion graphically.

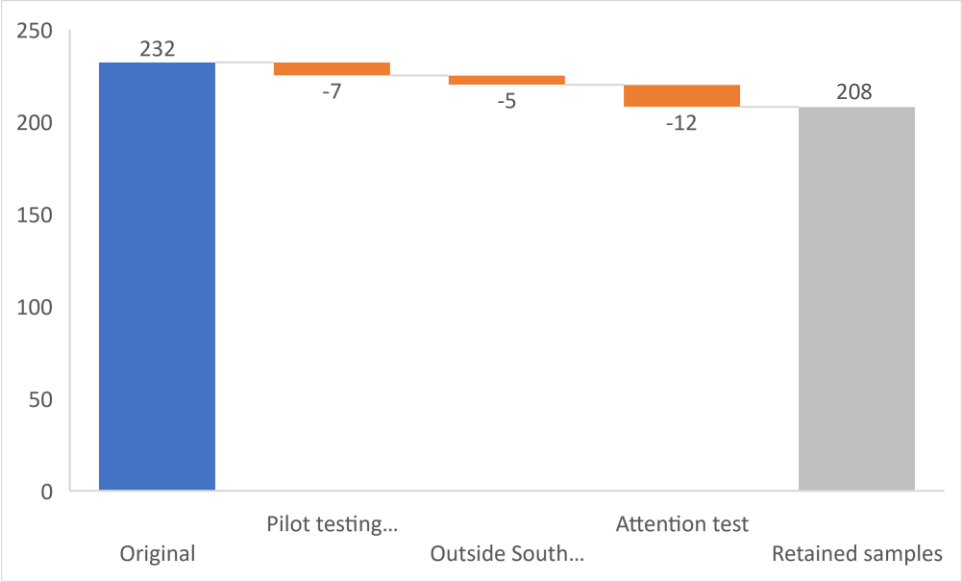

Figure 2 - Original and retained responses

Figure 3 shows the distribution of the retained samples across the three work contexts at 61, 76, and 71 respondents for virtual, hybrid, and regular work contexts, respectively. Having excluded the five samples from respondents outside South Africa, this can be considered a South African data set. However, it is heavily

weighted towards the Gauteng province, with 84% of the sample coming from people who reside in Gauteng.

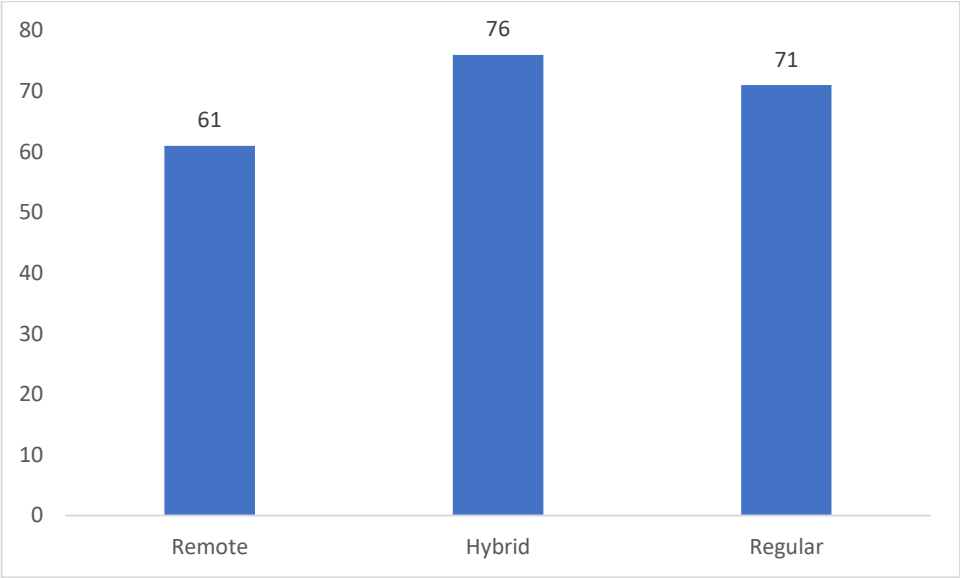

Figure 3 - Sample distribution across Virtual, Hybrid, and Regular work contexts

5.3 Validity of the data

This study focuses on three meta-categories of leadership behaviour and employee engagement. Employee engagement is only of interest as a complete construct in all the hypotheses, and validity will only be reported from this perspective. Leadership behaviours are of interest from the perspective of the meta-categories of leadership behaviour and the specific behaviours associated with each meta-category. Accordingly, the construct validity of the measurement instrument used in the current study is reported for employee engagement, each meta-category of leadership behaviour, and each specific behaviour (Øygarden et al., 2020; Yukl et al., 2019).

The results of the bivariate correlation between the test items for employee engagement and the item total scores are shown in Table 4. All items show significant correlations at the 0.01 level.

The results of the bivariate correlation between the test items in each meta-category of leadership behaviour and the item total scores are shown in Table 5, Table 6, and Table 7. All items show significant correlations at the 0.01 level.

The results of the bivariate correlation between the test items in each specific leadership behaviour and the item total scores are listed below from Table 8 to Table 19. All items show significant correlations at the 0.01 level.

Table 4 - Bivariate analysis results for construct validity of Employee Engagement

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. ITS_EE	-																	
2. b4_EV	0,68**	-																
3. b5_EV	0,68**	0,54**	-															
4. b6_EV	0,48**	0,5**	0,42**	-														
5. b7_EV	0,64**	0,32**	0,43**	0,26**	-													
6. b8_EV	0,53**	0,24**	0,42**	0,2**	0,39**	-												
7. b9_EV	0,49**	0,24**	0,36**	0,27**	0,3**	0,42**	-											
8. c1_ED	0,79**	0,6**	0,59**	0,3**	0,41**	0,4**	0,38**	-										
9. c2_ED	0,79**	0,63**	0,7**	0,47**	0,44**	0,41**	0,41**	0,7**	-									
10. c3_ED	0,82**	0,62**	0,56**	0,41**	0,45**	0,38**	0,33**	0,76**	0,75**	-								
11. c4_ED	0,68**	0,45**	0,55**	0,36**	0,39**	0,32**	0,42**	0,6**	0,64**	0,59**	-							
12. c5_ED	0,47**	0,2**	0,15*	0,06	0,21**	0,16*	0,161*	0,31**	0,26**	0,36**	0,28**	-						
13. c6_EA	0,64**	0,37**	0,31**	0,23**	0,34**	0,29**	0,25**	0,44**	0,37**	0,48**	0,37**	0,22**	-					
14. c7_EA	0,6**	0,26**	0,26**	0,162*	0,34**	0,26**	0,15*	0,38**	0,34**	0,41**	0,31**	0,24**	0,52**	-				
15. c8_EA	0,55**	0,37**	0,38**	0,22**	0,42**	0,28**	0,26**	0,35**	0,39**	0,4**	0,41**	0,14*	0,35**	0,24**	-			
16. c9_EA	0,64**	0,34**	0,38**	0,177*	0,44**	0,35**	0,31**	0,52**	0,42**	0,5**	0,37**	0,34**	0,41**	0,36**	0,21**	-		
17. d1_EA	0,51**	0,26**	0,11	0,04	0,31**	0,12	0,11	0,23**	0,22**	0,36**	0,17*	0,41**	0,38**	0,52**	0,19**	0,32**	-	
18. d2_EA	0,51**	0,19**	0,19**	0,04	0,34**	0,160*	0,11	0,33**	0,23**	0,31**	0,16*	0,31**	0,34**	0,39**	0,22**	0,34**	0,43**	-

** p < 0.01 (2-tailed)

* p < 0.05 (2-tailed)

Table 5 - Bivariate analysis results for construct validity of Relations-oriented Behaviours

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. ITS_RO	232	50,58	14,24	-												
2. d6_RS	232	3,76	1,79	0,8**	-											
3. d7_RS	232	4,51	1,46	0,75**	0,59**	-										
4. d8_RS	232	4,58	1,45	0,75**	0,55**	0,58**	-									
5. d9_RD	232	3,22	1,95	0,81**	0,68**	0,57**	0,52**	-								
6. e1_RD	232	4,24	1,52	0,78**	0,58**	0,44**	0,68**	0,62**	-							
7. e2_RD	232	3,66	1,8	0,73**	0,62**	0,41**	0,44**	0,73**	0,54**	-						
8. e3_RR	232	4,25	1,52	0,8**	0,56**	0,5**	0,59**	0,56**	0,63**	0,54**	-					
9. e4_RR	232	4,37	1,61	0,78**	0,62**	0,6**	0,61**	0,59**	0,53**	0,49**	0,64**	-				
10. e5_RE	232	4,49	1,48	0,82**	0,59**	0,54**	0,59**	0,57**	0,67**	0,54**	0,65**	0,56**	-			
11. e6_RE	232	4,13	1,51	0,85**	0,59**	0,6**	0,58**	0,63**	0,66**	0,58**	0,67**	0,58**	0,81**	-		
12. e7_RE	232	4,71	1,33	0,62**	0,37**	0,54**	0,39**	0,35**	0,41**	0,3**	0,54**	0,45**	0,51**	0,57**	-	
13. e8_RE	232	4,67	1,43	0,53**	0,36**	0,49**	0,29**	0,31**	0,23**	0,24**	0,38**	0,35**	0,44**	0,43**	0,37**	-

**p < .01 (2-tailed)

Table 6 - Bivariate analysis results for construct validity of Change-oriented Behaviours

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. ITS_CO	232	48,06	14,93	-												
2. e9_CA	232	4,08	1,5	0,83**	-											
3. f1_CA	232	3,97	1,38	0,73**	0,74**	-										
4. f2_CA	232	3,92	1,55	0,84**	0,71**	0,66**	-									
5. f3_CNV	232	4,06	1,54	0,85**	0,68**	0,58**	0,69**	-								
6. f4_CNV	232	2,96	1,81	0,49**	0,35**	0,31**	0,37**	0,33**	-							
7. f5_CNC	232	4,12	1,67	0,81**	0,6**	0,51**	0,61**	0,61**	0,3**	-						
8. f6_CNC	232	4,44	1,57	0,88**	0,71**	0,6**	0,67**	0,67**	0,34**	0,78**	-					
9. f7_CNC	232	4,39	1,52	0,86**	0,67**	0,56**	0,68**	0,68**	0,34**	0,72**	0,83**	-				
10. f8_CF	232	3,4	1,65	0,75**	0,56**	0,51**	0,66**	0,61**	0,3**	0,54**	0,61**	0,61**	-			
11. f9_CF	232	4,12	1,63	0,86**	0,65**	0,55**	0,67**	0,78**	0,29**	0,66**	0,75**	0,7**	0,6**	-		
12. g1_CF	232	4,44	1,51	0,85**	0,66**	0,54**	0,65**	0,67**	0,3**	0,71**	0,8**	0,76**	0,6**	0,72**	-	
13. g2_CF	232	4,16	1,6	0,8**	0,6**	0,5**	0,63**	0,75**	0,29**	0,6**	0,63**	0,63**	0,55**	0,78**	0,66**	-

**p < .01. (2-tailed)

Table 7 - Bivariate analysis results for construct validity of Task-oriented Behaviours

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. ITS_TO	232	41,38	10,62	-											
2. g3_TP	232	2,81	1,76	0,56**	-										
3. g4_TP	232	3,19	1,68	0,72**	0,55**	-									
4. g6_TC	232	3,63	1,58	0,67**	0,36**	0,47**	-								
5. g7_TC	232	3,56	1,54	0,61**	0,21**	0,32**	0,38**	-							
6. h1_TM	232	3,77	1,54	0,35**	0,4**	0,21**	0,21**	0,22**	-						
7. h2_TM	232	4,21	1,53	0,66**	0,23**	0,35**	0,34**	0,36**	0,178*	-					
8. h3_TM	232	3,75	1,57	0,51**	0,24**	0,39**	0,36**	0,24**	0,25**	0,21**	-				
9. h5_TPS	232	3,82	1,54	0,68**	0,22**	0,43**	0,33**	0,4**	0,0426	0,42**	0,23**	-			
10. h6_TPS	232	4,23	1,7	0,59**	0,0681	0,32**	0,31**	0,33**	-0,152	0,4**	0,147	0,43**	-		
11. h7_TPS	232	4,25	1,53	0,64**	0,17**	0,33**	0,29**	0,28**	068	0,46**	0,17**	0,52**	0,49**	-	
12. h8_TPS	232	4,17	1,43	0,74**	0,18**	0,41**	0,41**	0,42**	035	0,53**	0,26**	0,58**	0,59**	0,66**	-

**p < .01. (2-tailed)

Table 8 - Bivariate analysis results for construct validity of Supporting Behaviour

Variable	N	M	SD	1	2	3	4
1. ITS_RS	232	12,85	3,97	-			
2. d6_RS	232	3,76	1,79	0,87**	-		
3. d7_RS	232	4,51	1,46	0,84**	0,59**	-	
4. d8_RS	232	4,58	1,45	0,83**	0,55**	0,58**	-

**p < .01. (2-tailed)

Table 9 - Bivariate analysis results for construct validity of Developing Behaviour

Variable	N	M	SD	1	2	3	4
1. ITS_RD	232	11,12	4,59	-			
2. d9_RD	232	3,22	1,95	0,91**	-		
3. e1_RD	232	4,24	1,52	0,81**	0,62**	-	
4. e2_RD	232	3,66	1,8	0,88**	0,73**	0,54**	-

**p < .01. (2-tailed)

Table 10 - Bivariate analysis results for construct validity of Recognising Behaviour

Variable	N	M	SD	1	2	3
1. ITS_RR	232	8,62	2,84	-		
2. e3_RR	232	4,25	1,52	0,9**	-	
3. e4_RR	232	4,37	1,61	0,91**	0,64**	-

**p < .01. (2-tailed)

Table 11 - Bivariate analysis results for construct validity of Empowering Behaviour

Variable	N	M	SD	1	2	3	4	5
1. ITS_RE	232	18	4,62	-				
2. e5_RE	232	4,49	1,48	0,87**	-			
3. e6_RE	232	4,13	1,51	0,89**	0,81**	-		
4. e7_RE	232	4,71	1,33	0,75**	0,51**	0,57**	-	
5. e8_RE	232	4,67	1,43	0,7**	0,44**	0,43**	0,37**	-

**p < .01. (2-tailed)

Table 12 - Bivariate analysis results for construct validity of Planning Behaviour

Variable	N	M	SD	1	2	3
1. ITS_TP	232	6	3,02	-		
2. g3_TP	232	2,81	1,76	0,89**	-	
3. g4_TP	232	3,19	1,68	0,87**	0,55**	-

**p < .01. (2-tailed)

Table 13 - Bivariate analysis results for construct validity of Clarifying Behaviour

Variable	N	M	SD	1	2	3
1. ITS_TC	232	7,19	2,59	-		
2. g6_TC	232	3,63	1,58	0,84**	-	
3. g7_TC	232	3,56	1,54	0,83**	0,38**	-

**p < .01. (2-tailed)

Table 14 - Bivariate analysis results for construct validity of Monitoring Behaviour

Variable	N	M	SD	1	2	3	4
1. ITS_TM	232	11,72	3,19	-			
2. h1_TM	232	3,77	1,54	0,68**	-		
3. h2_TM	232	4,21	1,53	0,67**	0,178*	-	
4. h3_TM	232	3,75	1,57	0,71**	0,25**	0,21**	-

*p < .05. (2-tailed)

**p < .01. (2-tailed)

Table 15 - Bivariate analysis results for construct validity of Problem Solving Behaviour

Variable	N	M	SD	1	2	3	4	5
1. ITS_TPS	232	16,47	5,02	-				
2. h5_TPS	232	3,82	1,54	0,77**	-			
3. h6_TPS	232	4,23	1,7	0,79**	0,43**	-		
4. h7_TPS	232	4,25	1,53	0,82**	0,52**	0,49**	-	
5. h8_TPS	232	4,17	1,43	0,86**	0,58**	0,59**	0,66**	-

**p < .01. (2-tailed)

Table 16 - Bivariate analysis results for construct validity of Advocating Change Behaviour

Variable	N	M	SD	1	2	3	4
1. ITS_CA	232	11,97	3,96	-			
2. e9_CA	232	4,08	1,5	0,91**	-		
3. f1_CA	232	3,97	1,38	0,88**	0,74**	-	
4. f2_CA	232	3,92	1,55	0,89**	0,71**	0,66**	-

**p < .01. (2-tailed)

Table 17 - Bivariate analysis results for construct validity of Envisioning Change Behaviour

Variable	N	M	SD	1	2	3	4
1. ITS_CNV	232	7,02	2,73	-			
2. f3_CNV	232	4,06	1,54	0,78**	-		
3. f4_CNV	232	2,96	1,81	0,85**	0,33**	-	

**p < .01. (2-tailed)

Table 18 - Bivariate analysis results for construct validity of Encouraging Innovation Behaviour

Variable	N	M	SD	1	2	3	4
1. ITS_CNC	232	12,95	4,38	-			
2. f5_CNC	232	4,12	1,67	0,91**	-		
3. f6_CNC	232	4,44	1,57	0,94**	0,78**	-	
4. f7_CNC	232	4,39	1,52	0,92**	0,72**	0,83**	-

**p < .01. (2-tailed)

Table 19 - Bivariate analysis results for construct validity of Facilitating Collective Learning

Variable	N	M	SD	1	2	3	4	5
1. ITS_CF	232	16,12	5,48	-				
2. f8_CF	232	3,4	1,65	0,81**	-			
3. f9_CF	232	4,12	1,63	0,9**	0,6**	-		
4. g1_CF	232	4,44	1,51	0,86**	0,6**	0,72**	-	
5. g2_CF	232	4,16	1,6	0,87**	0,55**	0,78**	0,66**	-

**p < .01. (2-tailed)

5.4 Reliability of the data

5.4.1 Reliability using Cronbach's Alpha

The measurement instrument has been tested for internal consistency by evaluating Cronbach's Alpha for the constructs and sub-constructs analysed in this study. The Reliability of each item and the meta-categories is considered against the recommendations provided by Kalkbrenner (2023). The results are presented in Table 20 below.

Employee engagement is measured on a scale consisting of 17 items and has an alpha of 0.89, indicating good internal consistency. The three meta-categories of leadership behaviours, relations-, change-, and task-oriented behaviours, have alpha values of 0.93, 0.94, and 0.83, respectively and have good internal consistency. The scales for relations- and change-oriented behaviours consisted of 12 items each, whilst the scale for task-oriented behaviours consisted of 11 items.

The scales for the 12 individual component behaviours within each meta-category of leadership behaviours consist of between two and four items. While the scales for most component behaviours show good internal consistency, three specific behaviours have Cronbach's alpha readings below 0.7, which is of concern. Supporting, developing, recognising, and empowering, all four component behaviours from the Relations-oriented meta-category, have scales with good internal consistency. Similarly, planning and problem solving from the task-oriented category of behaviours and advocating change, encouraging innovation, and facilitating collective learning from the change-oriented behaviours meta-category also have scales with good internal consistency.

The three component behaviours whose scales have Cronbach's alpha values less than 0.7 are the behaviours clarifying and monitoring from the task-oriented meta-category and envisioning change from the change-oriented meta-category. These items can be retained as part of the overall analysis for the respective meta-categories of behaviour that they belong to but will not be considered as separate component behaviours.

Table 20 - Reliability Statistics and Item Correlations

		Correlations to Employee Engagement											
		Reliability		Virtual (61 records)			Hybrid (76 records)			Regular (71 records)			
Behaviours	Code	N	α	Mean	SD	Correlation	Mean	SD	Correlation	Mean	SD	Correlation	
Relations-oriented	cRO_Mn	12	0,93	4,46	1,07	0,47**	4,2	1,15	0,49**	3,96	1,33	0,57**	
Change-oriented	cCO_Mn	12	0,94	4,13	1,19	0,46**	4,06	1,13	0,41**	3,76	1,43	0,52**	
Task-oriented	cTO_Mn	11	0,83	3,79	0,92	0,22	3,83	0,92	0,33**	3,73	1,1	0,46**	
Supporting	sRS_Mn	3	0,80	4,56	1,25	0,48**	4,31	1,26	0,47**	3,94	1,5	0,48**	
Developing	sRD_Mn	3	0,83	3,96	1,47	0,31*	3,65	1,55	0,31**	3,5	1,6	0,44**	
Recognising	sRR_Mn	2	0,79	4,54	1,31	0,22	4,21	1,47	0,34**	4,17	1,53	0,54**	
Empowering	sRE_Mn	4	0,81	4,73	1,02	0,57**	4,51	1,08	0,57**	4,23	1,3	0,62**	
Planning	sTP_Mn	2	0,71	2,89	1,39	0	2,99	1,6	0,16	3,1	1,6	0,242*	
Clarifying	sTC_Mn	2	0,56	3,52	1,21	0,29*	3,55	1,23	0,25*	3,67	1,49	0,29*	
Monitoring	sTM_Mn	3	0,43	3,93	1,08	0,2	3,94	0,93	0,24*	3,91	1,2	0,4**	
Problem Solving	sTPS_Mn	4	0,82	4,20	1,20	0,28*	4,25	1,11	0,36**	3,9	1,44	0,47**	
Advocating Change	sCA_Mn	3	0,87	4,07	1,18	0,4**	4,02	1,23	0,34**	3,77	1,54	0,46**	
Envisioning Change	sCNV_Mn	2	0,51	3,52	1,42	0,4**	3,58	1,41	0,1	3,37	1,4	0,52**	
Encouraging Innovation	sCNC_Mn	3	0,91	4,49	1,48	0,41**	4,38	1,39	0,48**	3,99	1,57	0,51**	
Facilitation Collective Learning	sCF_Mn	4	0,88	4,23	1,28	0,43**	4,09	1,2	0,4**	3,77	1,6	0,48**	
Employee Engagement	cEE_Mn	17	0,89	4,35	0,86	1	4,22	0,68	1	4,2	0,82	1	

**p < .01 (2-tailed)

**p < .05 (2-tailed)

5.5 Hypothesis 1 Results

Hypothesis 1: Of the four relations-oriented behaviours, empowering behaviour has the most substantial relationship to employee engagement in virtual, hybrid, and regular work environments.

5.5.1 Regression Results

A stepwise multiple regression analysis was used to evaluate the relationship between employee engagement as a dependent variable and change-oriented behaviours, task-oriented behaviours, relations-oriented supporting behaviour, relations-oriented developing behaviour, relations-oriented recognising behaviour, and relations-oriented empowering behaviour as the independent variables. The regression analysis was repeated for each work context, and the results of the analyses are shown in Table 21, Table 22, and Table 23 for virtual, hybrid, and regular work contexts, respectively.

Consistent with hypothesis 1, empowering behaviour for the tested sample is shown to be the most substantial predictor of employee engagement in all three work contexts. The stepwise regression process has retained empowering behaviour as a significant predictor of employee engagement and excluded all other variables, finding that these had insignificant relationships to employee engagement within the model.

Table 21 - Stepwise regression - Virtual work context

Effect	Standardised Beta Coefficient	SE	95% CI		p
			LL	UL	
(Constant)		0,435	1,215	2,958	
RO - Empowering Behaviour	**0,569**	0,09	0,299	0,659	**0,000**

Table 22 - Stepwise regression - Hybrid work context

Effect	Standardised Beta Coefficient	SE	95% CI		p
			LL	UL	
(Constant)		0,279	2,032	3,145	
RO - Empowering Behaviour	**0,572**	0,060	0,242	0,482	**0,000**

Table 23 - Stepwise regression - Regular work context

Effect	Standardised Beta Coefficient	SE	95% CI		p
			LL	UL	
(Constant)		0,263	2,010	3,058	
RO - Empowering Behaviour	**0,624**	0,059	0,276	0,513	**0,000**

5.6 Hypothesis 2a Results

Hypothesis 2a: Relations-oriented behaviours correlate positively with employee engagement in virtual, hybrid, and regular work environments.

5.6.1 Multilinear Regression Results

A stepwise regression was conducted using SPSS to determine the effects of relations-, change-, and task-oriented behaviours on employee engagement. The analysis was conducted separately for the virtual, hybrid, and regular work contexts using the appropriate work mode to select each context.

Consistent with hypothesis 2a, relations-oriented behaviours are the most considerable predictor of employee engagement and are retained in the model for all three work contexts. The results of the stepwise regression are shown in Table 24, Table 25, and Table 26 respectively for virtual, hybrid, and regular work contexts. With standardised beta coefficient values of 0,471 for virtual, 0,487 for hybrid, and 0,574 for regular work contexts and $p<0,001$ in all three cases, relations-oriented behaviours are significantly positively correlated to employee engagement.

Table 24 - Stepwise regression - Virtual work context

Effect	Standardised Beta Coefficient	SE	95% CI		p
			LL	UL	
(Constant)		0,422	1,821	3,509	
Relations-oriented Behaviours	0,471	0,092	0,193	0,562	<0,001

Table 25 - Stepwise regression - Hybrid work context

Effect	Standardised Beta Coefficient	SE	95% CI		p
			LL	UL	
(Constant)		0,263	2,478	3,528	
Relations-oriented Behaviours	0,487	0,061	0,17	0,411	<0,001

Table 26 - Stepwise regression - Regular work context

Effect	Standardised Beta Coefficient	SE	95% CI		p
			LL	UL	
(Constant)		0,255	2,28	3,299	
Relations-oriented Behaviours	0,574	0,061	0,234	0,478	<0,001

5.7 Hypothesis 2b Results

Hypothesis 2b: Task-oriented behaviours have the weakest correlation to employee engagement in virtual, hybrid, and regular work environments.

5.7.1 Multilinear Regression Results

The stepwise regression model used for testing hypothesis 2a also provides results related to hypothesis 2b. The findings do not support hypothesis 2b as the exclusion of both change- and task-oriented behaviours from the regression model combined with the Sig. values above 0,05 show no significant relationship between these variables and employee engagement for the sample in this study. The details of these variables being excluded from the regression model through the stepwise iterations are shown in Table 27, Table 28, and Table 29 for virtual, hybrid, and regular work contexts, respectively.

Table 27 - Stepwise regression - Excluded variables - Virtual work context

Effect	Beta In	Sig.	Partial Correlation
Change-oriented Behaviours	0,194	0,453	0,422
Task-oriented Behaviours	-0,103	0,482	0,092

Table 28 - Stepwise regression - Excluded variables - Hybrid work context

Effect	Beta In	Sig.	Partial Correlation
Change-oriented Behaviours	-0,264	0,307	-0,12
Task-oriented Behaviours	-0,111	0,492	-0,081

Table 29 - Stepwise regression - Excluded variables - Regular work context

Effect	Beta In	Sig.	Partial Correlation
Change-oriented Behaviours	-0,21	0,933	-0,01
Task-oriented Behaviours	0,011	0,949	0,008

5.8 Hypothesis 3 Results

Hypothesis 3: The work context moderates the strength of the relationship between leadership behaviours and employee engagement.

5.8.1 Moderation Analysis Results

A moderation analysis was conducted using PROCESS v4.2 in SPSS to test whether the average number of days an employee worked from a traditional office environment moderated the influence between leadership behaviours and employee engagement. The analysis was repeated to test for moderation effects with each meta-category of leadership behaviours, and no significant moderation effect was detected.

The test results are reported in Table 30, Table 31, and Table 32 for virtual, hybrid, and regular work environments, respectively. Each iteration of the moderation analysis tested a different meta-category of leadership behaviour for moderation, whilst the remaining two meta-categories of leadership behaviour were configured as covariates. The interaction variable in all three test instances showed insignificant relationships to employee engagement. Hypothesis 2 is thus rejected with the conclusion that the work context does not influence the relationship between leadership behaviours and employee engagement.

Table 30 - Moderation effects of office days on Relations-oriented Behaviours

Variable	coeff	SE	t	p	LLCI	ULCI
constant	2,773	0,349	7,948	0,000	2,085	3,461
Relations-oriented Behaviour	0,376	0,112	3,347	0,001	0,154	0,597
Office Days	0,045	0,087	0,519	0,604	-0,126	0,215
Interaction Variable	-0,007	0,020	-0,338	0,736	-0,046	0,032
Task-oriented Behaviours	-0,070	0,080	-0,881	0,379	-0,227	0,087
Change-oriented Behaviours	0,030	0,099	0,308	0,758	-0,164	0,225

Table 31 - Moderation effects of office days on Change-oriented Behaviours

Variable	coeff	SE	t	p	LLCI	ULCI
constant	2,724	0,326	8,363	0,000	2,082	3,366
Change-oriented Behaviours	0,059	0,109	0,541	0,589	-0,156	0,274
Office Days	0,059	0,077	0,765	0,445	-0,093	0,212
Interaction Variable	-0,011	0,018	-0,576	0,565	-0,047	0,026
Task-oriented Behaviours	-0,067	0,080	-0,845	0,399	-0,224	0,090
Relations-oriented Behaviour	0,357	0,096	3,706	0,000	0,167	0,547

Table 32 - Moderation effects of office days on Task-oriented Behaviours

Variable	coeff	SE	t	p	LLCI	ULCI
constant	3,246	0,360	9,023	0,000	2,537	3,955
Task-oriented Behaviours	-0,158	0,101	-1,560	0,120	-0,358	0,042
Office Days	-0,103	0,095	-1,084	0,280	-0,291	0,084
Interaction Variable	0,031	0,024	1,303	0,194	-0,016	0,077
Relations-oriented Behaviour	0,349	0,096	3,630	0,000	0,160	0,539
Change-oriented Behaviours	0,027	0,098	0,275	0,784	-0,167	0,221

6 DISCUSSION

6.1 Introduction

This section summarises the key aspects of the extant literature related to employee engagement, leadership behaviours, and the virtual and hybrid work contexts related to the current study. The findings related to each hypothesis are then discussed to highlight the study's contributions and identify the opportunities for further studies that will add practical and academic benefits.

6.2 Scales with Low Reliability

It is crucial to reflect on the low reliability ratings observed for the scales of three out of the 16 unique categories used in this analysis to clarify the elements of this study that can still create value from an academic and a practical perspective. A significant portion of the study focuses on meta-categories of leader behaviours, and all three scales for these categories are demonstrated to have construct validity and internal consistency. Consequently, the affected scales do not influence the analysis connected to hypotheses 2a, 2b, and 3.

Hypothesis 1 investigates the relationship between the component behaviours and employee engagement. After considering the poor internal consistency of the three component behaviours in the task- and change-oriented behaviour categories, the analysis for hypothesis 1 was limited to the component behaviours from the relations-oriented behaviour category. The consolidated meta-categories of task- and change-oriented behaviours are included as control variables. This approach to testing the relationship between component behaviours and the dependent variable is similar to the method used by Yukl et al. (2019).

6.3 Leadership, Employee Engagement, and Work Environment

Leader behaviours are split into different meta-categories, three of which are included in this study. Relations-, change-, and task-oriented behaviours were all shown to be essential to managerial effectiveness, whilst only some of these behaviours had positive relationships to Job Satisfaction (Yukl et al., 2019). Each of these behaviours comprises a set of specific behaviours. Yukl et al. (2019) recommended further studies investigating the impacts and relationship of specific behaviours on other constructs rather than only focusing on the meta-categories of leadership behaviours.

Care should be exercised to distinguish between high or low levels of behaviour and the negative forms of the behaviour (Behrendt et al., 2017; Yukl, 2012). The positive forms of the behaviours, such as a manager being involved with the scheduling of a task, can be argued to be beneficial to the organisation. The negative forms of behaviour relate to activities such as creating unrealistic plans, setting vague goals, and monitoring tasks intrusively. This study has excluded the negative forms of all behaviours from the analysis. Considering that the extant literature classifies these as negative, these behaviours should always be avoided. Exercising the necessary degree of positive forms of leadership behaviour for the situation is essential to this study.

Core antecedents of employee engagement are the meaningfulness of work, the employee's sense of feeling safe, and the employee's availability (Albrecht et al., 2021; Kahn, 1990; May et al., 2004). Past studies have also shown that the meaning of work had the most substantial relationship with employee engagement compared to safety and availability. Consequently, leader behaviours that support meaningfulness, Safety, and Availability are expected to result in higher levels of employee engagement, whilst behaviours that erode meaningfulness, safety, and availability negatively impact employee engagement.

The definitions provided for empowering behaviour (Yukl, 2012) and meaningful work (Blustein et al., 2023; Laaser & Bolton, 2022; May et al., 2004) elicit the expectation that empowering behaviour is necessary for employee engagement. Considering the substantive relationship between meaningfulness and employee engagement, empowering behaviour is justifiably identified as the most significant predictor of employee engagement.

Task-oriented behaviours merit consideration despite the insignificant relationship between these behaviours and employee engagement for the sample in this study. When evaluating task-oriented behaviours, various factors beyond statistical significance must be considered. Task-oriented behaviours were found to have a weak but significant positive correlation to managerial effectiveness (Yukl et al., 2019) and are thus likely beneficial to leaders when applied in the current situations. Limitations of the current study include low internal consistency in the scales for two specific task-oriented behaviours, which deserve further investigation. It would also be helpful to include situational variables in a study of task-oriented behaviours and

employee engagement to study the moderating effects of the situation on the relationship between these two constructs.

The work environment is changing as technological advancements provide opportunities to try new mechanisms and to create greater value for organisations and their stakeholders (Contreras et al., 2020; Felstead & Henseke, 2017). Leaders and employees alike must adapt to these new ways of working as they present opportunities for improvement that will quickly become the new normal.

6.4 Hypothesis 1 Results

Hypothesis 1: Of the four relations-oriented behaviours, empowering behaviour has the most substantial relationship to employee engagement in virtual, hybrid, and regular work environments.

Of all the specific behaviours, empowering behaviour is the best match for the employee's need for autonomy and meaningful work and was thus expected to be the relations-oriented behaviour with the most substantial relationship to employee engagement in all three work contexts. Hypothesis 1 is supported from this perspective, and empowering is the only behaviour that shows a significant positive correlation to employee engagement in virtual, hybrid, and regular work contexts. The unexpected outcome is that no other relations-oriented behaviours had significant relationships with employee engagement.

It is important to recall that situational leadership theory guides us towards adapting the extent to which any leadership behaviour is exercised according to the situation (Hersey & Blanchard, 1982). From this perspective, the risks of excessive levels of empowering behaviour, when not called for, could pose a risk to the organisation. This study has not evaluated the situational variables and so cannot draw conclusions related to the relevance of the behaviour for the situation. However, It is fair to caution that empowering behaviours must be utilised with care and consideration of the situational variables. It might be irresponsible to delegate a critical task to an employee who is not ready for such a task.

Two of the measurement items for the subconstruct of empowering behaviour are related to the employee feeling a sense of psychological safety, being able to share their ideas, and then knowing that their input has been considered. This is a low-risk behaviour that most leaders can implement. If an employee can add value in this

manner, it improves the sense of meaning they get from the job. In addition, the employee's desire for safety can be improved since these activities help them feel like they are valuable, contributing team members.

Another aspect of empowering behaviour is delegation. It would not make sense to delegate a task to an employee who is not ready to take on the task that needs to be delegated, so managers need to tread with caution in this aspect of empowering behaviour. It is, however, a behaviour that must be utilised when practical, as this study has demonstrated that higher levels of empowering behaviour correlate to higher levels of employee engagement. Although developing behaviour did not feature as a significant predictor of employee engagement, its importance to Organisation Success becomes noticeable in the context of delegation of tasks. A leader would need to focus on development before being ready to exercise Delegation of responsibilities.

The final question in the scale for empowering behaviour addressed autonomy and the employee's freedom to determine how and when they completed a task, provided they maintained the necessary quality standards. Similarly to delegating tasks, a leader may need first to ensure that an employee is ready to autonomously manage a task before allowing this freedom.

The leader's quandary regarding delegating and allowing a degree of is that these behaviours are shown to improve employee engagement. We have expressed that employee engagement is characterised by vigour, dedication, and absorption. While the leader might have concerns about empowering employees in this manner, the evidence suggests that implementing these behaviours could drive employee engagement, which will drive positive outcomes for the task at hand through the employee's vigour, dedication, and absorption.

6.5 Hypothesis 2a and Hypothesis 2b

Hypothesis 2a: Relations-oriented behaviours correlate positively with employee engagement in virtual, hybrid, and regular work environments.

The findings of this study support hypothesis 2a, which is that relations-oriented leader behaviours have a substantial positive correlation to employee engagement in all three work contexts. The discussion of this hypothesis must consider the findings of hypothesis 1. Whilst relations-oriented behaviours as a meta-category of

leader behaviours show a substantial and significant relationship to employee engagement, hypothesis 1 showed that Empowering was the only behaviour from this meta-category with a significant and substantial positive correlation to employee engagement.

Yukl et al. (2019) advocate investigating specific behaviours rather than only focusing on the meta-categories of leader behaviours. These meta-categories are more broadly defined and can easily result in the more nuanced elements within a meta-category of leader behaviours going unnoticed. Understanding the factors that may have led to some component behaviours having insignificant relationships to employee engagement is essential.

Supporting behaviour is an integral part of the relations-oriented meta-category of leadership behaviours. It is about showing care for employees, especially in times of crisis. Leaders should consider the implications of the support and encouragement they provide to employees from the perspective of empowering behaviour, which has been discussed. Support provided by the leader contributes positively to the employee's perception of safety, one of the requirements for employee engagement. It might, however, simultaneously create a sense of disempowerment for the employee who is dependent on the leader whilst in that situation. May et al. (2004) showed that meaningfulness was a more substantial predictor of employee engagement than Safety or Availability.

Hypothesis 2b: Task-oriented behaviours have the weakest correlation to employee engagement in virtual, hybrid, and regular work environments.

Considering the importance of task-oriented behaviours to managerial effectiveness (Yukl et al., 2019), it was hypothesised that they would also positively correlate to employee engagement. However, hypothesis 2b is not supported as we find an insignificant relationship between task-oriented behaviours and employee engagement rather than a weak positive correlation as hypothesised.

Future research can concentrate on situational variables as a mediating factor in the relationship between leader behaviours and employee engagement to potentially develop a significant model to predict employee engagement better. This idea is supported by situational leadership theories, which suggest that the leader's behaviours must be adapted to the circumstances instead of the leader demonstrating high levels of any behaviour all the time (Benmira & Agboola, 2021).

Despite the insignificant relationship to employee engagement, leaders must remain aware of the usefulness of task-oriented behaviours and ensure that these are used responsibly. Behrendt et al. (2017) raised concerns, including the negative form of leadership behaviours as described by Yukl (2012). For example, a manager could give excessively detailed instructions, making the employee feel micromanaged, which constitutes a negative form of clarifying behaviour. Managers need to ensure that these negative forms of task-oriented behaviours are avoided.

Leaders who delegate tasks may benefit from sufficient Clarifying behaviour to ensure that the manager and the employee are aligned regarding the deliverables. Leaders who allow autonomy regarding when and how a task is completed may benefit from mechanisms to stay updated on the status of these tasks so that a complete project is effectively tracked. The scope of this study has not included an assessment of any moderating or mediating effects between leadership behaviours and their relationship to employee engagement.

6.6 Hypothesis 3

Hypothesis 3: The work context moderates the strength of the relationship between leadership behaviours and employee engagement.

The findings of this study do not support hypothesis 2 for the sample being analysed. The variation in the relationship between the employee's level of engagement and the employee's perception of leadership behaviours between different work contexts was insignificant.

The literature related to the virtual work context is most relevant for understanding the implications of these findings. The new work context presents opportunities and challenges alike, and employees and leaders must adapt to attain the best results from this work context without suffering the potential negative impacts. This lack of moderation influence is noteworthy as it expresses that lower levels of relations-oriented behaviours can be associated with lower levels of engagement in virtual and hybrid work contexts as they would in regular work contexts. So, whilst leaders adapt to the new context, they must be wary of the changes and not compromise relations-oriented behaviours.

Impromptu conversations in the office environment typically strengthen relationships among team members, improving psychological safety and contributing more

generally to innovation and team dynamics. The loss of this benefit of a regular office environment may prompt leaders of virtual and hybrid teams to implement alternative mechanisms for simulating these effects. The impromptu water cooler conversation in the regular office environment might have been a coping mechanism for employees in lower-level positions whose jobs offered little autonomy. Any attempt to create a simulated virtual interaction experience is likely risky as it will remove any semblance of autonomy that would have existed in the original experience.

6.7 Condensed model of leader influence on Employee Engagement

The findings of this study have considerably simplified the original model proposed. As expected from hypothesis 1, empowering behaviour, from the relations-oriented meta-category of leader behaviours, exists as a substantial and statistically significant predictor of employee engagement. However, the analysis of the sample did not furnish evidence for significant relationships between other meta-categories of behaviour or specific behaviours and employee engagement. There was also no evidence of the work context moderating the strength of the relationships between these behaviours and employee engagement. The analysis outcome is thus a simple model shown in Figure 4, where empowering behaviour is the only predictor of employee engagement.

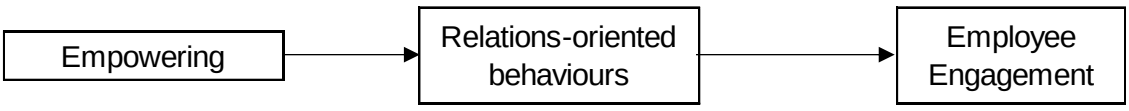

Figure 4 - Leader behaviour influence on employee engagement

It is important to note that other leader behaviours are still relevant for leader effectiveness and should not be ignored. Further research is required to investigate indirect relationships between other leader behaviours and employee engagement.

7 CONCLUSION

7.1 Introduction

Employee engagement is crucial for organisational success, and although this subject has been widely studied for more than three decades, many organisations are still not capturing this opportunity successfully (Govender & Bussin, 2020; Van Schalkwyk et al., 2010). Improving the levels of employee engagement across organisations in South Africa can help the country generate a competitive edge in the competitive global economy.

Ethical leaders are responsible for the performance of the organisations they represent and the employees they influence to create value for these organisations (Engelbrecht et al., 2017). These leaders must ensure they also serve these employees' needs while delivering organisational success. An employee who is engaged is then showing a willingness to contribute, which indicates that the needs of such an employee are being met, so employee engagement is also crucial from this perspective as an indicator that the leader is also serving the team.

7.2 Context of the study

The world of work is changing, and the increasing prevalence of virtual and hybrid work is a substantial factor (Aksoy et al., 2023; Morrison-Smith & Ruiz, 2020). Literature on the topic existed long before the COVID-19 pandemic, so this context is not entirely new. This literature identifies benefits and challenges arising from virtual and hybrid work, so leaders must manage the situation carefully to capitalise on the benefits without succumbing to the risks.

Many differences are characteristic of the new modes of work, which are not as common in the traditional office environment (Contreras et al., 2020). The interactions between employees and leaders are separated by physical distance more regularly and are facilitated by technology. There are fewer impromptu conversations and interactions between colleagues. Employees adjust their daily routines, aiming for a more efficient mix of work and home responsibilities, which becomes possible when working from home. Disturbances from home sometimes affect work activities and work easily finds its way into the home environment and employees' personal time.

The need to develop and maintain a competitive edge in business is ever-increasing, and employee engagement and the virtual and hybrid work contexts present opportunities for leaders to create that competitive edge (Bloom et al., 2015; Govender & Bussin, 2020). Leaders who understand these factors will be best prepared to respond appropriately to the challenges of the changing context and continue to improve employee engagement in their teams.

7.3 Current Knowledge and gaps that exist

Leadership is a complex field that will likely continue developing for many years; however, a considerable volume of literature captures what we already understand from this field, creating a solid base for research such as this (Benmira & Agboola, 2021). Although leadership theory has progressed into a new era in which many leadership styles have been defined and studied, the behavioural theories of leadership still feature commonly. An opportunity exists to study specific leader behaviours in greater detail to understand better how these behaviours relate to other constructs in business (Yukl et al., 2019). Whilst the studies investigating leadership styles are also valid, this approach helps us better understand the specific behaviours within leadership styles and how these interact with constructs such as employee engagement.

Meaningfulness of work has been topical in employee engagement studies for many decades. May et al. (2004) have shown that meaningfulness of work is a more substantial predictor of employee engagement than safety or availability. This gives us crucial insight into the human needs that could drive employee engagement and allows us to consider the leader's impact from this perspective. Autonomy and respectful recognition are among the factors that are closely related and required for an employee to experience the work that they do as meaningful (Laaser & Bolton, 2022). Getting a sense of dignity from work is also essential for its meaningfulness.

Numerous studies have already shown that leadership can influence employee engagement and that positive outcomes for individuals and organisations are related to higher levels of employee engagement (Bailey et al., 2017). It is still important to study the specific leader behaviours that influence employee engagement and understand their effects across virtual, hybrid, and regular work environments.

7.4 Questions being answered by this study

This study responds to the need for more investigation of specific leader behaviours rather than remaining predominantly focused on leadership styles (Yukl et al., 2019). The meta-categories of leadership behaviour and the specific behaviours in the relations-oriented category are tested for their relationship to employee engagement. The study was conducted across virtual, hybrid, and regular work contexts to understand any differences in the relationship between the study variables across these work contexts.

7.5 Research Methodology

The study used a cross-sectional design and surveyed individual employees from virtual, hybrid, and regular work contexts. The measurement instrument was a Likert scale survey managed with Microsoft Forms and distributed to potential respondents via electronic means, including Microsoft Teams, email, WhatsApp, and LinkedIn. After removing samples from the pilot test and those not meeting the requisite quality criteria, 208 of the original 232 samples were retained for analysis.

An existing measurement instrument was used to measure employee engagement (Schaufeli & Bakker, 2004) whilst the scales for the specific component behaviours were developed from literature (Yukl, 2012). The measurement instrument also included various demographic questions that helped confirm the relevance of the sample. Three attention-test questions were included as a mechanism to manage the quality of the sample (Zickar & Keith, 2023).

Data were prepared in Microsoft Excel and IBM SPSS, and the analysis was conducted on IBM SPSS v29.0. Hypotheses 1 and 2 required a stepwise regression analysis, while hypothesis 3 required a Moderation analysis using the PROCESS 4.2 macro in IBM SPSS.

7.6 The Findings

Construct validity was demonstrated with bivariate analysis testing the correlations between each item and the item total score for the construct. This validity was successfully demonstrated for each of the constructs of interest in this study, and the details are provided in section 5.3 of the report.

Reliability was tested using Cronbach's alpha to determine internal consistency in the measurement scales for each construct. Reliability was demonstrated for

employee engagement and each meta-category of leader behaviours, relations-, change-, and task-oriented. The scales for the specific behaviours in the relations-oriented behaviour category also had good internal consistency. Clarifying and monitoring from the task-oriented category and envisioning change from the change-oriented category were the only three behaviours for which the measurement scales had low reliability. These measurement items were only considered in terms of the completed meta-categories of task- and change-oriented behaviours for further analysis and not analysed as specific behaviours within these categories.

This study found that empowering leadership behaviour has a substantial, positive, and statistically significant relationship to employee engagement in virtual, hybrid, and regular work contexts. The study also found that other leader behaviours had no significant relationship to employee engagement in the studied work contexts.

The analysis testing for moderation effects of the number of office days on the relationship between leadership behaviours and employee engagement found no significant relationship for the interaction variable, indicating the absence of the hypothesised moderation effect. The strength of the relationship between the leader's behaviours and employee engagement does not change from one context to the next.

7.7 Academic Contributions

Much research has been conducted to understand the relationships between leadership styles, or meta-categories of leadership behaviour, and other pertinent business constructs. There has, however, been limited investigation into the relationships between specific behaviours and these constructs (Yukl et al., 2019). This study contributes to the existing literature by investigating the relationships between specific leader behaviours and employee engagement.

A considerable volume of research into employee engagement exists but often does not distinguish between different work contexts. It likely comprises a disproportionately higher number of respondents from the regular office environment than virtual and hybrid workers. The current study has included and distinguished between virtual, hybrid, and regular work contexts and has presented results that can be compared across the three work contexts.

7.8 Recommendations for Practice

This study has shown that leaders can use empowering behaviour to improve employee engagement. This behaviour helps support the employee's need for autonomy and meaning in their work, which has been demonstrated to be antecedent to employee engagement (Blustein et al., 2023).

Employees who feel at ease expressing their ideas to their leader and believe they are considered during decision-making are empowered (Yukl, 2012). This is a leadership behaviour that more leaders can implement without much risk. In addition, leaders who are comfortable delegating work and give employees autonomy in how and when they complete tasks are also seen as empowering. This approach requires additional caution on the part of the leader as the circumstances need to allow for this approach to be appropriate. Leaders may need to invest in the development and coaching of employees when required before this type of empowering behaviour can be employed without risk.

The employee's need for autonomy and meaningfulness in their work transcends the work context, so employees seek meaning in their work in any work context, virtual, hybrid, or regular (Blustein et al., 2023). Leaders adapting to virtual and hybrid work environments must know this need as they adapt to the new context. For example, leaders should not misuse the enhanced opportunity to monitor their employees' work as this may erode the effect of empowering behaviour.

Employees will also need to adapt to virtual and hybrid workplaces. A concern in this regard related to low-skilled jobs for which the leader has less opportunity to exercise empowering behaviour and may not easily influence employee engagement. Korczynski and Wittel (2020) discuss the concept of workplace commons in which employees in such jobs compensate for the psychological sense of meaningfulness by engaging in non-work related activities, such as informal groups that support each other without any hierarchical structure. Employees must actively seek new mechanisms to bridge these gaps and develop new coping mechanisms for the virtual and hybrid work contexts.

7.9 Limitations of the Study

The respondents to this study were predominantly from a single province in South Africa, with only 16% of the responses coming from other provinces or outside South Africa. Future studies could be more appropriately generalised to the South African

population if a more balanced response rate is targeted nationwide. Considering the moderating effects of culture between some leadership styles and their relationship with employee engagement (Li et al., 2021), the findings of this study are not generalisable to a global population.

The scope of this study has not included situational variables that may influence the need for certain leadership behaviours, which are an essential consideration from situational leadership theory (Benmira & Agboola, 2021). This likely factor would affect the statistical significance of a model that included task-oriented behaviours and employee engagement.

The cross-sectional nature of this study restricts its ability to claim causation within the relationships between leader behaviours and employee engagement. The findings indicate correlations between empowering behaviours and employee engagement but cannot claim a causal effect from one variable to the next.

This study only tested direct relationships between leadership behaviours and employee engagement, and this may be a reason for a simple model with only Empowering behaviour having a significant relationship to employee engagement. There may be mediating relationships between some of these behaviours and employee engagement through other constructs not included in this study.

7.10 Recommendations for Future Research

Incorporating situational variables in a future study will create the opportunity to test for mediating or moderating effects of the situation on the relationship between different leader behaviours and employee engagement. A variable such as the employees' perceived level of competence at their job may influence their response to a leader demonstrating a high level of certain behaviours.

A longitudinal study measuring the variables at different points can facilitate further findings demonstrating the causal relationships between leadership behaviours and employee engagement.

The stepwise regression process has excluded some leader behaviours due to the lack of a significant direct relationship with employee engagement. Future studies can build on the model by incorporating other constructs, such as safety or stress, through which some excluded behaviours might have mediated relationships with employee engagement.

7.11 Concluding Statement

This study has recapped the importance of employee engagement for both the competitive edge it can provide to organisations and the indication that employees benefit from the relationship. Ethical leaders who have invested in the development of their employees' capabilities must use empowering behaviour to afford their employees a sense of meaningfulness in their jobs. In so doing, they will create an engaged workforce that takes ownership of delivering the organisation's goals.

REFERENCE LIST

Adami, C. (2023, March 13). *Golf, rent, and commutes: 7 impacts of working from home*. StanfordReport. https://news.stanford.edu/report/2023/03/13/7-things-know-working-home/

Afram, J., Manresa, A., & Mas-Machuca, M. (2022). The impact of employee empowerment on organizational performance: A mediating role of employee engagement and organisational citizenship behaviour. *Intangible Capital*, *18*(1), 96. https://doi.org/10.3926/ic.1781

Aitken, K., & Von Treuer, K. (2021). Leadership behaviours that foster organisational identification during change. *Journal of Organizational Change Management*, *34*(2), 311–326. https://doi.org/10.1108/JOCM-01-2020-0029

Aksoy, C. G., Barrero, J. M., Bloom, N., Davis, S. J., Dolls, M., & Zarate, P. (2023). Working from Home Around the Globe: 2023 Report. *EconPol Policy Brief*, *53*. http://hdl.handle.net/10419/275827

Al-Ajlouni, M. I. (2020). Can high-performance work systems (HPWS) promote organisational innovation? Employee perspective-taking, engagement and creativity in a moderated mediation model. *Employee Relations: The International Journal*, *43*(2), 373–397. https://doi.org/10.1108/ER-09-2019-0369

Albrecht, S. L., Green, C. R., & Marty, A. (2021). Meaningful Work, Job Resources, and Employee Engagement. *Sustainability*, *13*(7), 4045. https://doi.org/10.3390/su13074045

Bailey, C., Lips-Wiersma, M., Madden, A., Yeoman, R., Thompson, M., & Chalofsky, N. (2019). The Five Paradoxes of Meaningful Work: Introduction to the special Issue 'Meaningful Work: Prospects for the 21st Century'. *Journal of Management Studies*, *56*(3), 481–499. https://doi.org/10.1111/joms.12422

Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The Meaning, Antecedents and Outcomes of Employee Engagement: A Narrative Synthesis. *International Journal of Management Reviews*, *19*(1), 31–53. https://doi.org/10.1111/ijmr.12077

Behrendt, P., Matz, S., & Göritz, A. S. (2017). An integrative model of leadership behavior. *The Leadership Quarterly*, *28*(1), 229–244. https://doi.org/10.1016/j.leaqua.2016.08.002

Benmira, S., & Agboola, M. (2021). Evolution of leadership theory. *BMJ Leader*, leader-2020-000296. https://doi.org/10.1136/leader-2020-000296

Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does Working from Home Work? Evidence from a Chinese Experiment*. *The Quarterly Journal of Economics*, *130*(1), 165–218. https://doi.org/10.1093/qje/qju032

Blustein, D. L., Lysova, E. I., & Duffy, R. D. (2023). Understanding Decent Work and Meaningful Work. *Annual Review of Organizational Psychology and Organizational Behavior*, *10*(1), 289–314. https://doi.org/10.1146/annurev-orgpsych-031921-024847

By, R. T. (2021). Leadership: In Pursuit of Purpose. *Journal of Change Management*, *21*(1), 30–44. https://doi.org/10.1080/14697017.2021.1861698

Caulfield, B., & Charly, A. (2022). Examining the potential environmental and travel time saved benefits of remote working hubs. *Transport Policy*, *127*, 139–147. https://doi.org/10.1016/j.tranpol.2022.08.017

Contreras, F., Baykal, E., & Abid, G. (2020). E-Leadership and Teleworking in Times of COVID-19 and Beyond: What We Know and Where Do We Go. *Frontiers in Psychology*, *11*, 590271. https://doi.org/10.3389/fpsyg.2020.590271

Engelbrecht, A. S., Heine, G., & Mahembe, B. (2017). Integrity, ethical leadership, trust and work engagement. *Leadership & Organization Development Journal*, *38*(3), 368–379. https://doi.org/10.1108/LODJ-11-2015-0237

Felstead, A., & Henseke, G. (2017). Assessing the growth of remote working and its consequences for effort, well-being and work-life balance. *New Technology, Work and Employment*, *32*(3), 195–212. https://doi.org/10.1111/ntwe.12097

Gallup. (2023). *State of the Global Workplace: 2023 Report*. https://www.gallup.com/workplace/349484/state-of-the-global-workplace.aspx#ite-506924

Golden, T. D. (2006). The role of relationships in understanding telecommuter satisfaction. *Journal of Organizational Behavior*, *27*(3), 319–340. https://doi.org/10.1002/job.369

Govender, M., & Bussin, M. H. R. (2020). Performance management and employee engagement: A South African perspective. *SA Journal of Human Resource Management*, *18*. https://doi.org/10.4102/sajhrm.v18i0.1215

Guest, D. E. (2017). Human resource management and employee well-being: Towards a new analytic framework. *Human Resource Management Journal*, *27*(1), 22–38.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, *87*(2), 268–279. https://doi.org/10.1037/0021-9010.87.2.268

Henry, M. S., Le Roux, D. B., & Parry, D. A. (2021). Working in a post Covid-19 world: Towards a conceptual framework for distributed work. *South African Journal of Business Management*, *52*(1). https://doi.org/10.4102/sajbm.v52i1.2155

Hersey, P., & Blanchard, K. H. (1982). Grid® Principles and Situationalism: Both! A Response to Blake and Mouton. *Group & Organization Studies*, *7*(2), 207–210. https://doi.org/10.1177/105960118200700207

Kahn, W. A. (1990). Psychological Conditions of Personal Engagement and Disengagement at Work. *Academy of Management Journal*, *33*(4), 692–724.

Kalkbrenner, M. T. (2023). Alpha, Omega, and *H* Internal Consistency Reliability Estimates: Reviewing These Options and When to Use Them. *Counseling Outcome Research and Evaluation*, *14*(1), 77–88. https://doi.org/10.1080/21501378.2021.1940118

Kalwani, S., & Mahesh, J. (2020). Trends in Organizational Behavior: A Systematic Review and Research Directions. *Journal of Business and Management*, *26*(1), 40–78.

Korczynski, M., & Wittel, A. (2020). The Workplace Commons: Towards Understanding Commoning within Work Relations. *Sociology*, *54*(4), 711–726. https://doi.org/10.1177/0038038520904711

Krekel, D. C. (2019). Employee Well-being, Productivity, and Firm Performance: Evidence and Case Studies. *Global Happiness and Wellbeing*, 99–140.

Kuper, S. (2023, September 21). Bosses won't like it but WFH is a happier way to work. *FT Magazine*. https://www.ft.com/content/74b43b83-1af1-4045-9bd1-15fc8556972d

Kwon, K., & Kim, T. (2020). An integrative literature review of employee engagement and innovative behavior: Revisiting the JD-R model. *Human Resource Management Review*, *30*(2), 100704. https://doi.org/10.1016/j.hrmr.2019.100704

Laaser, K., & Bolton, S. (2022). Absolute autonomy, respectful recognition and derived dignity: Towards a typology of meaningful work. *International Journal of Management Reviews*, *24*(3), 373–393. https://doi.org/10.1111/ijmr.12282

Lex. (2020, March 6). *Telecommuting: Green homework*. Financial Times. https://www.ft.com/content/14712dea-bb51-433a-a678-de44440dd25b

Magnavita, N., Tripepi, G., & Chiorri, C. (2021). Telecommuting, Off-Time Work, and Intrusive Leadership in Workers' Well-Being. *International Journal of Environmental Research and Public Health*, *18*(7), 3330. https://doi.org/10.3390/ijerph18073330

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, *77*(1), 11–37. https://doi.org/10.1348/096317904322915892

Meng, J., & Berger, B. K. (2019). The impact of organizational culture and leadership performance on PR professionals' job satisfaction: Testing the joint mediating effects of engagement and trust. *Public Relations Review*, *45*(1), 64–75. https://doi.org/10.1016/j.pubrev.2018.11.002

Morrison-Smith, S., & Ruiz, J. (2020). Challenges and barriers in virtual teams: A literature review. *SN Applied Sciences*, *2*(6), 1096. https://doi.org/10.1007/s42452-020-2801-5

Mutha, P., & Srivastava, M. (2023). Decoding leadership to leverage employee engagement in virtual teams. *International Journal of Organizational Analysis*, *31*(3), 737–758. https://doi.org/10.1108/IJOA-07-2021-2856

Narayanan, L., Menon, S., Plaisent, M., & Bernard, P. (2017). Telecommuting: The work anywhere, anyplace, anytime organization in the 21st century. *Journal of Marketing & Management*, *8*(2), 47–54.

Opperman, I. (2023, December 11). *SA's employee engagement levels at only 53% is concerning*. https://www.citizen.co.za/business/personal-finance/sa-employee-engagement-levels-concerning/

Ouedraogo, N., & Ouakouak, M. L. (2020). Antecedents and outcome of employee change fatigue and change cynicism. *Journal of Organizational Change Management*, *34*(1), 158–179. https://doi.org/10.1108/JOCM-05-2019-0141

Øygarden, O., Olsen, E., & Mikkelsen, A. (2020). Changing to improve? Organizational change and change-oriented leadership in hospitals. *Journal of Health Organization and Management*, *34*(6), 687–706. https://doi.org/10.1108/JHOM-09-2019-0280

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, *21*(7), 600–619. https://doi.org/10.1108/02683940610690169

Saks, A. M. (2019). Antecedents and consequences of employee engagement revisited. *Journal of Organizational Effectiveness: People and Performance*, *6*(1), 19–38. https://doi.org/10.1108/JOEPP-06-2018-0034

Salimi, A. (2011). Social-Emotional Loneliness and Life Satisfaction. *Procedia - Social and Behavioral Sciences*, *29*, 292–295. https://doi.org/10.1016/j.sbspro.2011.11.241

Saunders, M., & Lewis, P. (2018). *Doing research in business and management* (2nd ed.). Pearson education limited.

Schaufeli, W., & Bakker, A. (2004). Utrecht Work Engagement Scale. *Occupational Health Psychology Unit Utrecht University*. https://www.wilmarschaufeli.nl/publications/Schaufeli/Test%20Manuals/Test_manual_UWES_English.pdf

Seters, D. A. V. (1990). The Evolution of Leadership Theory. *Journal of Organizational Change Management*, *3*(3), 29–45.

Shafique, I., & Beh, L.-S. (2017). Shifting Organizational Leadership Perspectives: An Overview of Leadership Theories. *International Journal of Economic Perspectives*, *11*(4), 134–143.

Stantcheva, S. (2023). How to Run Surveys: A Guide to Creating Your Own Identifying Variation and Revealing the Invisible. *Annual Review of Economics*, *15*, 205–234.

Taucean, I. M., Tamasila, M., & Negru-Strauti, G. (2016). Study on Management Styles and Managerial Power Types for a Large Organization. *Procedia - Social and Behavioral Sciences*, *221*, 66–75. https://doi.org/10.1016/j.sbspro.2016.05.091

Tummers, L. G., & Bakker, A. B. (2021). Leadership and Job Demands-Resources Theory: A Systematic Review. *Frontiers in Psychology*, *12*, 722080. https://doi.org/10.3389/fpsyg.2021.722080

Uddin, Md. A., Mahmood, M., & Fan, L. (2019). Why individual employee engagement matters for team performance?: Mediating effects of employee commitment and organizational citizenship behaviour. *Team Performance Management: An International Journal*, *25*(1/2), 47–68. https://doi.org/10.1108/TPM-12-2017-0078

Van Schalkwyk, S., Du Toit, D. H., Bothma, A. S., & Rothmann, S. (2010). Job insecurity, leadership empowerment behaviour, employee engagement and intention to leave in a petrochemical laboratory. *SA Journal of Human Resource Management*, *8*(1). https://doi.org/10.4102/sajhrm.v8i1.234

Yukl, G. (2012). Effective Leadership Behavior: What We Know and What Questions Need More Attention. *Academy of Management Perspectives*, *26*(4), 66–85. https://doi.org/10.5465/amp.2012.0088

Yukl, G., Mahsud, R., Prussia, G., & Hassan, S. (2019). Effectiveness of broad and specific leadership behaviors. *Personnel Review*, *48*(3), 774–783. https://doi.org/10.1108/PR-03-2018-0100

Zickar, M. J., & Keith, M. G. (2023). Innovations in Sampling: Improving the Appropriateness and Quality of Samples in Organizational Research. *Annual Review of Organizational Psychology and Organizational Behavior*, *10*(1), 315–337. https://doi.org/10.1146/annurev-orgpsych-120920-052946

APPENDIX 1 –SURVEY QUESTIONS

The tables below list the questions in their respective categories to read this report easily. The distributed survey only retained the category demographic questions, while all other questions were in random order. Another difference is that the questions received by participants included three additional measurement items to test the respondents' attention. One item stated, 'Please select Never', one stated, 'Please select Very often', and the last stated, 'Please select Always'.

Table 33 - Demographic questions

Category	Measurement Item
Demographic Questions	How many years of work experience do you have
Demographic Questions	What is your current mode of work?
Demographic Questions	How many years of experience do you have in your current work mode?
Demographic Questions	What province do you reside in?
Demographic Questions	What province is the organisation/company based in?

Table 34 - Relations-oriented behaviour questions

Category	Measurement Item
Relations-oriented: Supporting	My manager makes time to understand my concerns when I am stressed or worried.
Relations-oriented: Supporting	My manager expresses confidence in my ability to execute difficult tasks.
Relations-oriented: Supporting	My manager encourages cooperation amongst team members.
Relations-oriented: Developing	I get helpful career advice from my manager.
Relations-oriented: Developing	My manager assigns me to work that helps me to learn through experience
Relations-oriented: Developing	My manager informs me of relevant training opportunities
Relations-oriented: Recognising	My manager gives recognition for good work that I do.
Relations-oriented: Recognising	I believe that the praise I receive from my manager is sincere
Relations-oriented: Empowering	I have the opportunity to present my ideas and suggestions when there is a problem to solve
Relations-oriented: Empowering	My manager takes my ideas and suggestions into consideration when making decisions
Relations-oriented: Empowering	My manager is comfortable delegating important tasks to me when necessary
Relations-oriented: Empowering	I have the autonomy to decide how and when I complete tasks provided I maintain the expected quality

Table 35 - Employee engagement questions (UWES)

Category	Measurement Item
Employee Engagement	At my work, I feel bursting with energy
Employee Engagement	I find the work that I do full of meaning and purpose
Employee Engagement	Time flies when I'm working
Employee Engagement	At my job, I feel strong and vigorous
Employee Engagement	I am enthusiastic about my job
Employee Engagement	When I am working, I forget everything else around me
Employee Engagement	My job inspires me
Employee Engagement	When I get up in the morning, I feel like going to work
Employee Engagement	I feel happy when I am working intensely
Employee Engagement	I am proud on the work that I do
Employee Engagement	I am immersed in my work
Employee Engagement	I can continue working for very long periods at a time
Employee Engagement	To me, my job is challenging
Employee Engagement	I get carried away when I'm working
Employee Engagement	At my job, I am very resilient, mentally
Employee Engagement	It is difficult to detach myself from my job
Employee Engagement	At my work I always persevere, even when things do not go well
Employee Engagement	I feel proud to work for this organisation
Employee Engagement	I feel my manager cares about my success
Employee Engagement	The work that I do is meaningful

Adapted from "Utrecht Work Engagement Scale" by Schaufeli, W., & Bakker, A. (2004). *Occupational Health Psychology Unit Utrecht University.* https://www.wilmarschaufeli.nl/publications/Schaufeli/Test%20Manuals/Test_manual_UWES_English.pdf. Copyright by Occupational Health Psychology Unit Utrecht University

Table 36 - Change-oriented behaviour questions

Category	Measurement Item
Change-oriented: Advocating change	My manager explains why change is urgently needed.
Change-oriented: Advocating change	My manager explains the potential for undesirable outcomes if change is not implemented.
Change-oriented: Advocating change	My manager ensures that the need for change is expressed effectively but without causing unnecessary distress
Change-oriented: Envisioning change	My manager builds commitment to change by articulating a clear and appealing vision of what the organisation can achieve through the change.
Change-oriented: Envisioning change	My manager uses emotional language with metaphors and stories when helping the team do develop a vision for the change.
Change-oriented: Encouraging Innovation	I feel safe expressing ideas to my manager, even if I am not entirely confident that they will work.
Change-oriented: Encouraging Innovation	My manager encourages innovative thinking.
Change-oriented: Encouraging Innovation	My manager supports the implementation of great ideas.
Change-oriented: Facilitating collective learning	My manager provides resources to test new ideas.
Change-oriented: Facilitating collective learning	My manager creates a psychologically safe climate in which successes and failures are discussed to facilitate learning
Change-oriented: Facilitating collective learning	My manager supports team collaboration to develop new strategies and work methods.
Change-oriented: Facilitating collective learning	My manager works with the team to understand the root causes of failures and to prevent future recurrence.

Table 37 - Task-oriented behaviour questions

Category	Measurement Item
Task-oriented: Planning	My manager gets involved in scheduling of tasks that are allocated to me
Task-oriented: Planning	My manager determines and plans for resources that are needed for each task
Task-oriented: Planning	My manager makes plans that are superficial or unrealistic
Task-oriented: Clarifying	My manager focuses on explaining standard procedures
Task-oriented: Clarifying	How much emphasis does your manager place on explaining objectives, priorities, and deadlines?
Task-oriented: Clarifying	My manager sets vague or easy goals
Task-oriented: Clarifying	My manager gives instructions that are excessively detailed and that make me feel micromanaged
Task-oriented: Monitoring	My manager tracks the status of work that has been allocated to me
Task-oriented: Monitoring	My manager obtains task status updates through communication with me
Task-oriented: Monitoring	My manager depends on information systems and observation to obtain status updates for tasks that I work on.
Task-oriented: Monitoring	My manager is intrusive and excessively focused on monitoring the status of work that has been allocated to me
Task-oriented: Problem Solving	When complex problems arise, my manager gets involved to identify the root cause before taking action.
Task-oriented: Problem Solving	My manager tries to ignore signs of a serious problem for as long as possible.
Task-oriented: Problem Solving	My manager welcomes input from subordinates when dealing with a complex problem.
Task-oriented: Problem Solving	My manager is firm and confident in the direction provided whilst dealing with a complex problem.