

DISSERTATION

ASSESSING TRANSFORMATIONAL LEADERSHIP AND SELF-LEADERSHIP AS ENHANCERS OF WELL-BEING IN A REMOTE WORK CONTEXT

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Dissertation submitted to IPAM in fulfillment of the requirements for obtaining the degree of Master in Marketing Management, conducted under the scientific guidance of Professor Luísa M. Martinez, PhD and Professor Filipe Ramos, PhD.

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RESUMO

Este estudo analisa como a liderança transformacional e a autoliderança promovem o bem-estar de trabalhadores em teletrabalho, considerando o possível efeito moderador da Pessoa Altamente Sensível (PAS). Este traço é particularmente evidente em contexto de ambientes físicos e sociais. A inovação deste trabalho é testar se, em contexto de comportamento organizacional, as pessoas altamente sensíveis se sentem mais afetadas do que as restantes, quanto ao bem-estar, em contexto de liderança no teletrabalho. Com base em 330 respostas a um questionário online, os resultados mostram que líderes que inspiram, apoiam e reconhecem os seus colaboradores incentivam maior autonomia e autorregulação, o que se associa positivamente ao bem-estar. Embora a autoliderança tenha impacto positivo no bem-estar, o efeito foi estatisticamente moderado e o traço de PAS não teve influência significativa na moderação deste efeito. Os dados reforçam a importância de estilos de liderança que promovam autonomia e apoio emocional no teletrabalho, oferecendo orientações úteis para melhorar a experiência dos colaboradores e fortalecer a resiliência organizacional.

Palavras-chave: Liderança Transformacional, Autoliderança, Bem-estar, PAS, Teletrabalho

ABSTRACT

This study examines how transformational leadership and self-leadership promote the well-being of remote workers, considering the potential moderating effect of High Sensitive Person (HSP), a trait particularly evident in physical and social environments. The innovation of this research lies in testing whether, in the context of organizational behavior, highly sensitive individuals are more affected in terms of well-being than others, in a remote work leadership setting. Based on 330 responses to an online questionnaire, the results show that leaders who inspire, support, and recognize their employees foster greater autonomy and self-regulation, which are positively associated with well-being. Although self-leadership has a positive impact on well-being, the effect was statistically moderate, and the HSP trait did not have a significant influence in moderating this effect. These findings underscore the importance of leadership styles that encourage autonomy and emotional support in remote work settings, offering practical guidance to enhance employee experience and strengthen organizational resilience.

Keywords: Transformational Leadership, Self-Leadership, Well-being, HSP, Remote Work

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1. Introduction

Leadership has consistently emerged as a central factor influencing employee well-being and organizational effectiveness, particularly in contemporary work environments shaped by remote work. Transformational leadership, which inspires and empowers individuals toward shared objectives, and self-leadership, a framework enabling individuals to regulate their own behaviors and motivations, have gained prominence in this discourse (Harari et al., 2021). These approaches highlight the evolving dynamics of leadership as organizations adapt to a more decentralized workforce.

The acceleration of remote work during the COVID-19 pandemic has fundamentally altered traditional workplace dynamics, creating opportunities for flexibility but also challenges such as isolation and reduced collaboration. In this context, transformational leadership fosters motivation and commitment through a compelling vision, while self-leadership equips individuals to independently manage productivity and well-being (Bermúdez-González et al., 2024). These dual leadership frameworks address the complexities of maintaining engagement and efficiency in a virtual setting.

Moreover, the interplay between transformational leadership and self-leadership creates a synergistic dynamic that is particularly effective in remote work scenarios. Transformational leaders inspire collective goals, while self-leadership strategies enhance individual autonomy and self-regulation, crucial in environments where direct supervision is limited. This relationship underscores the necessity for leadership styles that prioritize adaptability and psychological support (Cjvit & Göncü-Köse, 2024).

High sensitivity, often conceptualized through the framework of Sensory Processing Sensitivity (SPS), is a psychological trait that highlights individual differences in responsiveness to environmental stimuli. Research indicates that approximately 25–30% of individuals exhibit heightened sensitivity, characterized by an amplified awareness of subtle environmental cues and stronger emotional reactions (Onesti et al., 2024). This trait, while associated with greater vulnerability to stressors in adverse environments, also enables individuals to benefit more from supportive and positive conditions. In organizational contexts, understanding high sensitivity has emerged as a crucial factor, as it influences employee well-being, stress levels, and responses to leadership styles. Studies have shown that highly sensitive individuals thrive in environments with positive leadership and job resources, underscoring the importance of tailoring workplace strategies to accommodate individual differences and promote well-being effectively (Addison & Shapiro, 2023).

This study explores the intersection of transformational leadership, self-leadership, and employee well-being in remote work contexts. Additionally, the HSP trait (The acronym stands for Highly Sensitive Person, referring to individuals who exhibit heightened sensitivity to environmental stimuli), will be considered as a moderator in the relation between self-leadership and well-being. Transformational leadership and self-leadership are pivotal in fostering well-being, particularly for individuals identified as highly sensitive through the HSP Scale, as these leadership styles empower personal growth and create supportive environments that align with their heightened responsiveness to stimuli (Pluess et al., 2023). By leveraging insights from behavioral sciences and organizational management, this research aims to identify actionable strategies for fostering resilience and innovation in the evolving digital workplace.

This dissertation follows a specific structure, starting with the literature review, followed by the formulation of hypotheses, conceptual model, and methodology. Subsequently, the results are analyzed and presented, concluding with the discussion and conclusion.

2. Literature Review

2.1. Remote work

Remote work, often referred to as telecommuting, has become an integral part of modern work culture, especially since the COVID-19 pandemic. It has reshaped organizational practices, workplace dynamics, and employee behaviors. The shift to remote work has been driven by advances in technology, evolving labor markets, and the reorganization of labor into knowledge economies, enabling work across spatial and temporal borders (Watermeyer et al., 2023). This essay explores the transformative impacts of remote work, its challenges, and opportunities, drawing on a diverse body of literature.

The normalization of remote work practices is attributed to various factors. Technological advancements have facilitated connectivity, enabling work regardless of location. Social exchange theorists suggest that remote work is governed by reciprocity, where employees' flexibility and autonomy are exchanged for enhanced productivity and commitment to organizational goals (Watermeyer et al., 2023).

During the pandemic, remote work became a necessity. Organizations played pivotal roles in supporting employees through this transition, highlighting the critical importance of robust technological infrastructure and organizational adaptability (Bermúdez-González et al., 2024). For instance, high-tech firms with pre-existing remote work policies were better positioned to adapt during the pandemic (Beland et al., 2023).

The relationship between remote work and productivity is complex. Studies such as Etheridge et al. (2020) reveal that remote work productivity varies significantly across individual characteristics and job types. While some

employees report stable productivity levels, tasks requiring face-to-face communication often suffer in remote settings (Morikawa, 2023). However, the reallocation of time from commuting to work activities often enhances productivity for specific job roles (Al-Dmour et al., 2023).

Remote work offers significant benefits, including improved work-life balance, reduced distractions, and enhanced focus. These factors contribute to higher employee satisfaction, motivation, and productivity (Al-Dmour et al., 2023). However, blurred boundaries between work and personal life can lead to stress and burnout (Rahman & Sing, 2024). Addressing these challenges requires robust strategies to manage stress and balance work-life dynamics effectively.

The Yerkes-Dodson law posits that optimal stress levels improve cognitive functions like memory, attention, and problem-solving (Liu et al., 2024). Understanding and managing these stressors is particularly relevant in remote work environments (Alam et al., 2024). Employers must provide tools and strategies to optimize employee performance and well-being.

Remote work can hinder creativity and innovation. Collaborative tasks requiring team interaction often suffer due to the lack of physical presence. Innovation thrives on collective brainstorming, which is less effective in virtual settings (Al-Dmour et al., 2023). Organizations must find ways to foster collaboration in remote environments.

Online labor platforms, a common avenue for remote work, highlight the role of skills in determining wages and career growth. However, these platforms often limit opportunities for skill development, necessitating new approaches to training and education (Braesemann et al., 2022).

Remote work environments must prioritize physical well-being, mental health, and ergonomic setups. A conducive indoor environment and

adequate technological facilities are essential for maintaining productivity and overall health (Tleuken et al., 2022). Without such measures, remote workers risk experiencing adverse effects on their health and performance.

2.2. Leadership and Remote Work

The widespread shift to remote work has precipitated a profound transformation in the organizational landscape, necessitating a reevaluation of leadership paradigms to sustain engagement, productivity, and employee well-being in dispersed environments. Transformational leadership, self-leadership, and communication emerge as pivotal frameworks in addressing the challenges intrinsic to this new mode of working. Their combined application underscores the need for adaptive, innovative, and contextually relevant approaches to leadership in remote settings, particularly as organizations contend with heightened autonomy, reduced face-to-face interactions, and complex team dynamics (Jones & Schöning, 2021).

Transformational leadership, traditionally regarded as a catalyst for fostering motivation, innovation, and psychological safety, encounters distinct challenges when transposed into the virtual sphere. The reliance on personal interactions and emotional resonance complicates its effectiveness in remote environments. Research suggests that transformational leadership enhances psychological safety but may inadvertently reduce job satisfaction in remote work due to diminished relational dynamics (Jones & Schöning, 2021). To adapt, leaders must embrace empathetic communication and digital tools to foster trust and engagement. Transparent leader-member exchanges play a critical role in

bridging relational gaps, sustaining the motivational essence of this leadership style even in virtual contexts (Qin, 2024).

Self-leadership is essential in remote work environments, where autonomy amplifies the need for employees to exercise proactive self-regulation. Strategies like goal-setting, self-reward, and reflective self-monitoring empower individuals to navigate remote work complexities while aligning their tasks with organizational imperatives (Patterer et al., 2024). This is particularly effective when combined with psychological safety, which enhances the impact of self-leadership strategies by enabling employees to manage their roles effectively and mitigate challenges such as isolation and burnout (Sjöblom et al., 2022). This synergy fosters resilience and sustains productivity, underscoring the importance of creating environments that prioritize both autonomy and support.

Effective communication underpins successful leadership in remote work, mitigating the spatial and relational divides inherent in virtual environments. Transparent, consistent, and strategic communication facilitates trust and alignment, reinforcing cultural cohesion and organizational objectives (Qin, 2024). The deliberate use of diverse communication tools, tailored to individual needs, fosters inclusivity and responsiveness, helping leaders replicate elements of in-person interactions and maintain relational depth (Wontorczyk & Rożnowski, 2022). This approach is critical in bridging the disconnects often associated with remote work, ensuring employees feel valued and connected.

Small and medium-sized enterprises (SMEs) face unique challenges in adapting leadership practices to remote work, often constrained by limited resources. These organizations benefit from innovative and flexible leadership development programs tailored to the digital age, particularly

when addressing the preferences of Generation Z. This generation values work-life balance and digital fluency, which necessitates leadership approaches that integrate online training and emphasize inclusivity (Török-Kmoskó & Dajnoki, 2024). Such initiatives not only address generational preferences but also foster a culture of continuous learning, critical for organizational resilience in a remote work context.

The interplay between transformational leadership, self-leadership, and effective communication delineates a multifaceted approach to navigating the complexities of remote work. These frameworks, when applied synergistically, foster engagement, trust, and resilience, enabling organizations to thrive in dispersed environments. Leaders must integrate the motivational aspects of transformational leadership with the autonomy encouraged by self-leadership, supported by advanced communication strategies. This integration creates a cohesive and adaptive workforce capable of navigating the evolving dynamics of work.

As organizations continue to embrace remote and hybrid work arrangements, the role of leadership becomes increasingly pivotal. By recalibrating traditional models to meet the demands of dispersed teams and investing in innovative leadership development strategies, organizations can overcome present challenges and position themselves for sustained success in a digital and distributed future.

2.2.1 Transformational Leadership

Transformational leadership (TL) represents a leadership style that transcends traditional transactional models by focusing on inspiring, motivating, and empowering followers to achieve extraordinary outcomes. Pioneered by James MacGregor Burns in 1978 and later refined by Bernard

Bass, TL emphasizes the role of vision, personal connection, and intellectual stimulation in fostering change and innovation (Zhang, 2024).

Transformational leadership is characterized by four key dimensions. The first, idealized influence, refers to leaders who act as role models by exemplifying high ethical standards and building trust and respect among their followers. They set clear expectations and inspire others through their behavior and commitment to organizational goals, as highlighted by Cjvit and Göncü-Köse (2024). The second dimension, inspirational motivation, involves leaders articulating a compelling vision that fosters optimism and unites followers under a shared purpose, emphasizing enthusiasm and confidence in achieving collective objectives, as noted by Oh (2024). The third, intellectual stimulation, is demonstrated by leaders who encourage innovation by challenging assumptions, fostering creativity, and promoting problem-solving. They support their followers in questioning conventional practices and exploring novel solutions, as described by Zhang (2024). Finally, individualized consideration focuses on recognizing the unique needs and strengths of each follower. Leaders provide personalized support and development opportunities, enhancing their followers' sense of competence and commitment to both personal and organizational goals. (Cjvit & Göncü-Köse, 2024).

Transformational leaders elevate followers' aspirations and align their personal goals with collective objectives. By instilling confidence and demonstrating self-sacrificing behaviors, leaders create a sense of autonomy and competence, motivating followers to exceed expectations (Benchea & Ilie, 2023). Studies indicate that TL fosters intrinsic motivation, leading to sustained engagement and improved performance (Oh, 2024).

TL is instrumental in fostering an environment conducive to innovation. Intellectual stimulation encourages employees to think critically

and approach challenges creatively. This dynamic promotes collaboration and the exploration of new ideas, enhancing organizational adaptability (Zhang, 2024).

Transformational leaders promote team cohesion by aligning diverse perspectives under a shared vision. This alignment reduces conflicts and fosters trust, improving decision-making and collective performance (Oh, 2024). Team cohesion is further strengthened by the leader's ability to demonstrate empathy and recognize individual contributions, thereby enhancing collaboration and morale (Benchea & Ilie, 2023).

At an organizational level, TL influences culture by embedding shared values and ethical principles. Leaders act as cultural architects, shaping norms that prioritize innovation, inclusivity, and employee well-being. This cultural transformation enhances organizational performance and resilience in dynamic environments (Zhang, 2024).

In educational settings, TL plays a critical role in inspiring teachers and fostering collective commitment to student success. By creating supportive environments, transformational leaders drive significant improvements in teaching quality and student outcomes (Zhang, 2024).

In the business sector, TL has proven effective in navigating complex challenges and driving organizational change. Leaders leverage their vision to align teams with strategic objectives, fostering adaptability and competitive advantage. The emphasis on intellectual stimulation and individualized consideration further enhances employee engagement and innovation (Cjvit & Göncü-Köse, 2024).

The rise of digital technologies has introduced new dimensions to TL. Digital leaders integrate traditional principles with digital tools to enhance communication, collaboration, and decision-making. This approach

enables organizations to navigate digital transformation while maintaining a human-centric focus (Sivulca et al., 2024). Digital leadership underscores the importance of agility, inclusivity, and continuous learning in adapting to technological advancements (Eberl & Drews, 2021). While TL's visionary focus is a strength, it can also pose challenges. Leaders must ensure that their aspirations are grounded in practical strategies and supported by adequate resources.

TL's emphasis on individualized consideration requires leaders to recognize and adapt to diverse follower needs. However, achieving this level of personalization can be resource-intensive and challenging in large organizations. Effective delegation and the use of technology can help mitigate these challenges (Oh, 2024). As ethical role models, transformational leaders face heightened scrutiny. Maintaining transparency, integrity, and accountability is essential to uphold trust and credibility. Leaders must navigate ethical dilemmas carefully to avoid undermining their influence (Oh, 2024).

Future TL practices must prioritize diversity and inclusion, recognizing the value of diverse perspectives in fostering innovation and resilience. Leaders should create environments where all employees feel valued and empowered to contribute (Zhang, 2024). And the integration of digital tools and platforms presents opportunities to enhance TL. Leaders can use technology to personalize support, facilitate collaboration, and gather real-time feedback. This approach enables more effective communication and decision-making in dynamic environments (Eberl & Drews, 2021).

Leadership training programs should focus on cultivating TL competencies, including emotional intelligence, ethical decision-making, and strategic visioning. Continuous learning and mentorship can help

leaders adapt to evolving organizational needs and challenges (Cheng et al., 2024).

Transformational leadership is a powerful approach that inspires individuals and drives organizational success. By focusing on vision, innovation, and personalized support, transformational leaders create environments that empower employees and foster resilience. This empowering environment is particularly relevant in remote work contexts, where transformational leadership may play a critical role in promoting the development of self-leadership among remote workers (H1). While challenges exist, the principles of TL provide a robust framework for navigating complex organizational landscapes. As the workplace continues to evolve, embracing TL will be critical to achieving sustainable growth and positive societal impact. Therefore, the following hypothesis is defined:

H1: The transformational leadership promotes a development of self-leadership on remote worker

2.2.2. Self-leadership

Self-leadership is a critical concept in contemporary leadership and organizational studies, emphasizing the ability of individuals to guide themselves toward achieving personal and professional goals. Self-leadership integrates behavioral, cognitive, and motivational strategies that enable individuals to manage their actions and thoughts effectively (Harari et al., 2021). This explores the principles, strategies, and impacts of self-leadership, with insights from key studies and theoretical frameworks.

Self-leadership is a self-influencing process that involves purposeful actions aligned with personal standards, values, and goals. Unlike self-

management, which focuses on adhering to externally set standards, self-leadership is rooted in internally driven control processes (Harari et al., 2021). It is built upon three core principles. First, self-regulation and reflection serve as foundational elements, enabling individuals to exercise control over their thoughts and actions through self-set standards and evaluative feedback, while also assessing outcomes and adjusting strategies to achieve desired results (Harari et al., 2021). Second, self-leadership fosters intrinsic motivation by aligning tasks with personal values and interests, encouraging individuals to find personal meaning in their actions, which enhances engagement and satisfaction (Krampitz et al., 2021). Finally, it emphasizes personal accountability, promoting ownership of decisions and behaviors, which strengthens the ability to navigate challenges and remain focused on objectives (van Dorssen-Boog et al., 2021). Self-leadership involves a range of strategies categorized into behavioral-focused, constructive thought patterns, and natural rewards strategies.

Behavioral strategies are designed to guide and regulate individual actions. Key strategies include: Self-Observation: This involves monitoring one's behaviors to identify patterns and areas for improvement. Self-observation raises awareness of unproductive habits and encourages positive changes (Harari et al., 2021); Self-Goal Setting: Individuals set specific and challenging goals based on self-reflection, enhancing performance and motivation (Van Dorssen-Boog et al., 2021); Self-Rewards and Punishments: These strategies involve reinforcing desired behaviors through positive outcomes and correcting undesired actions with constructive feedback (Harari et al., 2021). As you seen in Table1.

These strategies focus on developing positive cognitive frameworks to influence behavior. Examples include: Self-Talk: Positive self-dialogue fosters resilience and emotional regulation in challenging situations (Botke & Van

Woerkom, 2023); Mental Imagery: Visualizing successful task completion enhances confidence and preparedness (Van Dorssen-Boog et al., 2021); Evaluation of Assumptions: Identifying and challenging distorted beliefs or mental filters helps in creating realistic and adaptive perspectives (Harari et al., 2021). By emphasizing the inherent satisfaction in tasks and focusing on enjoyable aspects of work, self-leadership strategies enable individuals to sustain motivation even for less appealing activities, ultimately enhancing personal performance, organizational effectiveness, and overall well-being (Van Dorssen-Boog et al., 2021).

Table 1 – Description of Behavior Strategies

Aspect	Behavioral Strategies	Cognitive Strategies
Focus	Regulate actions and behaviors	Shape thoughts and mental frameworks
Examples	Self-Observation, Self-Goal Setting, Self-Rewards and Punishments	Self-Talk, Mental Imagery, Evaluation of Assumptions
Purpose	Improve behavior by monitoring, setting goals, and reinforcing or correcting actions	Enhance motivation, emotional regulation, and resilience through mental techniques
Key Mechanism	External behavior regulation through feedback and structured planning	Internal thought management through reflection and mental rehearsal
Contribution to Performance	Encourages consistency, accountability, and behavioral change	Builds confidence, adaptability, and positive mindset
Combined Benefit	When used together, these strategies support sustained motivation, greater	

	effectiveness, and overall well-being	
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Source: Author's Own Work

Self-leadership directly impacts productivity and goal achievement. By fostering self-regulation and intrinsic motivation, individuals can maintain high levels of performance even in the absence of external supervision (Van Dorssen-Boog et al., 2021). In team settings, self-leadership contributes to collaborative effectiveness by promoting self-accountability and proactive engagement (Liu & Gu, 2024). Self-leadership strategies, such as self-rewards and positive self-talk, enhance emotional resilience and reduce stress. By aligning actions with personal values, individuals experience greater satisfaction and reduced burnout (Yildirim-Hamurcu & Terzioglu, 2022). Organizations benefit from self-leadership as it reduces the need for micromanagement and enhances employee autonomy. Empowered individuals contribute to a positive work culture characterized by trust, innovation, and accountability (Kim & Beehr, 2023). Self-leadership is applicable across various contexts, including education, healthcare, and corporate environments.

In educational settings, self-leadership helps students and educators manage their tasks and responsibilities effectively. By fostering self-regulation and reflective practices, individuals can achieve academic and professional excellence (Heiskanen et al., 2024). For professionals in emotionally demanding roles, such as healthcare, self-leadership skills like emotional regulation and detached concern are critical. These skills enable them to maintain compassion while protecting themselves from emotional exhaustion (Botke & Van Woerkom, 2023). In corporate settings, self-leadership enhances adaptability and innovation. Empowering leadership

styles that emphasize self-leadership principles foster collaboration, reduce job boredom, and promote professional growth (Kim & Beehr, 2023).

While self-leadership offers numerous benefits, it is not without challenges. Key limitations include: Over-Reliance on Individual Effort: Excessive emphasis on self-leadership can lead to neglect of team dynamics and external support systems (Liu & Gu, 2024); Cognitive Overload: Self-leadership requires significant mental effort, which can lead to decision fatigue and reduced effectiveness over time (Botke & Van Woerkom, 2023); Inequitable Application: Not all individuals possess the same capacity for self-leadership due to differences in skills, resources, and organizational support (Krampitz et al., 2021).

To maximize the potential of self-leadership, future efforts should focus on: Training and Development: Leadership development programs should incorporate self-leadership strategies to enhance individuals' capacity for self-regulation and motivation (George-Puskar et al., 2024); Technological Integration: Digital tools can support self-leadership by providing feedback, tracking progress, and facilitating reflective practices (Kim & Beehr, 2023); Inclusive Practices: Organizations should ensure equitable access to resources and support systems that enable self-leadership for all employees (Krampitz et al., 2021).

Self-leadership is a transformative approach that empowers individuals to take control of their actions and thoughts, driving personal and organizational success. By integrating behavioral, cognitive, and motivational strategies, self-leadership fosters resilience, innovation, and well-being. This is particularly important in remote work settings, where self-leadership may significantly enhance the sense of well-being experienced by remote workers (H2). Despite its challenges, the principles of self-leadership provide a robust framework for navigating complex professional

landscapes and achieving meaningful outcomes. Thus, we present the following hypothesis:

H2: *The self-leadership increase the sensation of well-being on remote worker*

2.2.3. HSP Scale

The concept of environmental sensitivity has gained increasing relevance in recent decades, being widely investigated in psychology due to individual differences in the ability to respond to environmental stimuli (Aron & Aron, 1997). Sensory Processing Sensitivity (SPS) emerges as a fundamental trait that determines the degree of susceptibility to adverse and positive experiences (Pluess et al., 2023). Approximately 20% to 30% of the population exhibit high levels of SPS, characterized by greater emotional reactivity and profound analysis of sensory information, which makes them more vulnerable to environmental stressors but also more responsive to positive incentives (Onesti et al., 2024).

Recent studies indicate that environmental sensitivity, as a phenotypic construct, can be reliably assessed by instruments such as the Highly Sensitive Person Scale, HSP (Pluess et al., 2023). This scale captures three main subdimensions: ease of excitation, low sensory threshold, and aesthetic sensitivity. Research shows that individuals with high HSP scores are more predisposed to intense emotional experiences, both negative and positive (Aron & Aron, 1997). This high sensitivity is associated with personality traits such as neuroticism and openness to experience, suggesting that these individuals are more susceptible to the influence of the environment, for better or worse (Pluess et al., 2023).

The interaction between environmental sensitivity, occupational stressors, and leadership styles has also been explored. Research indicates that individuals with high levels of SPS are more likely to experience high levels of work stress but can also significantly benefit from positive workplace resources, such as supervisor support and job autonomy (Pluess et al., 2023). A democratic leadership style, for example, tends to mitigate the negative effects of occupational stress, especially for highly sensitive individuals, promoting greater overall well-being (Onesti et al., 2024).

The impact of leadership styles on workplace well-being is significant. While autocratic styles are associated with lower satisfaction and higher stress levels, democratic approaches promote greater job satisfaction and affective commitment (Aron & Aron, 1997). Furthermore, leaders who adopt a "let-it-be" or laissez-faire style may both increase stress and promote well-being, depending on the organizational structure and employee competence. These findings highlight the importance of leadership styles that align with the individual needs of workers (Onesti et al., 2024; Pluess et al., 2023).

In the field of organizational psychology, it is essential to understand how occupational stressors affect individuals differently, depending on their level of sensitivity. Less sensitive individuals tend to be more resilient to adverse conditions, while those more sensitive are more affected, both positively and negatively (Aron & Aron, 1997). This aligns with the differential susceptibility theory, which proposes that highly sensitive individuals not only suffer more in negative environments but also disproportionately benefit from positive contexts (Pluess et al., 2023).

Research on environmental sensitivity also has practical implications for organizational management. Implementing psychological support programs or creating a positive work environment can bring

disproportionate benefits to highly sensitive workers, resulting in greater productivity and overall well-being. Such programs may include training in emotional intelligence for leaders, promoting autonomy, and reducing excessive workloads (Onesti et al., 2024).

However, there are methodological challenges in researching environmental sensitivity. Although the HSP is a valuable instrument, it presents limitations in distinguishing certain sensitivity traits from related personality aspects, such as anxiety and openness. Future studies should explore additional measures and adopt experimental approaches to examine the influence of sensitivity on life experiences (Pluess et al., 2023).

Another relevant point is the role of cultural context in the expression of environmental sensitivity. Evidence suggests that the quality of the environment during childhood, including family support and adverse experiences, shapes sensitivity levels throughout life (Aron & Aron, 1997). This reinforces the importance of longitudinal and cross-sectional studies to identify factors that enhance or mitigate the effects of high sensitivity in the workplace and everyday life (Pluess et al., 2023).

The integration of positive leadership styles in the workplace is one of the most promising strategies to promote well-being among sensitive workers. Democratic or laissez-faire leaders, when well-implemented, can attenuate the impact of stressors and create a more favorable environment for personal and professional growth. This is a field of research that continues to evolve, offering insights on how to improve workplace well-being (Onesti et al., 2024).

In conclusion, the study of environmental sensitivity and its impact in different contexts provides a rich theoretical basis for practical interventions in organizations. By understanding how leadership styles and workplace resources interact with individual differences in sensitivity, it is possible to

create more inclusive and productive environments, maximizing human potential. In particular, considering the HSP trait as a moderating factor may help explain variations in how self-leadership influences well-being among remote workers (H3). Future research should continue to explore these dynamics, integrating innovative methodologies and multidisciplinary approaches (Onesti et al., 2024; Pluess et al., 2023). Based on this, the following hypothesis is put forward:

H3: *The HSP trait moderates the effect between self-leadership and well-being*

2.3. Leadership and Future Perspectives for Remote Work

The COVID-19 pandemic significantly transformed workplace dynamics, accelerating the adoption of remote work and reshaping leadership strategies. As highlighted by Rotimi et al. (2024) and Efimov et al. (2024), the evolving relationship between telework and leadership presents both challenges and opportunities, requiring innovative approaches to sustain productivity and well-being.

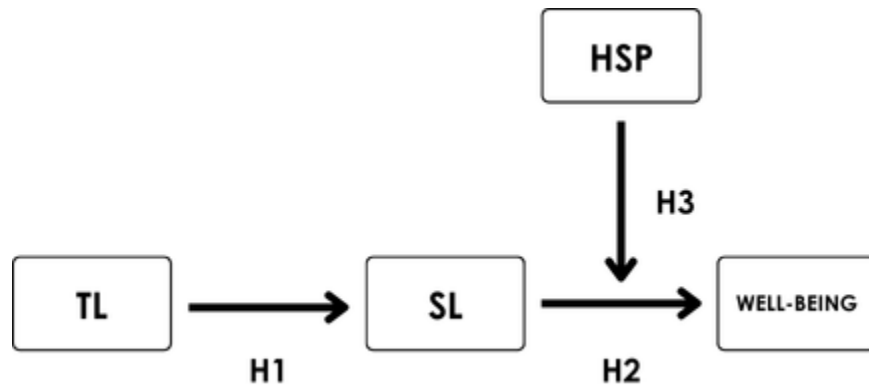
Leadership plays a pivotal role in addressing remote work complexities. Efimov et al. (2024) emphasize the importance of health-oriented leadership (HoL), where leaders prioritize self-care to model and promote healthy behaviors. This proactive approach equips leaders to manage remote teams more effectively, fostering engagement and resilience. Rotimi et al. (2024) align with this perspective, advocating for adaptive measures such as flexible schedules and personalized support to meet the diverse needs of remote teams.

The future of telework also depends on leveraging technology to bridge gaps between professional and personal spheres. Rotimi et al. (2024) discuss the growing reliance on digital tools, emphasizing their role in enhancing collaboration and monitoring team well-being. However, Efimov et al. (2024) caution that insufficient training and limited access to user-friendly technologies may hinder their effectiveness. Future strategies must focus on comprehensive training programs and investment in intuitive tools to enable efficient virtual leadership.

Ultimately, the integration of leadership strategies and technological advancements will shape the future of remote work. By embracing flexibility, fostering continuous improvement, and prioritizing mental and physical well-being, leaders can build resilient teams and navigate the evolving telework landscape effectively.

2.4. Conceptual model and hypotheses

This study aims to explore the dynamics linking Transformational Leadership (TL), Self-Leadership (SL), the High Sensitive Person (HSP), and well-being in organizational settings. This conceptual model seeks to deepen the understanding of the mechanisms through which different leadership styles and individual characteristics influence health and well-being at work, as well as the processes that can enhance or mediate these effects.



H1: The transformational leadership promotes a development of self-leadership on remote worker

H2: The self-leadership increase the sensation of well-being on remote worker

H3: The HSP trait moderates the effect between self-leadership and well-being

The proposed model is grounded on three main hypotheses: the first (H1) suggests that transformational leadership positively influences self-leadership, highlighting the role of transformational leaders in inspiring employees to develop self-management skills, autonomy, and intrinsic motivation. The second hypothesis (H2) examines the relationship between self-leadership and employee well-being, arguing that a higher capacity for self-regulation and personal initiative is associated with improvements in emotional balance, job satisfaction, and overall health. Lastly, the third hypothesis (H3) proposes that the High Sensitive Person (HSP) plays a moderation role by identifying how individual characteristics, such as high sensitivity, influence the connection between self-leadership and well-being. This construct evaluates how highly sensitive individuals process and react to

stimuli in the workplace, impacting their emotional experiences and perceptions of well-being.

3. Methodology

3.1. Research Procedures and Methods

To conduct this research and test the hypotheses, a quantitative approach was adopted using a structured online questionnaire as the primary data collection instrument. The questionnaire was carefully designed for clarity and relevance, incorporating validated scales from existing academic literature to ensure reliability and validity. Hosting the survey online facilitated accessibility and maximized response rates by allowing participants to complete it conveniently on their preferred devices.

Participation in the study was voluntary, with participants recruited through digital channels such as email and social media platforms to ensure a diverse sample of individuals with telework experience. Respondents were informed that the survey would take no more than 10 minutes, minimizing their time commitment while collecting data on transformational leadership, self-leadership, and well-being.

To uphold ethical standards, the survey was fully anonymous, and all responses were treated with strict confidentiality. No identifying information was collected, and participants were assured the data would be used exclusively for academic purposes. Respondents retained the right to withdraw at any time without repercussions. By proceeding, participants confirmed their understanding and consented to participate in the study.

The questionnaire consists of three sections and targets employees working under telework arrangements, either fully or partially, who have a direct leader whose performance can be assessed.

The questionnaire was divided to cover the primary theoretical constructs discussed (i.e., transformational leadership, self-leadership, and positive leadership in the context of telework) and link them to the development of workplace well-being, especially focusing on the balance between personal and professional life for teleworkers.

The questionnaire was created using Google Forms, a free digital platform provided by Google, which ensures the confidentiality and security of respondents' data. The survey was distributed in 2025 through various online social networking platforms, including LinkedIn, Facebook, and Instagram. Additionally, it was shared via the author's personal and professional networks and email contacts. To further expand the sample and ensure diversity among respondents, the survey was also disseminated via Prolific, an online research platform that connects researchers with a wide pool of participants while maintaining high standards of data quality and participant diversity.

At the beginning of the questionnaire, participants were instructed to complete it based on their relationship with their direct leaders and managers. Additionally, they will be asked to perform a self-assessment of all the points presented, considering their work relationships specifically on telework days. The questionnaire will also include demographic questions aimed at gathering essential background information, such as age, gender, education level, and professional experience. These questions will provide context for the analysis and ensure a comprehensive understanding of the sample's characteristics.

3.2. Sample

This study was based on a total of 339 responses, but just 330 valid responses (work in remote work at least in the past 6 months), collected from a diverse sample of individuals (49,7% feminine, 49,4% masculine), representing a wide range of nationalities and countries of residence. The majority of participants are concentrated between the ages of 25 and 35, with the highest frequencies observed at ages 27 (8.2%) and 28 (7.6%). And, the high level of international representation in the sample offers a valuable foundation for understanding cross-cultural perspectives and experiences within the context of the study.

The most common nationality among respondents was American, accounting for 118 individuals. This was followed by British nationals (65), Portuguese (35), Spanish (16), and Nigerian (15). The remainder of the sample included participants from over 40 additional nationalities, such as German, Italian, Dutch, Pakistani, French, Brazilian, and others, including less represented groups such as Haitian, Peruvian, Latvian, and Serbian individuals. This broad range of nationalities contributed to a comprehensive and nuanced understanding of global perspectives.

In terms of country of residence, the most frequently reported location was the United States (126 participants), followed by the United Kingdom (100 participants), Portugal (39 participants), Spain (19), and Germany (19). Other countries of residence included the Netherlands, France, Finland, South Africa, Sweden, Ireland, and more. This data suggests not only national diversity, but also that many individuals live outside their countries of origin, potentially offering insights informed by cross-cultural or expatriate experiences.

This level of demographic diversity enhances the external validity of the study's findings. The large number of American and British participants is consistent with typical patterns in international research recruitment, particularly through digital platforms. Meanwhile, the considerable proportion of Portuguese respondents reflects either the recruitment context or institutional ties, providing a local complement to the otherwise international scope.

The variety in countries of residence also suggests varying cultural, social, and economic environments that may influence participants' responses. For instance, individuals residing in the USA or UK may be subject to different societal norms, policies, and institutional structures than those residing in continental European countries, which can affect their experiences and perspectives. Furthermore, the representation of individuals from countries in different stages of economic development (e.g., Portugal, Nigeria, Germany, and Haiti) adds to the socio-economic diversity of the sample.

Overall, the sample reflects a well-distributed mix of participants from both Western and non-Western contexts, across multiple continents, including North America, Europe, Africa, and Asia. Such diversity is particularly important when examining phenomena that may be culturally or contextually contingent. Moreover, it offers the potential for subgroup analyses, such as comparing experiences across continents or between native residents and expatriates.

In conclusion, the demographic profile of the sample ensures both depth and breadth in the study's findings. It offers a strong basis for drawing insights that are generalizable to a broader population while also supporting more targeted analyses by nationality or geographic region. The

international nature of the respondents reinforces the relevance and applicability of the study's outcomes across a global context.

3.3. Variables and Measurement Scales

This study examines the relationships between Well-Being, Transformational Leadership (TL), Self-Leadership (SL), and the High Sensitive Person (HSP) in remote work.

Remote Work. The remote work experience of 339 respondents, where the majority (64.6%) report that they sometimes work remotely, while 24.5% are currently working exclusively remotely. A small proportion only work remotely very occasionally, have worked remotely in the past six months, or more than six months ago. Very few respondents have never had any experience working remotely, aligning with the questionnaire's requirement for prior remote work experience.

Well-Being (Russell & Daniels, 2018, cit em Nascimento, J., 2021). The questionnaire begins by assessing participants' general feelings about their telework situation using a 6-point Likert scale, where 1 represents "I do not feel this way at all" and 6 represents "I feel this way very strongly." These items aim to gauge participants' perceptions of telework challenges and opportunities, setting the foundation for understanding their overall experiences in this work arrangement. The focus here is to evaluate how telework influences both professional and personal domains.

Transformational Leadership (Rafferty & Griffin, 2004, cit em Nascimento, J., 2021). The next section evaluates participants' perceptions of their leader's behavior, particularly transformational leadership practices, and how these behaviors influence the telework experience. Participants will

respond using a 5-point Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree." This section is key to examining the influence of leadership on creating a supportive, motivating, and productive remote work environment, which impacts employee performance and well-being.

Self-leadership (Houghton & Neck 2002, cit em Nascimento, J., 2021), a crucial variable in the model, will be assessed through items asking participants to evaluate their self-management and autonomous work practices. Responses will use a 5-point Likert scale, where 1 represents "not true at all" and 5 represents "completely true." This section explores how participants regulate their work schedules, manage distractions, and maintain productivity while working remotely. These insights will help identify the role of self-leadership in enhancing well-being and performance.

HSP Scale (Pluess, M. et al., 2023). The final sections of the questionnaire examine the participants' sensitivity in the telework context. Items in these section aim to understand how individual trait, such as sensitivity (HSP), moderation the relationships between leadership behaviors, self-leadership, and well-being. The scales used ensure a comprehensive assessment of the emotional, psychological, and professional balance that teleworkers experience.

4. DATA ANALYSIS

The data to be collected will be analyzed using statistical methods to identify relationships and trends between transformational leadership, self-leadership, and well-being in the telework environment. Descriptive and inferential analyses will be conducted using appropriate software tools to derive meaningful insights. This methodology will ensure a robust and ethical approach to studying the influence of leadership in promoting well-being within the context of remote work.

The initial processing and coding of respondent information will be performed using Microsoft Excel. Subsequently, the dataset will be imported into IBM SPSSv29, a statistical software, to enable univariate and multivariate descriptive analysis. This approach will allow for the characterization of the study sample, the evaluation of the questionnaire's reliability and its dimensional groupings, and the identification of associations and correlations between variables.

The data were collected through a questionnaire, which received a total of 339 responses. Of these, 330 were considered valid, while 9 were excluded from the analysis.

4.1. Cronbach Alpha

The assessment of internal consistency using Cronbach's alpha is a fundamental step in validating the reliability of the scales used in this study. We examined the homogeneity of the items comprising the main constructs (well-being, transformational leadership, self-leadership, and HSP) to determine whether each scale consistently measures the intended phenomenon. Alpha values of 0.70 or higher were considered indicative of adequate reliability, a key criterion to ensure that subsequent analyses, such as correlations and regressions, are based on robust measures. This analysis is further justified using scales adapted from different cultural contexts, given that the study's sample is international.

4.1.1 Well-Being

Table 2 – Internal consistency of the well-being

Dimension	Items	Cronbach's Alpha
Well-being	1. Happy	0,851
	2. Comfortable	
	3. Anxious	
	4. Upset	
	5. Motivated	
	6. Calm	
	7. Tired	
	8. Bored	
	9. Sad	
	10. Active	

Source: Author's Own Work

The internal consistency of the well-being scale was assessed using Cronbach's alpha. The scale consisted of ten affective items representing a

mix of positive (e.g., happy, comfortable, motivated, calm, active) and negative (e.g., anxious, upset, tired, bored, sad) emotional states. The overall Cronbach's alpha was 0.851, indicating good internal reliability and suggesting that the items consistently measure the same underlying construct of well-being.

This high level of internal consistency suggests that the inclusion of both positively and negatively worded items—presumably with appropriate reverse scoring—did not adversely affect the scale's reliability. As such, the scale appears to provide a reliable measure of affective well-being.

4.1.2 Transformational Leadership

Table 3 – Internal consistency of the transformational leadership dimensions

Dimension	Items	Cronbach's Alpha
Articuled Vision	1. The leader has a clear understanding of the direction to follow. 2. The leader has a clear vision of where they want the company to be in five years. 3. The leader has no idea where the organization is heading.	0,667
Inspirational Communication	1. The leader says things that make employees feel proud to be part of the company. 2. The leader speaks positively about the department. 3. The leader encourages people to view changing environments as full of opportunities.	0,831
Intellectual Stimulation	1. The leader challenges me to think about old problems in new ways.	0,806

	2. The leader shares ideas that make me rethink things I had never questioned before. 3. The leader challenges me to reconsider some of my basic assumptions about my work.	
Supportive Leadership	1. The leader considers my personal feelings before taking action. 2. The leader behaves in ways that take my personal needs into account. 3. The leader ensures that employees' interests are properly considered.	0,884
Personal Recognition	1. The leader praises me when my performance is above average. 2. The leader acknowledges improvements in the quality of my work. 3. The leader personally praises me when I do excellent work.	0,889

Source: Author's Own Work

The internal consistency of the five dimensions of transformational leadership was assessed using Cronbach's alpha. Each dimension was measured with three items. The results indicated acceptable to high internal consistency for most dimensions, except for *Articulated Vision*, which showed a lower alpha value.

Specifically, the *Articulated Vision* dimension yielded a Cronbach's alpha of 0.667, which is slightly below the commonly accepted threshold of 0.70. This may be attributed to the inclusion of a negatively worded item ("The leader has no idea where the organization is heading") that may not have been reverse-coded. The other dimensions demonstrated good internal consistency: *Inspirational Communication* ($\alpha = 0.831$), *Intellectual Stimulation* ($\alpha = 0.806$), *Supportive Leadership* ($\alpha = 0.884$), and *Personal Recognition* ($\alpha = 0.889$).

= 0.889). These results suggest that the scales used for these four dimensions are reliable in capturing their respective constructs.

Future studies may consider revising the *Articulated Vision* items to improve reliability, possibly by ensuring reverse-scoring is applied where appropriate or by rewording negatively framed statements for better conceptual alignment.

4.1.3 Self-Leadership

Table 4 – Internal consistency of the self-leadership dimensions

Dimension	Items	Cronbach's Alpha
Visualizing successful performance	1, 10, 19, 27, 33	0,863
Self-goal setting	2, 11, 20, 28, 34	0,852
Self-talk	3, 12, 21	0,882
Self-reward	4, 13, 22	0,893
Evaluating beliefs and assumptions	5, 14, 23, 29	0,763
Self-punishment	6, 15, 24, 30	0,800
Self-observation	7, 16, 25, 31	0,784
Focusing thoughts on natural rewards	8, 17, 26, 32, 35	0,752
Self-cueing	9, 18	0,776

Source: Author's Own Work

The self-leadership construct was assessed across nine dimensions using a multi-item scale. Each dimension demonstrated acceptable to excellent internal consistency based on Cronbach's alpha values.

The dimension *Visualizing Successful Performance* yielded a high alpha of 0.863, indicating strong reliability. Similarly, *Self-Goal Setting* ($\alpha = 0.852$), *Self-Talk* ($\alpha = 0.882$), and *Self-Reward* ($\alpha = 0.893$) all demonstrated excellent internal consistency. The dimension *Evaluating Beliefs and*

Assumptions showed a moderate reliability level ($\alpha = 0.763$), which is still within an acceptable range.

The more introspective dimensions—*Self-Punishment* ($\alpha = 0.800$), *Self-Observation* ($\alpha = 0.784$), *Focusing Thoughts on Natural Rewards* ($\alpha = 0.752$), and *Self-Cueing* ($\alpha = 0.776$)—also reported acceptable internal consistency. These results suggest that the scale is a reliable tool for measuring various facets of self-leadership.

Notably, the subscale *Self-Punishment* includes negatively valenced items. However, its alpha indicates consistent responses within the construct, suggesting that these items function as expected and likely do not require reverse scoring.

Taken together, the self-leadership scale shows good psychometric properties across its nine dimensions, supporting its use in further empirical analysis.

4.1.4 HSP

Table 5 – Internal consistency of the HSP dimensions

Dimension	Items	Cronbach's Alpha
EOE (Ease of Excitation)	1, 5, 11, 14, 16, 19, 21, 23, 24, 26	0,901
AES (Aesthetic Sensitivity)	2, 8, 10, 15, 22	0,726
LST (Low Sensory Threshold)	3, 4, 6, 7, 9, 13, 17, 18, 20, 25, 27	0,844

Source: Author's Own Work

The internal consistency of the three dimensions of the Highly Sensitive Person (HSP) scale was assessed using Cronbach's alpha. Each dimension was composed of a distinct set of items intended to capture specific aspects

of sensory-processing sensitivity. The results indicated acceptable to high internal consistency across all three dimensions.

Specifically, the Ease of Excitation (EOE) dimension demonstrated the highest internal consistency with a Cronbach's alpha of 0.901, suggesting excellent reliability in measuring the tendency to become mentally overwhelmed by external and internal demands. The Low Sensory Threshold (LST) dimension also showed strong reliability, with an alpha of 0.844, indicating that the scale items reliably capture individuals' sensitivity to low-intensity stimuli. In contrast, the Aesthetic Sensitivity (AES) dimension yielded a Cronbach's alpha of 0.726, which, while above the conventional cutoff of 0.70, was comparatively lower than the other two dimensions. This suggests acceptable but somewhat reduced internal consistency, potentially due to the subjective nature of aesthetic perception or item content variability.

Overall, these findings support the reliability of the HSP scale dimensions, with particularly strong measurement properties for EOE and LST. Future research may explore refinement of the AES items to enhance internal consistency, possibly by clarifying item wording or increasing the number of items targeting the aesthetic experience construct.

4.2. Correlations

4.2.1. Articulated Vision vs Self-Leadership

Table 6 – Articulated Vision vs Dimensions of Self-Leadership

Dimension	Coefficient of Pearson	P – value ($H_0: \rho = 0$)
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Visualizing successful performance	0,359	0,001
Self-goal setting	0,341	0,001
Self-talk	0,218	0,001
Self-reward	0,250	0,001
Evaluating beliefs and assumptions	0,371	0,001
Self-punishment	0,138	0,012
Self-observation	0,374	0,001
Focusing thoughts on natural rewards	0,335	0,001
Self-cueing	0,129	0,019

Source: Author's Own Work

Table 5 presents the correlation between articulated vision and various dimensions of self-leadership, measured using Pearson's correlation coefficient and associated p-values. All listed dimensions show statistically significant positive correlations with articulated vision ($p < 0.05$), indicating that as individuals develop a clearer vision, their self-leadership behaviors tend to improve. The strongest correlations are observed with self-observation ($r = 0.374$), evaluating beliefs and assumptions ($r = 0.371$), and visualizing successful performance ($r = 0.359$), suggesting these aspects are most closely aligned with having a clearly articulated vision.

Conversely, the weakest correlations are found with self-cueing ($r = 0.129$) and self-punishment ($r = 0.138$), although still significant, indicating that these behaviors may be less influenced by one's vision clarity. Overall, the data support the idea that a well-defined vision enhances a range of self-leadership strategies, especially those related to cognitive and evaluative processes.

4.2.2. Inspirational Leadership vs Self-Leadership

Table 7 – Inspirational Communication vs Dimensions of Self-Leadership

Dimension	Coefficient of Pearson	P – value ($H_0: \rho = 0$)
Visualizing successful performance	0,397	0,001
Self-goal setting	0,455	0,001
Self-talk	0,226	0,001
Self-reward	0,310	0,001
Evaluating beliefs and assumptions	0,526	0,001
Self-punishment	0,094	0,087
Self-observation	0,479	0,001
Focusing thoughts on natural rewards	0,522	0,001

Self-cueing	0,246	0,001
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Source: Author's Own Work

Table 6 explores the relationship between inspirational communication and various self-leadership dimensions, presenting Pearson correlation coefficients and their corresponding p-values. The data reveal significant positive correlations ($p < 0.05$) between inspirational communication and all dimensions of self-leadership except for self-punishment, which shows a weak and statistically insignificant relationship ($r = 0.094$, $p = 0.087$). The strongest associations are with evaluating beliefs and assumptions ($r = 0.526$), focusing thoughts on natural rewards ($r = 0.522$), and self-observation ($r = 0.479$), indicating that inspirational communication is particularly effective in enhancing reflective and motivational aspects of self-leadership.

Moderate correlations are also seen with self-goal setting ($r = 0.455$) and visualizing successful performance ($r = 0.397$), underscoring the influence of inspirational messages in shaping cognitive strategies. These findings suggest that leaders who communicate in an inspiring way may significantly boost key self-leadership behaviors, especially those linked to internal motivation and self-awareness.

4.2.3. Intellectual Stimulation vs Self-Leadership

Table 8 – Intellectual Stimulation vs Dimensions of Self-Leadership

Dimension	Coefficient of Pearson	P – value ($H_0: \rho = 0$)
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Visualizing successful performance	0,381	0,001
Self-goal setting	0,422	0,001
Self-talk	0,175	0,001
Self-reward	0,235	0,001
Evaluating beliefs and assumptions	0,537	0,001
Self-punishment	0,132	0,016
Self-observation	0,358	0,001
Focusing thoughts on natural rewards	0,441	0,001
Self-cueing	0,209	0,001

Source: Author's Own Work

Table 7 presents the correlations between intellectual stimulation and various dimensions of self-leadership, using Pearson's correlation coefficients and significance values. All the correlations are statistically significant, with p-values below 0.05, although the strength of association varies. The highest correlation is with evaluating beliefs and assumptions ($r = 0.537$), suggesting that intellectual stimulation strongly encourages critical self-reflection. This is followed by focusing thoughts on natural rewards ($r = 0.441$) and self-goal setting ($r = 0.422$), indicating that intellectually stimulating environments may foster intrinsic motivation and strategic thinking. Moderate associations are

found with visualizing successful performance ($r = 0.381$) and self-observation ($r = 0.358$).

Meanwhile, the weakest but still significant correlations are seen with self-talk ($r = 0.175$), self-cueing ($r = 0.209$), and self-punishment ($r = 0.132$), the latter being the only dimension with a p-value slightly higher ($p = 0.016$), though still below the standard 0.05 threshold. These results highlight the role of intellectual stimulation in enhancing reflective and motivational self-leadership behaviors, especially those that require deeper cognitive engagement.

4.2.4. Supportive Leadership vs Self-Leadership

Table 9 – Supportive Leadership vs Dimensions of Self-Leadership

Dimension	Coefficient of Pearson	P – value ($H_0: \rho = 0$)
Visualizing successful performance	0,334	0,001
Self-goal setting	0,342	0,001
Self-talk	0,013	0,812
Self-reward	0,234	0,001
Evaluating beliefs and assumptions	0,463	0,001
Self-punishment	0,081	0,140

Self-observation	0,336	0,001
Focusing thoughts on natural rewards	0,399	0,001
Self-cueing	0,181	0,001

Source: Author's Own Work

Table 8 examines the correlations between supportive leadership and various dimensions of self-leadership. Most dimensions show statistically significant positive correlations ($p < 0.05$), indicating that supportive leadership is generally associated with improved self-leadership behaviors. The strongest relationships are observed with evaluating beliefs and assumptions ($r = 0.463$) and focusing thoughts on natural rewards ($r = 0.399$), suggesting that support from leaders may enhance reflective thinking and intrinsic motivation.

Other notable correlations include self-goal setting ($r = 0.342$), visualizing successful performance ($r = 0.334$), and self-observation ($r = 0.336$), all significant at the 0.001 level. However, self-talk shows an extremely weak and statistically insignificant correlation ($r = 0.013$, $p = 0.812$), implying no meaningful relationship. Likewise, self-punishment ($r = 0.081$, $p = 0.140$) does not reach significance. These findings suggest that supportive leadership mainly reinforces constructive and motivational self-leadership strategies, while having little to no influence on more critical or punitive internal dialogues.

4.2.5. Personal Recognition vs Self Leadership

Table 10 – Personal Recognition vs Dimensions of Self-Leadership

Dimension	Coefficient of Pearson	P – value ($H_0: \rho = 0$)
Visualizing successful performance	0,373	0,001
Self-goal setting	0,375	0,001
Self-talk	0,108	0,049
Self-reward	0,271	0,001
Evaluating beliefs and assumptions	0,448	0,001
Self-punishment	0,124	0,024
Self-observation	0,376	0,001
Focusing thoughts on natural rewards	0,478	0,001
Self-cueing	0,146	0,001

Source: Author's Own Work

Table 9 investigates the relationship between personal recognition and various dimensions of self-leadership. All dimensions show statistically significant correlations, though the strength of the associations varies considerably. The strongest relationships are with focusing thoughts on

natural rewards ($r = 0.478$), evaluating beliefs and assumptions ($r = 0.448$), and self-observation ($r = 0.376$), highlighting how personal recognition may enhance internal motivation and reflective thinking. Moderate correlations are seen with self-goal setting ($r = 0.375$) and visualizing successful performance ($r = 0.373$), reinforcing the role of recognition in supporting strategic and motivational self-leadership behaviors.

On the other hand, weaker correlations are found for self-talk ($r = 0.108$, $p = 0.049$), self-punishment ($r = 0.124$, $p = 0.024$), and self-cueing ($r = 0.146$, $p = 0.001$), suggesting these are less influenced by recognition. Notably, despite the significance, the low coefficients in these dimensions imply a limited practical impact. Overall, personal recognition appears to most effectively support cognitive and motivational components of self-leadership.

The present study investigates the relationship between transformational leadership and self-leadership among remote workers, with a specific focus on testing Hypothesis 1: "Transformational leadership promotes the development of self-leadership in remote workers." In the context of remote work—where direct supervision is limited and autonomy is elevated—self-leadership becomes a critical factor in maintaining productivity, motivation, and self-regulation. Therefore, examining the influence of transformational leadership on self-leadership is both timely and significant, with practical implications for managing distributed teams.

The analysis is based on Tables 5 to 9, which explore the correlations between five dimensions of transformational leadership (articulated vision, inspirational communication, intellectual stimulation, individualized support, and personal recognition) and nine dimensions of self-leadership. Across all tables, statistically significant positive correlations were observed for the

majority of the dimensions, providing robust empirical support for the proposed hypothesis.

Among the most prominent findings, the dimension evaluating beliefs and assumptions consistently demonstrated the strongest correlations with transformational leadership components—particularly with intellectual stimulation ($r = 0.537$) and inspirational communication ($r = 0.526$). Additionally, focusing thoughts on natural rewards and self-observation also showed consistently strong associations across multiple leadership dimensions, indicating that transformational leadership may enhance intrinsic motivation and self-awareness in remote work contexts.

In contrast, dimensions such as self-punishment, self-talk, and self-cueing exhibited weaker correlations, some of which were not statistically significant—for instance, the correlation between individualized support and self-talk was negligible ($r = 0.013$, $p = 0.812$). These findings suggest that transformational leadership more effectively fosters reflective, motivational, and strategic aspects of self-leadership, while having a more limited impact on reactive or punitive self-regulation mechanisms.

In conclusion, the results indicate that transformational leadership plays a meaningful role in fostering self-leadership among remote employees, thereby validating Hypothesis 1. This highlights the importance of transformational leadership behaviors—such as providing inspiration, intellectual challenge, and recognition—in cultivating autonomous and self-directed work behaviors in virtual and decentralized environments.

4.3. Self-Leadership vs Well-being

Table 11 – Correlation: Self-Leadership vs Well-being

Dimension	Coefficient of Pearson	P – value ($H_0: \rho = 0$)
Well-Being	0,435	0,001

Source: Author's Own Work

In relation to H2 — that self-leadership increases the sensation of well-being in remote workers — the Pearson correlation coefficient is 0.435, which reflects a moderate positive relationship. The p-value is also 0.001, indicating statistical significance. Therefore, this hypothesis is supported, suggesting that self-leadership is positively and significantly associated with well-being, although the relationship is not as strong as that observed for H1. The positive but moderate association suggests that well-being when working remotely depends not only on self-leadership, but also on contextual factors such as organisational support and workload, as observed by Van Dorssen-Boog et al. (2021). Overall, the data indicates that while both hypotheses are supported, the influence of transformational leadership on self-leadership is stronger than the influence of self-leadership on well-being.

4.4. Regression

A moderation analysis was conducted using Model 1 of the PROCESS macro for SPSS (Hayes, 2022), with the aim of investigating whether the variable HSP moderates the relationship between Self-Leadership

(independent variable) and Well-being (dependent variable). The sample consisted of 330 participants.

The overall model was statistically significant, $R^2 = .2425$, $F(3, 326) = 34.79$, $p < .001$, indicating that the set of predictor variables explained approximately 24% of the variance in Well-being.

The variable Self-Leadership showed a marginally significant effect on Well-being ($B = 0.544$, $SE = 0.300$, $t = 1.81$, $p = .070$), suggesting a tendency for higher levels of Self-Leadership to be associated with higher values of Well-being. However, this association did not reach the conventional level of statistical significance ($p < .05$). The variable HSP was not a significant predictor ($B = -0.354$, $p = .170$). Crucially, the interaction term between Self-Leadership and HSP was also not statistically significant ($B = 0.050$, $p = .471$), indicating no evidence of a moderating effect.

The results obtained indicate that there was no evidence of moderation by the variable HSP in the relationship between self-leadership and well-being. Although self-leadership showed a tendency toward a positive association with well-being, this relationship was not statistically significant at the 5% level. Furthermore, neither HSP alone nor its interaction with self-leadership significantly contributed to the prediction of well-being. The absence of moderation by HSP ($\beta = 0.050$, $p = 0.471$) contradicts the initial hypothesis, but aligns with recent studies (Pluess et al., 2023), which suggest that sensitivity traits may be less significant in environments offering high autonomy, such as remote working.

The absence of moderation suggests that the effect of Self-Leadership on Well-being occurs relatively consistently, regardless of levels of HSP. These findings may indicate that HSP, although theoretically relevant, does not influence the strength or direction of the relationship between Self-Leadership and Well-being within the present model (Aron & Aron, 1997).

5. DISCUSSION

The results of this study provide relevant empirical evidence regarding the importance of transformational leadership and self-leadership in promoting the well-being of employees in remote work contexts. Consistent with prior literature (Harari et al., 2021; Çivit & Göncü-Köse, 2024), a significant correlation was found between transformational leadership behaviors and self-leadership strategies, supporting Hypothesis 1. Specifically, dimensions such as inspirational communication and intellectual stimulation were strongly associated with self-leadership behaviors like evaluating beliefs and assumptions and focusing on natural rewards. These results suggest that leaders who intellectually challenge their employees and articulate a compelling vision are more likely to foster internal self-regulatory capacities—an essential factor in settings where direct supervision is limited.

Regarding Hypothesis 2, a moderate and significant correlation was observed between self-leadership and well-being ($r = 0.435$; $p < 0.001$), reinforcing previous studies that highlight the role of self-regulation in sustaining emotional balance and productivity (Van Dorssen-Boog et al., 2021; Botke & Van Woerkom, 2023). Strategies such as self-praise, visualization of successful performance, and goal-setting appear to mitigate the adverse effects of isolation, contributing to positive affective states such as motivation and calmness.

However, Hypothesis 3—which proposed that the Highly Sensitive Person (HSP) trait would moderate the relationship between self-leadership and well-being—was not supported. This was somewhat surprising, especially in light of differential susceptibility theory (Pluess et al., 2023), which posits that highly sensitive individuals are more responsive to both negative and

positive environments. A possible explanation is that remote work environments, which often offer greater autonomy and reduced sensory input compared to face-to-face settings, may neutralize the differential impact of sensitivity. Additionally, a lack of variability in HSP traits within the sample may have reduced the statistical power needed to detect such effects.

Another unexpected finding was the relatively weak influence of transformational leadership on certain self-leadership dimensions, such as self-punishment and self-talk, which showed low or statistically insignificant correlations. This may indicate that despite transformational encouragement, more critical or punitive self-regulatory strategies are not directly shaped by leadership behaviors and may depend more on other factors such as individual coaching or structured feedback systems.

On the other hand, the strong association between personal recognition from leaders and the focus on natural rewards by employees reinforces the idea that external positive reinforcement can enhance internal motivation. This aligns with prior literature on the synergy between intrinsic and extrinsic rewards (Van Dorssen-Boog et al., 2021).

In summary, the findings support the notion that in remote work contexts, transformational leadership is not only relevant but essential to foster self-leadership practices that, in turn, promote employee well-being. However, individual traits such as high sensitivity appear to be less influential than initially expected, at least in environments characterized by autonomy and limited sensory stimuli.

5.1. Limitations of the Study

This study offers valuable insights into the relationship between transformational leadership, self-leadership, and well-being in remote work settings. However, several limitations should be considered when interpreting the findings.

A primary limitation lies in the cross-sectional nature of the research design, which restricts the ability to draw causal inferences. Although significant associations were identified between the main variables, the directionality of these relationships remains uncertain. To better understand the causal mechanisms, future research would benefit from longitudinal or experimental approaches that track changes over time.

Another important limitation concerns the use of self-reported questionnaires for data collection. This method is inherently subject to potential biases, such as social desirability or inaccurate self-perception. As a result, participants' responses may reflect subjective impressions rather than objective evaluations of leadership behaviors, self-leadership capabilities, or well-being levels. While the sample included individuals from diverse national backgrounds, it was not evenly distributed, with a large portion of respondents originating from English-speaking countries. This imbalance may have influenced the results, particularly in areas like leadership perception and well-being, which are shaped by cultural expectations and values. As such, generalizability to non-Western populations may be limited.

Additionally, the non-significant moderating effect of HSP suggests possible contextual or methodological constraints. Remote work environments, which typically offer higher levels of autonomy, may reduce the salience of environmental sensitivity traits. It is also possible that the HSP

scale used in this study did not capture sufficient variability within the sample, thereby diminishing its explanatory power.

Finally, external organizational factors such as company culture, workload demands, or the quality of technological infrastructure were not accounted for in the analysis. These factors can substantially influence employee experiences in remote settings and may interact with leadership and self-leadership dynamics in complex ways. Taken together, these limitations underscore the importance of adopting more comprehensive and methodologically diverse approaches in future research. Incorporating longitudinal data, alternative data collection methods, and broader contextual variables will contribute to a deeper understanding of how leadership and individual traits shape well-being in contemporary work environments.

5.2. Theoretical and Practical Implications

This study offers meaningful theoretical contributions to the fields of organizational behavior and leadership within remote work contexts. Notably, it reinforces the applicability of transformational leadership theory in virtual environments, where direct, face-to-face interaction is limited (Jones & Schöning, 2021). The significant association between transformational leadership and self-leadership suggests that core dimensions of transformational behavior - such as inspirational motivation, intellectual stimulation, and individualized consideration—retain their effectiveness in digital settings. Likewise, the study supports the integration of self-leadership theory into the conversation on employee well-being. In contexts of high autonomy, such as remote work, self-leadership strategies

(e.g., goal setting, self-observation, self-reward) appear to play a key role in sustaining emotional balance and personal motivation. Although the hypothesized moderating role of High Sensitive Person (HSP) was not confirmed, its inclusion represents a novel theoretical direction that opens the door to further research on how individual differences may shape the effects of leadership and self-regulation in virtual contexts (Pluess et al., 2023).

From a practical perspective, the findings offer clear insights for leaders, employees, and organizations seeking to optimize performance and well-being in remote environments. For leaders, the evidence highlights the importance of adopting transformational behaviors—such as articulating a compelling vision, providing emotional support, and offering recognition—to foster employee engagement and self-leadership. These practices are particularly critical when physical oversight is limited, and workers must rely more heavily on internal motivation (Harari et al., 2021). For employees, the results underscore the value of developing self-leadership skills to enhance their own well-being and productivity (Harari et al., 2021). Techniques such as positive self-talk, self-goal setting, and mental visualization of successful performance can help individuals maintain focus, confidence, and psychological resilience in distributed work settings (Van Dorssen-Boog et al., 2021). Finally, organizations are encouraged to invest in leadership development programs that emphasize emotional intelligence, communication, and empowerment, while also integrating self-leadership training into employee development initiatives (Van Dorssen-Boog et al., 2021). Doing so can help cultivate a more autonomous, resilient, and adaptable workforce. Overall, the study emphasizes the importance of creating organizational cultures that effectively balance autonomy and

support, enabling both leaders and employees to thrive in the evolving landscape of remote and hybrid work (Patterer et al., 2024).

5.3. Future Research

Building on the findings and limitations of this study, several promising avenues for future research can be identified. One of the most important next steps is the use of longitudinal research designs to examine how the relationships between transformational leadership, self-leadership, and well-being unfold over time. Unlike cross-sectional studies, longitudinal approaches can clarify causality and help determine whether leadership behaviors precede changes in self-leadership and well-being or vice versa. Such studies would provide a deeper understanding of how these constructs interact and evolve in dynamic remote or hybrid work contexts.

Another potential direction involves the exploration of alternative individual difference variables beyond High Sensitive Person (HSP), whose moderating effect was not supported in this study. Traits such as emotional intelligence, resilience, or introversion-extraversion may offer stronger explanatory power when it comes to understanding how individuals respond to leadership and self-regulation demands in remote environments. Moreover, future studies could benefit from employing alternative frameworks or multidimensional measures of environmental sensitivity, potentially yielding richer insights into the role of personal characteristics in workplace well-being.

Additionally, adopting mixed-methods approaches that combine quantitative analysis with qualitative interviews or focus groups could provide a more nuanced perspective on how employees experience leadership, manage themselves, and maintain well-being in virtual settings.

These methods would capture contextual subtleties that are often missed in purely statistical analyses, particularly around perceptions of trust, autonomy, and emotional support.

Future research should also broaden its scope to compare different work modalities, including hybrid and fully in-person arrangements. Such comparative studies could assess whether the mechanisms linking leadership and well-being differ depending on the structure of work, physical proximity, or frequency of team interactions. Likewise, it would be valuable to investigate whether the strength of these relationships varies across professional sectors such as technology, education, or healthcare, where the nature of remote work may differ considerably.

Lastly, cultural influences should be more explicitly integrated into future research. Although this study included participants from multiple countries, a deeper cross-cultural analysis could reveal how norms, values, and leadership expectations vary across cultures and affect leadership effectiveness, self-leadership behaviors, and well-being outcomes. Emphasizing cultural context would enhance the global applicability and relevance of leadership models in increasingly international and remote workforces.

By addressing these directions, future research can contribute to the development of more inclusive, flexible, and evidence-based frameworks that reflect the realities of modern organizational life and support diverse employee needs in remote and hybrid work environments.

6. Conclusion

The primary aim of this study was to analyze the relationship between transformational leadership, self-leadership, and well-being in the context of remote work, while also considering the moderating role of individual sensitivity (HSP). The pandemic and the resulting consolidation of telework have brought new demands to leadership practices and workers' self-regulation, highlighting the importance of theoretical and practical models that prioritize psychological well-being and autonomy in contemporary organizational management.

The results confirmed the first two hypotheses of the proposed model. Statistical analysis revealed a positive and significant relationship between transformational leadership and the development of self-leadership (H1), showing that leaders who adopt inspiring, motivational, and supportive behaviors tend to enhance their employees' ability to self-manage effectively in virtual environments. This finding underscores the relevance of leadership practices that foster autonomy, trust, and individual growth, particularly in remote work settings.

Likewise, the data supported the second hypothesis (H2), indicating that self-leadership is positively associated with the well-being of remote workers. Although the strength of this relationship was moderate, the results suggest that strategies such as personal goal-setting, self-control, and self-motivation can contribute to a more balanced and satisfying work experience (Harari et al., 2021). However, the analysis showed that the moderating effect of individual sensitivity (HSP) on the relationship between self-leadership and well-being (H3) was not statistically significant. These results indicate that while sensitivity may influence how individuals experience the work environment, it does not substantially alter the impact

of self-leadership on well-being, at least under the conditions assessed in this study.

Some limitations of this research must be acknowledged, such as its cross-sectional design, which limits the ability to establish causal relationships, and the use of self-reported data, which may introduce perception biases. Additionally, the non-significance of HSP as a moderating variable suggests that future research should employ complementary methodologies or different samples to further explore its potential influence (Pluess et al., 2023).

From a practical standpoint, the findings reinforce the importance of adopting transformational leadership styles and developing self-leadership skills to enhance well-being in remote work environments. Effective leaders who can communicate a clear vision, provide emotional support, and recognize individual contributions play a vital role in creating healthy and motivating work contexts. At the same time, encouraging self-leadership among employees proves to be a strategic asset for organizations aiming for agility, resilience, and innovation during times of change.

In conclusion, this study contributes to the understanding of leadership and well-being dynamics in remote work by proposing an integrated approach that acknowledges both the leader's role and the employee's individual agency in their personal and professional development. As remote work becomes increasingly common, these conclusions gain additional relevance for managers, researchers, and HR professionals alike.

References

- Addison, L., & Shapiro, J. (2023). Coach for positive (Coach4+): using the intersection of positive psychology, positive organisational psychology and executive leadership coaching to facilitate positive leadership outcomes. *Coaching: An International Journal of Theory, Research and Practice*, 16(2), 219-232.
- Alam S, Khazaei S, Faghih RT (2024) Unveiling productivity: The interplay of cognitive arousal and expressive typing in remote work. *PLoS ONE* 19(5): e0300786. <https://doi.org/10.1371/journal.pone.0300786>
- Al-Dmour, H., Al Hasan, R., Thneibat, M., Masa'deh, R. E., Alkhadra, W., Al-Dmour, R., & Alalwan, A. (2023). Integrated model for the factors determining the academic's remote working productivity and engagement: Empirical study. *SAGE Open*, 13(3), 21582440231194393. <https://doi.org/10.1177/21582440231194393>
- Aron, E. N., & Aron, A. (1997). Sensory-processing sensitivity and its relation to introversion and emotionality. *Journal of personality and social psychology*, 73(2), 345.
- Beland L-P, Brodeur A, Wright T (2023) The short-term economic consequences of COVID19: Exposure to disease, remote work and government response. *PLoS ONE* 18(3): e0270341. <https://doi.org/10.1371/journal.pone.0270341>
- Benchea, L., & Ilie, A. G. (2023). Preparing for a New World of Work: Leadership Styles Reconfigured in the Digital Age. *European Journal of Interdisciplinary Studies*, 15(1). <http://doi.org/10.24818/ejis.2023.10>
- Bermúdez-González, G., Lucia-Casademunt, A. M., & Padilla-Angulo, L. (2024). What can talent management do about involuntary remote

working in the post-COVID-19 era? Spanish IT employees' organizational commitment. *Humanities and Social Sciences Communications*, 11(1), 1-15. <https://doi.org/10.1057/s41599-024-03514-3>

Botke, J. A., & van Woerkom, M. (2023). The effect of self-leadership training on detached concern and the proactivity of human service professionals. *International Journal of Training and Development*, 27(2), 281-300.

Braesemann F, Stephany F, Teutloff O, Ka'ssi O, Graham M, Lehdonvirta V (2022) The global polarisation of remote work. *PLoS ONE* 17(10): e0274630. <https://doi.org/10.1371/journal.pone.0274630>

Cheng, Z., Zhu, C., & Dinh, N. B. K. (2024). Perceived changes in transformational leadership: The role of motivation and perceived skills in educational leadership training under an EU-China cooperation project. *European Journal of Education*, e12636. <https://doi.org/10.1111/ejed.12636>

Çivit, S., & Göncü-Köse, A. (2024). Relationships of Transformational and Paternalistic Leadership Styles With Follower Needs, Multidimensional Work Motivations and Organizational Commitment: A Mediated Model. *Psychological Reports*, 00332941241226905. <https://doi.org/10.1177/00332941241226905>

George-Puskar, A., Beavers, E., Bruns, D., & Lindner, C. (2024). Process of Self-Leadership: Establishing Yourself as Leader No Matter Your Role. *International Journal of Education Policy and Leadership*, 20(1), 1-16.

- Harari, M. B., Williams, E. A., Castro, S. L., & Brant, K. K. (2021). Self-leadership: A meta-analysis of over two decades of research. *Journal of Occupational and Organizational Psychology*, 94(4), 890-923.
- Heiskanen, N., Karhu, A., Savolainen, H., & Närhi, V. (2024). Implementing positive behaviour intervention and support in Finnish early childhood education and care: leadership team's perspective. *European Journal of Special Needs Education*, 39(2), 265-280.
- Kim, M., & Beehr, T. A. (2023). Empowering leadership improves employees' positive psychological states to result in more favorable behaviors. *The International Journal of Human Resource Management*, 34(10), 2002-2038.
- Krampitz, J., Seubert, C., Furtner, M., & Glaser, J. (2021). Self-leadership: A meta-analytic Review of Intervention Effects on Leaders' Capacities. *Journal of Leadership Studies*, 15(3), 21-39.
- Liu, M., & Gu, Q. (2024). Does Shared Leadership Always Have Positive Effects on Employee Creativity? A Role Conflict Perspective. *Journal of Leadership & Organizational Studies*, 31(4), 420-432.
- Liu, Y., Fuller, B., Hester, K., & Chen, H. (2023). Authentic leadership and employees' job performance: mediation effect of positive employee health. *Journal of Management Analytics*, 10(3), 566-582.
- Morikawa, M. (2023). Productivity dynamics of remote work during the COVID-19 pandemic. *Industrial Relations: A Journal of Economy and Society*, 62(3), 317-331. <https://doi.org/10.1111/irel.12327>
- Oh, Y. (2024). Team Cohesion in Records/Martial Arts Sport Athletes: Transformational Leadership and the Role of Narcissism. *SAGE Open*, 14(2), 21582440241248900. <https://doi.org/10.1177/21582440241248900>

- Pluess, M., Lionetti, F., Aron, E. N., & Aron, A. (2023). People differ in their sensitivity to the environment: An integrated theory, measurement and empirical evidence. *Journal of Research in Personality*, 104, 104377.
- Rahman, S. Y. A., & Sing, R. D. R. (2024). Remote Work Dynamics in Semiconductor MNCs in Klang Valley: The Impact of Work Environment, Technological Infrastructure, and Work-Life Balance on Employee Productivity Moderated by Gender. *International Review of Management and Marketing*, 14(6), 400-408.
<https://doi.org/10.32479/irmm.17104>
- Sivulca, A. D., Abrudan, M. M., Sala, D. C., & Bibu, N. (2024). Navigational Dynamics In The Digital Age: Digital Leadership And E-Leadership In Organizational Transformation. *THE ANNALS OF THE UNIVERSITY OF ORADEA*, 33(1st), 618.
- Tleuken, A., Turkyilmaz, A., Sovetbek, M., Durdyev, S., Guney, M., Tokazhanov, G., ... & Karaca, F. (2022). Effects of the residential built environment on remote work productivity and satisfaction during COVID-19 lockdowns: An analysis of workers' perceptions. *Building and Environment*, 219, 109234.
<https://doi.org/10.1016/j.buildenv.2022.109234>
- van Dorssen-Boog, P., van Vuuren, T., de Jong, J. P., & Veld, M. (2021). Facilitating health care workers' self-determination: The impact of a self-leadership intervention on work engagement, health, and performance. *Journal of occupational and organizational psychology*, 94(2), 259-281.
- Watermeyer, R., Knight, C., Crick, T., & Borrás, M. (2023). 'Living at work': COVID-19, remote-working and the spatio-relational reorganisation of

professional services in UK universities. *Higher Education*, 85(6), 1317-1336. <https://doi.org/10.1007/s10734-022-00892-y>

Yildirim-Hamurcu, S., & Terzioglu, F. (2022). Nursing students' perceived stress: Interaction with emotional intelligence and self-leadership. *Perspectives in psychiatric care*, 58(4), 1381-1387.

Zhang, Y. (2024). The Mediation Role of Teacher Recognition Between Transformational Leadership and Teacher Professionalism: A Multilevel Mediation Analysis. *Educational Administration Quarterly*, 60(4), 383-417. <https://doi.org/10.1177/0013161X241263845>

ANNEXES

QUESTIONNAIRE

Introduction



Leadership and Telework

Hello,

As part of the Master's thesis in Marketing Management at IPAM - Instituto Português de Administração e Marketing, in Lisbon, Portugal, I am conducting this survey to evaluate transformational leadership and self-leadership as enhancers of well-being in a telework context. Your responses are extremely valuable for the development of this study. It will take no more than **5 minutes** to complete.

Your participation in this study will be greatly valued as it will contribute to the advancement of knowledge in this field of science. There are no significant expected risks associated with participation in the study.

The participation in the study is strictly voluntary: you can choose to participate or not to participate. If you have chosen to **participate**, you may discontinue participation at any time without having to provide any justification. In addition to being voluntary, participation is also **anonymous** and **confidential**. The data obtained is intended only for statistical treatment and no response will be analyzed or reported individually. At no point in the study do you will to identify yourself.

By proceeding, you confirm that you understand and agree to participate in the research.

If you have any questions about this study or the questionnaire, you can request more information by contacting pedro.furtado.valente@gmail.com (Pedro Valente).

Thank you for your contribution!

* Indica uma pergunta obrigatória

I have read the informed consent and agree to participate in this study voluntarily. *

☐ Yes

☐ No

Mobile Position

Mobile position

If you are answering this questionnaire on a mobile phone, please rotate it to the **horizontal position**.



Remote Work

Remote work

To proceed with answering this questionnaire, **you must have had some experience as a remote worker.** *

Please select one of the following options:

- ☐ I am currently working exclusively remotely
- ☐ I sometimes work remotely
- ☐ I only work remotely very occasionally
- ☐ I am not currently working remotely, but I have in the past six months
- ☐ I have worked remotely, but more than six months ago
- ☐ I have never had any experience working remotely

Well-Being

For each of the following items, please indicate on a scale from 1 to 6 (1=I do not feel this way at all, 6=I feel this way very strongly) how you feel about **your current telework situation**:

(if you are not in telework at the moment, please consider the last professional experience you had)

	1 - I do not f...	2	3	4	5	6 - I feel this ...
Happy	☐	☐	☐	☐	☐	☐
Comfortable	☐	☐	☐	☐	☐	☐
Anxious	☐	☐	☐	☐	☐	☐
Upset	☐	☐	☐	☐	☐	☐
Motivated	☐	☐	☐	☐	☐	☐
Calm	☐	☐	☐	☐	☐	☐
Tired	☐	☐	☐	☐	☐	☐
Bored	☐	☐	☐	☐	☐	☐
Sad	☐	☐	☐	☐	☐	☐
Active	☐	☐	☐	☐	☐	☐

Leader's Behavior

Fill in the information below, keeping in mind your **leader's behavior** and **your telework context**. For accurate completion, use a scale from 1 to 5 (1=strongly disagree, 5=strongly agree):

	1 - strongly dis...	2	3	4	5 - strongly agr...
Has a clear un...	☐	☐	☐	☐	☐
Has a clear visi...	☐	☐	☐	☐	☐
Has no idea wh...	☐	☐	☐	☐	☐
Says things tha...	☐	☐	☐	☐	☐
Speaks positiv...	☐	☐	☐	☐	☐
Encourages pe...	☐	☐	☐	☐	☐
Challenges me ...	☐	☐	☐	☐	☐
Has ideas that ...	☐	☐	☐	☐	☐
Challenges me ...	☐	☐	☐	☐	☐
Considers my ...	☐	☐	☐	☐	☐
Behaves in a w...	☐	☐	☐	☐	☐
Ensures that e...	☐	☐	☐	☐	☐
Praises me wh...	☐	☐	☐	☐	☐
Recognizes im...	☐	☐	☐	☐	☐
Personally prai...	☐	☐	☐	☐	☐

Self-Leadership

Read each of the following items and determine how true each statement is based on a scale *
from 1 to 5 (1=not true at all, 5=completely true):

	1 - not true at all	2	3	4	5 - completely
I use my mind t...	☐	☐	☐	☐	☐
I set specific g...	☐	☐	☐	☐	☐
Sometimes I ta...	☐	☐	☐	☐	☐
When I perfor...	☐	☐	☐	☐	☐
I think about m...	☐	☐	☐	☐	☐
I tend to feel d...	☐	☐	☐	☐	☐
I make sure to ...	☐	☐	☐	☐	☐
I focus my tho...	☐	☐	☐	☐	☐
I make written ...	☐	☐	☐	☐	☐
I visualize mys...	☐	☐	☐	☐	☐
I consciously k...	☐	☐	☐	☐	☐
Sometimes I ta...	☐	☐	☐	☐	☐
When I do som...	☐	☐	☐	☐	☐
I try to mentally...	☐	☐	☐	☐	☐
I tend to be har...	☐	☐	☐	☐	☐
I am usually a...	☐	☐	☐	☐	☐
I try to surroun...	☐	☐	☐	☐	☐
I use concrete r...	☐	☐	☐	☐	☐
Sometimes I l...	☐	☐	☐	☐	☐
I work toward s...	☐	☐	☐	☐	☐
When I am in dl...	☐	☐	☐	☐	☐
When I succes...	☐	☐	☐	☐	☐
I articulate and...	☐	☐	☐	☐	☐
I feel guilty wh...	☐	☐	☐	☐	☐
I pay attention ...	☐	☐	☐	☐	☐
When I can, I tr...	☐	☐	☐	☐	☐
I intentionally v...	☐	☐	☐	☐	☐
I think about th...	☐	☐	☐	☐	☐
I think about an...	☐	☐	☐	☐	☐
Sometimes I o...	☐	☐	☐	☐	☐
I track my prog...	☐	☐	☐	☐	☐
I seek out activ...	☐	☐	☐	☐	☐
I often mentall...	☐	☐	☐	☐	☐
I write specific ...	☐	☐	☐	☐	☐
I find my favori...	☐	☐	☐	☐	☐

HSP Scale

Answer each question according to **the way you personally feel**, using the following scale: *

	1 - Not at All	2	3	4 - Modera...	5	6	7 - Extrem...
Are you ea...	☐	☐	☐	☐	☐	☐	☐
Do you se...	☐	☐	☐	☐	☐	☐	☐
Do other p...	☐	☐	☐	☐	☐	☐	☐
Do you ten...	☐	☐	☐	☐	☐	☐	☐
Do you fin...	☐	☐	☐	☐	☐	☐	☐
Are you pa...	☐	☐	☐	☐	☐	☐	☐
Are you ea...	☐	☐	☐	☐	☐	☐	☐
Do you ha...	☐	☐	☐	☐	☐	☐	☐
Are you m...	☐	☐	☐	☐	☐	☐	☐
Are you de...	☐	☐	☐	☐	☐	☐	☐
Does your ...	☐	☐	☐	☐	☐	☐	☐
Are you co...	☐	☐	☐	☐	☐	☐	☐
Do you sta...	☐	☐	☐	☐	☐	☐	☐
Do you get...	☐	☐	☐	☐	☐	☐	☐
When peo...	☐	☐	☐	☐	☐	☐	☐
Are you an...	☐	☐	☐	☐	☐	☐	☐
Do you try ...	☐	☐	☐	☐	☐	☐	☐
Do you ma...	☐	☐	☐	☐	☐	☐	☐
Do you be...	☐	☐	☐	☐	☐	☐	☐
Does bein...	☐	☐	☐	☐	☐	☐	☐
Do change...	☐	☐	☐	☐	☐	☐	☐
Do you not...	☐	☐	☐	☐	☐	☐	☐
Do you fin...	☐	☐	☐	☐	☐	☐	☐
Do you ma...	☐	☐	☐	☐	☐	☐	☐
Are you bo...	☐	☐	☐	☐	☐	☐	☐
When you ...	☐	☐	☐	☐	☐	☐	☐
When you ...	☐	☐	☐	☐	☐	☐	☐

Demongrafics

Demographics

Age: *

A sua resposta

Sex: *

- ☐ Masculine
- ☐ Feminine
- ☐ Other

Nationality: *

A sua resposta

Country of residence: *

A sua resposta

Job: *

A sua resposta

How long ago did you start your professional activity? *

- ☐ Less than 6 months
- ☐ 6 months - 1 year
- ☐ 1 year - 5 years
- ☐ More than 5 years

How long ago did you start working remotely (part-time or full-time)? *

- ☐ Less than 6 months
- ☐ 6 months - 1 year
- ☐ 1 year - 5 years
- ☐ More than 5 years

Are you in a leadership position at your company? *

- ☐ Yes
- ☐ No

What is your highest level of education? *

- ☐ Middle School
- ☐ High School
- ☐ Technical/Vocational Course
- ☐ Bachelor's Degree
- ☐ Postgraduate Diploma
- ☐ Master's Degree
- ☐ Doctorate

Acknowledgment

Thank you for your participation and the time you dedicated to completing this questionnaire. Your responses are essential to the development of this research and will contribute significantly to the outcomes of this study!

CALCULATIONS

Cronbach Well-being

Estatísticas de confiabilidade

Alfa de Cronbach	N de itens
,851	10

Pearson Self-Leadership and Transformational Leadership

Correlações															
		Mean_TL_V	Mean_TL_CI	Mean_TL_EI	Mean_TL_LA	Mean_TL_RP	Mean_SL_F1	Mean_SL_F2	Mean_SL_F3	Mean_SL_F4	Mean_SL_F5	Mean_SL_F6	Mean_SL_F7	Mean_SL_F8	Mean_SL_F9
Mean_TL_V	Correlação de Pearson	1	,445**	,434**	,329**	,312**	,359**	,341**	,218**	,250**	,371**	,139*	,374**	,341**	,129*
	Sig. (2 extremidades)		<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	,012	<,001	<,001	,019
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_TL_CI	Correlação de Pearson	,445**	1	,578**	,547**	,602**	,397**	,455**	,226**	,310**	,526**	,094	,479**	,522**	,246**
	Sig. (2 extremidades)	<,001		<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	,087	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_TL_EI	Correlação de Pearson	,434**	,578**	1	,552**	,567**	,381**	,422**	,175**	,235**	,537**	,132*	,358**	,441**	,209**
	Sig. (2 extremidades)	<,001	<,001		<,001	<,001	<,001	<,001	,001	<,001	<,001	,016	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_TL_LA	Correlação de Pearson	,329**	,547**	,552**	1	,751**	,334**	,342**	,013	,234**	,463**	,081	,336**	,399**	,181**
	Sig. (2 extremidades)	<,001	<,001	<,001		<,001	<,001	<,001	,812	<,001	<,001	,140	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_TL_RP	Correlação de Pearson	,312**	,602**	,567**	,751**	1	,373**	,375**	,108*	,271**	,448**	,124*	,376**	,478**	,146**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001		<,001	<,001	,049	<,001	<,001	,024	<,001	<,001	,008
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F1	Correlação de Pearson	,359**	,397**	,381**	,334**	,373**	1	,650**	,329**	,407**	,642**	,221**	,541**	,575**	,222**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001	<,001		<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F2	Correlação de Pearson	,341**	,455**	,422**	,342**	,375**	,650**	1	,354**	,439**	,654**	,231**	,702**	,646**	,418**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001	<,001	<,001		<,001	<,001	<,001	<,001	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F3	Correlação de Pearson	,218**	,226**	,175**	,013	,108*	,329**	,354**	1	,336**	,387**	,379**	,307**	,318**	,301**
	Sig. (2 extremidades)	<,001	<,001	,001	,812	,049	<,001	<,001		<,001	<,001	<,001	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F4	Correlação de Pearson	,250**	,310**	,235**	,234**	,271**	,407**	,439**	,336**	1	,472**	,203**	,488**	,442**	,250**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001		<,001	<,001	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F5	Correlação de Pearson	,371**	,526**	,537**	,463**	,448**	,642**	,654**	,387**	,472**	1	,337**	,657**	,640**	,329**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001		<,001	<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F6	Correlação de Pearson	,139*	,094	,132*	,081	,124*	,221**	,231**	,379**	,203**	,337**	1	,279**	,191**	,257**
	Sig. (2 extremidades)	,012	,087	,016	,140	,024	<,001	<,001	<,001	<,001	<,001		<,001	<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F7	Correlação de Pearson	,374**	,479**	,358**	,336**	,376**	,541**	,702**	,307**	,488**	,657**	,279**	1	,603**	,379**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001		<,001	<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F8	Correlação de Pearson	,335**	,522**	,441**	,399**	,478**	,575**	,646**	,318**	,442**	,640**	,191**	,603**	1	,316**
	Sig. (2 extremidades)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001		<,001
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Mean_SL_F9	Correlação de Pearson	,129*	,246**	,209**	,181**	,146**	,222**	,418**	,301**	,250**	,329**	,257**	,379**	,316**	1
	Sig. (2 extremidades)	,019	<,001	<,001	<,001	,008	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	
	N	330	330	330	330	330	330	330	330	330	330	330	330	330	330

** A correlação é significativa no nível 0,01 (2 extremidades).

* A correlação é significativa no nível 0,05 (2 extremidades).

Correlation: Self-Leadership and Well-Being

Correlações

		Mean_SLR	Mean_W
Mean_SLR	Correlação de Pearson	1	,435**
	Sig. (2 extremidades)		<,001
	N	330	330
Mean_W	Correlação de Pearson	,435**	1
	Sig. (2 extremidades)	<,001	
	N	330	330

** . A correlação é significativa no nível 0,01 (2 extremidades).

Regression

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2

Written by Andrew F. Hayes, Ph.D.
www.afhayes.com
Documentation available in Hayes (2022).
www.guilford.com/p/hayes3

Model : 1
Y : Mean_W
X : Mean_SLR
W : M_HSP

Sample
Size: 330

OUTCOME VARIABLE:
Mean_W

Model Summary

	R	R-sq	MSE	F	df1
df2	p				

,4925 ,2425 ,4271 34,7894 3,0000
326,0000 ,0000

Model

	coeff	se	t	p	
LLCI	ULCI				
constant	3,4602	1,1095	3,1187	,0020	
1,2775	5,6429				
Mean_SLR	,5442	,2999	1,8147	,0705	-
,0457	1,1342				
M_HSP	-,3536	,2571	-1,3754	,1700	-
,8593	,1522				
Int_1	,0496	,0687	,7222	,4707	-
,0855	,1848				

Product terms key:

Int_1 : Mean_SLR x M_HSP

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0012	,5216	1,0000	326,0000	,4707

Bootstrap estimates were saved to a file

Map of column names to model coefficients:

	Conseqnt	Antecdnt
COL1	Mean_W	constant
COL2	Mean_W	Mean_SLR
COL3	Mean_W	M_HSP
COL4	Mean_W	Int_1

***** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS

OUTCOME VARIABLE:

Mean_W

	Coeff	BootMean	BootSE	BootLLCI
BootULCI				
constant	3,4602	3,4411	1,3164	,9225
6,0025				
Mean_SLR	,5442	,5497	,3431	-,1171
1,2062				

M_HSP	-,3536	-,3501	,3045	-,9424
,2244				
Int_1	,0496	,0486	,0785	-,1001
,1992				

***** ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output:
95,0000

Number of bootstrap samples for percentile bootstrap
confidence intervals:
5000

----- END MATRIX -----