

SELIN AKDUMAN

DYNAMICS OF PLAYFUL WORK DESIGN IN AGILE TEAMS

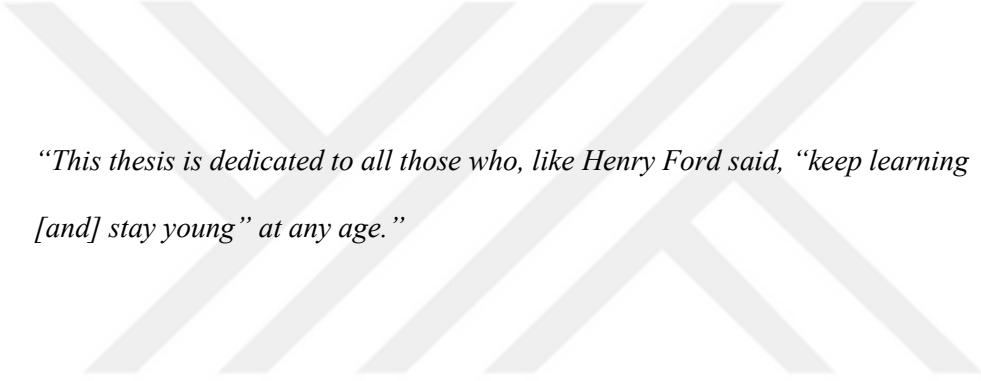
Bilkent University

DYNAMICS OF PLAYFUL WORK DESIGN IN AGILE TEAMS

A Master's Thesis

by
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Management
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Ankara
July 2025



*“This thesis is dedicated to all those who, like Henry Ford said, “keep learning
[and] stay young” at any age.”*

DYNAMICS OF PLAYFUL WORK DESIGN
IN AGILE TEAMS

The Graduate School of Economics and Social Sciences
of

İhsan Doğramacı Bilkent University

by

SELİN AKDUMAN

In Partial Fulfillment of the Requirements for the Degree of
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İHSAN DOĞRAMACI BİLKENT UNIVERSITY
ANKARA

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By Selin Akduman

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Science in Business Administration.

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ABSTRACT

DYNAMICS OF PLAYFUL WORK DESIGN IN AGILE TEAMS

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In this thesis, the dynamics of playful work design were examined within the context of agile teams. More specifically, leadership-related antecedents (i.e., transformational leadership) of playful work design and its individual-level consequences (i.e., task performance, innovative behavior, and work engagement) were investigated. Adopting a quantitative approach, data were collected from 254 individuals working in agile teams from private sector organizations. The results demonstrated that transformational leadership had a significant positive effect on playful work design, which, in turn, enhanced innovative behavior, task performance, and work engagement. These findings confirm the central role of playful work design as a mechanism translating transformational leadership into enhanced innovative behavior, task performance, and work engagement in agile teams. By emphasizing the mediating role of playful work

design, the study contributes to our understanding of how leadership styles can foster employee outcomes in agile work settings.

Keywords: Playful Work Design, Agile Teams, Transformational Leadership, Innovative Behavior, Task Performance, Work Engagement, Individual-Level Outcomes



ÖZET

ÇEVİK TAKIMLARDA OYUNLAŞTIRILMIŞ İŞ TASARIMININ DİNAMİKLERİ

Akduman, Selin

Yüksek Lisans, İşletme Bölümü

Tez Danışmanı: Doç. Dr. Zahide Karakitapoğlu Aygün

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Bu tezde, oyunlaştırılmış iş tasarımının dinamikleri çevik takımlar bağlamında incelenmiştir. Daha spesifik olarak, oyunlaştırılmış iş tasarımının liderlik temelli öncülleri (dönüştürücü liderlik) ve birey düzeyindeki sonuçları (görev performansı, yenilikçi davranış ve işe bağlılık) araştırılmıştır. Nicel bir araştırma yaklaşımı benimsenerek, özel sektör kuruluşlarında çevik takımlarda çalışan 254 kişiden veri toplanmıştır. Sonuçlar, dönüştürücü liderliğin oyunlaştırılmış iş tasarımı üzerinde anlamlı ve olumlu bir etkisi olduğunu ve bunun da yenilikçi davranışı, görev performansını ve işe bağlılığı artırdığını göstermiştir. Bu bulgular, oyunlaştırılmış iş tasarımının, dönüştürücü liderliği çevik takımlarda artan yenilikçi davranış, görev performansı ve işe bağlılığa dönüştüren merkezi bir mekanizma olarak rolünü doğrulamaktadır. Oyunlaştırılmış iş tasarımının aracılık rolünü vurgulayan bu çalışma, liderlik tarzlarının çevik iş ortamlarında çalışan çıktılarının

nasıl desteklenebileceğine dair anlayışımıza katkıda bulunmaktadır.

Anahtar Kelimeler: Oyunlaştırılmış İş Tasarımı, Çevik Takımlar, Dönüştürücü

Liderlik, Yenilikçi Davranış, Görev Performansı, İşe Bağlılık, Bireysel Düzey Sonuçlar



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CHAPTER I

INTRODUCTION

1.1 Background of the Study

As organizations evolved from small, family-run enterprises to large, complex bureaucracies, the question of how to manage work and lead people has shaped much of the industrial and post-industrial era. Classical management theories such as Frederick Taylor's scientific management (Taylor, 1911), Max Weber's bureaucratic model (Weber, 1947), and Henri Fayol's administrative theory (Fayol, 1949) prioritized efficiency, control, and hierarchy as the keys to achieving organizational success. These early approaches viewed workers primarily as components of a machine, where tasks could be optimized and tightly supervised for maximum output. Although these approaches were effective in industrial production settings, they largely neglected human aspects of organizations, such as motivation, adaptability, and creativity, elements that later became central to organizational effectiveness. This realization led to the emergence of the human relations movement (Mayo, 1933), systems theory (Katz & Kahn, 1966), and contingency approaches (Burns & Stalker, 1961), which highlighted that organizations are dynamic systems requiring adaptation to complex and changing environments.

Leadership theory also evolved significantly, moving beyond the simple command-and-control models embedded in early management thought. Transactional leadership (Bass, 1985) introduced the idea of managing by exchanges, while servant

leadership (Greenleaf, 1977) and authentic leadership (Avolio & Gardner, 2005) emphasized care, ethical behavior, and self-awareness. Among these, transformational leadership emerged as one of the most influential paradigms for its emphasis on inspiring vision, intellectual stimulation, individualized consideration, and idealized influence (Bass, 1985; Bass & Avolio, 1995). Transformational leaders have been shown to cultivate employee motivation, innovation, and commitment, making this style particularly suitable for environments characterized by volatility and rapid change (Wang & Rode, 2010; Rosing, Frese & Bausch, 2011).

Agile methodologies, first formalized in the software development industry through the Agile Manifesto (Beck, Beedle, van Bennekum, Cockburn, Cunningham, Fowler, Grenning, Highsmith, Hunt, Jeffries, Kern, Marick, Martin, Mellor, Schwaber, Sutherland, & Thomas, 2001), have since expanded into virtually every sector, from manufacturing and finance to healthcare and telecommunications (Rigby, Sutherland & Takeuchi, 2016). Agile frameworks emphasize cross-functional teams, iterative development cycles, decentralized decision-making, and continuous feedback, allowing organizations to respond rapidly to changing environments (Serrador & Pinto, 2015). In contrast to classical hierarchical approaches that emphasized predictability and control, agile methods thrive on ambiguity, experimentation, and learning, providing fertile ground for the study of contemporary leadership and employee behavior.

Leadership is a critical promoter of agility. Traditional management structures that depend on supervision, control, and clear chains of command are incompatible with the autonomy, innovation, and adaptability required for successful agile teams (Junker, Bakker & Theunissen, 2022). Agile organizations depend on leaders who can foster trust, psychological safety (Edmondson, 1999), and intrinsic motivation. Transformational

leadership aligns perfectly with these needs by articulating a compelling vision, encouraging intellectual challenge, modeling ethical and empowering behaviors, and providing individualized attention (Bass & Avolio, 1995; Wang & Rode, 2010). Despite this theoretical alignment, empirical research remains limited regarding how transformational leadership operates specifically in agile contexts and how it shapes the psychological mechanisms behind successful agile performance.

One of these mechanisms is playful work design, a new and proactive job design strategy where employees introduce elements of enjoyment and challenge into their work (Scharp, Bakker, & Breevaart, 2019; Liu, Bakker, Tse & van der Linden, 2023). Playful work design can be understood as a cognitive-behavioral orientation where individuals intentionally introduce elements of fun and competition into their tasks to increase intrinsic motivation, engagement, and creativity (Scharp et al., 2019; Bakker & van Woerkom, 2017). It consists of two primary dimensions: *designing fun* and *designing competition*. Designing fun involves proactively shaping the work experience through humor, wit, or imagination, such as gamifying routine tasks or creating a visually enjoyable workspace. On the other hand, designing competition involves self-imposed challenges, such as setting time records or aiming to outperform one's own previous performance, turning everyday tasks into motivating contests (Scharp et al., 2019; Bakker, Hetland, Olsen, Espevik, De Vries, 2020). Unlike traditional job crafting, which may modify formal task boundaries or relationships (Wrzesniewski & Dutton, 2001), playful work design allows individuals to reinterpret and reframe their work within existing structures, enhancing engagement and creativity without requiring structural change. Previous empirical studies suggest that playful work design is associated with higher creativity, performance, and work engagement (Bakker et al., 2020; Dishon-Berkovits,

Bakker & Peters, 2024). However, there is limited empirical evidence on how transformational leadership fosters playful work design and, in turn, how this mechanism translates into improved innovative behavior, task performance, and work engagement. By exploring this mediated chain of relationships, this thesis provides a new understanding of the psychological pathway through which leaders shape proactive and adaptive employee behaviors in agile teams.

This thesis directly addresses this gap by examining how transformational leadership predicts playful work design, which, in turn, affects key employee outcomes such as innovative behavior, task performance, and work engagement in agile teams. By empirically testing this mediating relationship, the study makes contributions to several fields such as leadership theory, job design research, and agile work studies. It aims to move the discussion about agility from just structures and processes to a stronger focus on people, recognizing that agility ultimately depends on how employees engage with their work and how leaders create environments that support that engagement.

The findings of this research have substantial practical implications for leaders and organizations seeking to thrive in turbulent environments. Transformational leadership provides a promising path for fostering agility not just by restructuring work processes but by creating a psychological climate in which employees feel empowered to experiment, innovate, and engage playfully with their tasks. Playful work design emerges as a low-cost, high-impact strategy for enhancing engagement and creativity, allowing organizations to tap into their employees' intrinsic motivation even in agile environments where adaptability is essential. These insights are especially relevant as organizations worldwide cope with the difficulties of post-pandemic work, increasing digital transformation, and the growing need for resilience and innovation.

In an era where organizational agility and innovation have become vital for competitiveness, understanding how leadership enables these outcomes is a matter of both academic and practical urgency. While agile methodologies are widely recognized for their potential to enhance organizational responsiveness, collaboration, and speed (Rigby et al., 2016), the mechanisms through which leadership behaviors transform into individual and team-level agility remain underexplored. The majority of the existing research on agile practices focuses on process optimization and team structures, often neglecting the psychological factors that stimulate employee creativity, motivation, and engagement. Moreover, while transformational leadership has been extensively studied as a driver of innovation and positive organizational outcomes (Bass, 1985; Wang & Rode, 2010), the number of empirical studies examining its role in promoting playful work design is scarce (Scharp et al., 2019).

Given this critical gap in the literature, this thesis is driven by the ambition to advance both theoretical understanding and managerial practice by providing an analysis of the relationships between transformational leadership, playful work design, and individual-level outcomes within agile teams. The research questions that guide this inquiry are designed not only to map the direct influence of leadership on employee behaviors but also to uncover the psychological mechanisms, specifically playful work design, through which leaders enable innovation, performance, and engagement in dynamic work environments.

Accordingly, this thesis seeks to address the following core questions: To what extent does transformational leadership predict playful work design behaviors among employees working in agile teams? How does playful work design, in turn, influence key individual outcomes such as innovative behavior, task performance, and work

engagement? Does playful work design mediate the relationship between transformational leadership and these outcomes, thereby acting as a channel through which leaders shape the motivational and creative dynamics of agile teams? By addressing these questions, this study aims to offer both conceptual understanding and empirical evidence on how transformational leaders foster proactive, engaged, and high-performing teams, which is important in today's increasingly volatile, uncertain, complex, and ambiguous (VUCA) environments (Bennett & Lemoine, 2014). Ultimately, these research questions reflect a larger aspiration: to illuminate the human and relational foundations of organizational agility and to position playful work design as a key mechanism through which transformational leaders can unlock creativity, innovation, and engagement in modern workplaces.

This thesis offers several significant theoretical contributions that advance contemporary scholarship at the intersection of leadership theory, job design research, and agile work practices. First, by conceptualizing playful work design as a mediating mechanism linking transformational leadership to key employee outcomes, this study enriches the transformational leadership literature, which has traditionally emphasized direct leader–follower relationships without unpacking the psychological processes that translate leadership behaviors into performance, innovation, and engagement (Bass & Avolio, 1995; Wang & Rode, 2010). The integration of playful work design into this framework responds directly to calls for leadership research that opens the “black box” of how leaders influence employee motivation and creativity (van Knippenberg & Sitkin, 2013). In doing so, the thesis bridges the gap between macro-level leadership behaviors and micro-level employee experiences, offering a more nuanced understanding of the relational and psychological foundations of effective leadership in agile environments.

Second, the study advances the literature on job design by situating playful work design, a relatively new and underexplored construct, within the dynamic, team-based context of agile work. While most research on job design has historically focused on static, individually defined work roles (Hackman & Oldham, 1976; Wrzesniewski & Dutton, 2001), this thesis demonstrates that playful work design is especially relevant in settings where adaptability, creativity, and rapid learning are significant. By empirically testing how leadership enables employees to engage in playful reframing of their tasks, the study contributes to a deeper theoretical understanding of how proactive work behaviors emerge and thrive in agile contexts.

Finally, the research contributes to agile management scholarship by identifying psychological processes that underpin agility at the individual level. By integrating leadership theory and job design concepts into agile research, this study provides a more comprehensive understanding of how organizations can build adaptive, resilient, and high-performing teams.

In summary, this thesis makes a bold and timely contribution by integrating transformational leadership, playful work design, and agile work practices into a cohesive explanatory framework. It advances theory by illuminating previously underexplored psychological mechanisms, enriches leadership and job design theory by extending research into agile team contexts, and offers practical guidance that addresses some of the most pressing challenges facing contemporary organizations. These contributions guarantee that the study will be relevant to scholars, practitioners, and policymakers, establishing it as a crucial tool for comprehending what it takes to create companies that are not only inventive and flexible but also compassionate, resilient, and happy to work for.

CHAPTER II

LITERATURE REVIEW

2.1 Overview of Key Theories and Concepts

2.1.1 Agile Work Environments

Agile work environments have more recently become popular in modern organizations, especially in the technology and software development sectors. However, their influence has extended across diverse industries such as finance, telecommunications, manufacturing, and consulting (Rigby et al., 2016; Serrador & Pinto, 2015). Rooted in the Agile Manifesto (Beck et al., 2001), the agile paradigm promotes a flexible, adaptive, and iterative approach to organizing work and solving problems. Agile methodologies are built upon emergent, exploratory, and learning-based processes, in which knowledge and action are intertwined. In these environments, decision-making is decentralized and driven by mechanisms that enable rapid responses to real-time feedback, uncertainty, and evolving demands (Rigby et al., 2016). Therefore, agility is not just a methodology but also a mindset that acknowledges uncertainty as a characteristic of modern work (Junker et al., 2022).

In their study, Junker et al. (2022) highlight that agile environments are maintained by developing flexible organizational routines that develop through continuous feedback loops and learning processes. These routines are shaped by multidirectional learning across individual, team, and organizational levels. The iterative nature of agile work,

continuous cycles of planning, execution, and review, allows teams to incrementally improve their processes and outputs through feedback, experimentation, and reflection (Junker et al., 2022). This aligns with principles of learning and continuous improvement (Argyris, 1977). The quality of agile work refers to how project goals, tasks, and solutions iterate over time as teams interact with problems and stakeholders. Rather than resisting change, agile teams are designed to actively shape and respond to it, making learning and adaptation central to their operations (Kapsali, 2013).

Organizations that adopt agile practices typically view their external environment as volatile, uncertain, complex, and ambiguous. As a response, they foster collaborative team structures, transparent communication, and psychological safety, all conducive to experimentation, exploration, and innovation (Guinan, Parise, & Langowitz, 2019). Constructive conflict, shared decision-making, and cross-functional teamwork are valued as mechanisms to facilitate learning and improvement, not as disruptions to workflow. Junker et al. (2021) also emphasize that as teams iterate on routines and knowledge, resilience emerges as an evolving organizational competency. These routines build long-term adaptability, enabling firms to remain effective even in highly turbulent conditions. Similarly, Serrador and Pinto (2015) show that agile practices directly contribute to project success and innovation capacity, largely due to the dynamic, feedback-driven nature of agile implementation. In summary, agile work environments represent a shift from rigid, top-down processes to more responsive, decentralized, and learning-driven approaches.

A defining characteristic of agile work environments is the dependence on cross-functional, self-managed teams that have high autonomy and flexibility. These teams include members from diverse functional backgrounds, such as engineering, design,

marketing, or analytics, who collaborate in order to achieve shared goals without strict hierarchical supervision (Dyba & Dingsoyr, 2009). The absence of strictly assigned roles in these teams encourages role flexibility, which enables members to fulfill multiple duties depending on the project's evolving needs and employees' individual competencies. Consequently, teams become more resilient and capable of adapting to rapidly changing conditions, which is necessary in volatile, uncertain, and dynamic environments.

One of the main aspects of agile methodologies is the focus on employee autonomy. Agile teams are often self-managed and non-hierarchical, allowing individuals autonomy in completing their work (Dyba & Dingsoyr, 2009). This freedom in task execution aligns with the premise of playful work design that employees voluntarily shape their experience to enhance enjoyment, motivation, and engagement. Additionally, agile frameworks promote continuous interaction, collaborative reflection, and short-cycle feedback, naturally providing play opportunities, personal goal-setting, and creative experimentation (Rigby et al., 2016; Junker et al., 2022). Incorporating playful elements into these agile practices makes routine tasks more engaging, leading to more resilient and innovative teams. Playful actions such as gamifying tasks or setting self-challenges can stimulate curiosity and enhance team dynamics, especially in agile settings that reward iteration, exploration, and collective ownership.

Furthermore, agile environments typically foster psychological safety and role flexibility, allowing individuals to experiment without fear of negative evaluation. These conditions further reinforce the likelihood that playful work design will emerge and flourish in such contexts. Another motivation for investigating playful work design in agile environments stems from the novelty of the concept itself. Although the theoretical foundations of playful work design are developing (e.g., Scharp et al., 2019; Liu et al.,

2023), empirical research on its application within agile teams is still limited. Existing studies have largely focused on traditional organizational contexts, leaving a significant gap in understanding how playful behaviors take place in dynamic, team-based environments. By exploring this intersection, the present study provides insights for organizations to optimize employee experience and agility through innovative job design strategies. Agile work environments offer a rich set of developmental affordances: high autonomy, continuous learning, and innovation opportunities, making them an ideal context for examining playful work design. This synergy can improve individual outcomes, such as engagement and creativity, and enhance team-level adaptability and organizational resilience.

Despite the increasing application of agile methodologies across industries and the rising interest in proactive job behaviors such as job crafting and playful work design, research on the intersection of playful work design and agile teams remains scarce. While numerous studies have examined traditional job design elements in hierarchical contexts (e.g., Hackman & Oldham, 1976), there is limited empirical evidence on how employees reframe and personalize their work in dynamic, team-based agile environments. Specifically, micro-level proactive behaviors, such as playful work design, have not been adequately explored in agile settings, despite these contexts offering unique opportunities for such behaviors. While a few diary studies (e.g., Scharp et al., 2019; Liu et al., 2023) have demonstrated that playful work design enhances engagement and creativity, none have investigated how agile structures, marked by flexibility, rapid iteration, and autonomy, interact with or support playful work design behaviors.

Furthermore, the role of leadership in facilitating playful work design in agile teams has not been sufficiently addressed. Most leadership studies in agile contexts focus

on project or product outcomes rather than employee-level proactive work strategies. This creates a gap in understanding how leadership styles, especially transformational leadership, can activate playful work behaviors in environments defined by agility. This thesis aims to address this gap by being the first study to systematically examine the relationship between transformational leadership, playful work design, and individual-level outcomes (such as innovation, task performance, and engagement) within agile teams. By focusing on this underexplored intersection, this study offers both a theoretical contribution and practical insight into enhancing employee experiences in modern, agile workplaces.

2.1.2 Playful Work Design

The concept of playful work design was first introduced by Scharp, Bakker, Breevaart, Kruup, and Uusberg in 2018. Playful work design is a proactive, cognitive-behavioral strategy through which employees intentionally incorporate play elements, such as fun and competition, into their tasks to enhance enjoyment, challenge, intrinsic motivation, engagement, and creativity, all without altering the formal structure of the job (Bakker & van Woerkom, 2017; Scharp et al., 2019). This approach involves personal initiative to integrate play elements such as humor, fantasy, and challenge, allowing employees to enhance their work experience, satisfaction, and performance resourcefully (Bakker et al., 2020).

Grounded in play theory, which suggests that play is intrinsically rewarding and meets basic needs for enjoyment and challenge, playful work design incorporates two primary types of play: ludic play, designed at making work tasks more fun, and agonistic play, characterized by playful competition like setting personal records or striving to beat previous performance. Engaging in these behaviors allows employees to self-design their

work environment, which fosters engagement, creativity, and motivation independently of organizational constraints or formal job design changes (Bakker et al., 2020). Furthermore, recent research highlights that this proactive leveraging of play elements can serve as a resource for building volatile resources such as work engagement and creative capacity, contributing to optimal daily functioning and proactive motivation (Scharp et al., 2019). It is important to note that "designing fun" and "designing competition" are specific play elements that employees proactively integrate into their work in order to foster engagement and creativity. These behaviors are rooted in the distinction between ludic and agonistic play elements.

"Designing fun" mainly involves ludic play elements such as humor, wit, and fantasy, which aim to enhance entertainment, amusement, and positive affect during work activities (Scharp et al., 2018; Lieberman, 2014). It refers to employees' proactive efforts to create enjoyable and engaging conditions in their work activities without changing the official job design and involves intentionally shaping aspects of their work environment or tasks to foster feelings of enjoyment, challenge, and absorption. This type of proactive behavior aims to improve intrinsic motivation and make work more satisfying by actively constructing pleasurable experiences during work tasks (Bakker et al., 2020).

In contrast, "designing competition" involves agonistic play elements, emphasizing challenge, goal-setting, and mastery, which foster a sense of challenge and achievement. It refers to the behaviors where employees incorporate challenges and self-competition into their work, such as setting personal goals to outperform their past performances or attempting to beat their time records, adding a playful and competitive dimension to their work. These behaviors are aimed at making work more engaging and stimulating by proactively introducing a sense of challenge and mastery for competitive

and challenging work experiences (Bakker et al., 2020). These proactive behaviors are motivated by intrinsic pleasures and activate personal resources such as engagement, positive emotions, and creativity, which are necessary for adaptive performance and innovation (Tett, Simonet, Walser, Brown, 2013; Scharp et al., 2019). Moreover, these behaviors allow employees to have control over their work environment, aligning their work experiences with individual personality traits such as openness and playfulness, thereby optimizing their daily functioning and well-being (Scharp et al., 2019).

In playful work design, employees proactively create their conditions to foster enjoyment and challenge without altering the fundamental structure of the job itself (Liu et al., 2023). Designing enjoyment can be in the form of gamification of tasks or designing creative workspaces, whereas designing competition can involve setting deadlines and time records for oneself and trying to beat them each day, effectively turning routine tasks into playful competitions. These strategies intentionally modify the work process and experience within the existing job boundaries, emphasizing fun, competition, and personal challenge to enhance motivation. These initiatives are intended to increase intrinsic motivation and engagement (Liu et al., 2023).

Playful work design closely resembles certain aspects of job crafting, particularly cognitive crafting, which involves reframing tasks and perceptions to find more meaning or enjoyment in work (Wrzesniewski & Dutton, 2001). However, there are important distinctions between the two concepts. Job crafting broadly involves proactive modifications to tasks, relationships, and perceptions related to one's job, often seeking to expand or contract the scope of work in response to individual preferences and organizational constraints (Berg, Dutton, & Wrzesniewski, 2008). It encompasses a range of strategies such as increasing challenging demands or seeking new resources, which can

lead to greater engagement and performance (Bakker et al., 2020). In contrast, playful work design focuses exclusively on reframing the experience within the existing job boundaries to boost inherent enjoyment and reduce monotony, without necessarily changing the scope or content of the tasks (Liu et al., 2023). By inducing a sense of fun and challenge through self-imposed games, competitions, or creative adjustments, employees can experience increased job satisfaction, flow, and psychological detachment from routine stressors (Bakker, 2008).

Playful work design aligns with and draws theoretical support from several foundational psychological frameworks, notably Self-Determination Theory (Deci & Ryan, 1985), Flow Theory (Csikszentmihalyi, 1990), and the principles of Positive Organizational Behavior (Luthans & Youssef-Morgan, 2017). By enabling employees to proactively shape their work experience through designing fun and competition, playful work design fosters the satisfaction of three core psychological needs: autonomy, competence, and relatedness, thereby enhancing intrinsic motivation, well-being, and engagement (Deci & Ryan, 1985). From the lens of Self-Determination Theory, such need satisfaction is a precursor to high-quality motivation and optimal functioning. Empirical studies have shown that playful work design promotes greater work engagement, energy, a stronger sense of agency, and mastery, which are the hallmarks of thriving employees (Petelczyc, Capezio, Wang, Restubog, & Aquino, 2018; Scharp, Bakker, and Breevaart, 2022). According to Flow Theory, playful work design facilitates conditions that lead to the experience of flow, a state characterized by focused immersion, enjoyment, and temporal distortion, by allowing employees to transform mundane tasks into enjoyable and appropriately challenging activities (Csikszentmihalyi, 1990; Liu et al., 2023). These experiences boost momentary task performance and encourage creativity, as employees

become more open to novel perspectives and solutions (Amabile, 1997). Finally, under the framework of Positive Organizational Behavior, playful work design supports the development of positive psychological resources such as resilience, hope, and optimism, which in turn enhance motivation, reduce the risk of burnout, and promote collaborative and adaptive work behavior (Luthans & Youssef-Morgan, 2017). Although multiple theoretical perspectives enrich the understanding of playful work design, this study primarily grounds its hypotheses in Self-Determination Theory, which provides the central explanatory mechanism linking transformational leadership, playful work design, and employee outcomes. Building on this theoretical grounding, recent empirical research further supports the central role of Self-Determination Theory in explaining the mechanisms through which playful work design influences employee outcomes.

Although playful work design is a relatively new concept in organizational behavior literature, empirical studies over the past five years have consistently shown that it results in a wide range of positive individual-level outcomes, including work engagement, creativity, and performance. In one of the foundational studies, Scharp et al. (2019) employed a diary methodology. They found that daily playful work design behaviors, particularly those related to designing fun and competition, were positively associated with work engagement and creativity. These findings were later developed by Scharp et al. (2022), who demonstrated that playful work design results in higher engagement levels through the satisfaction of autonomy, competence, and relatedness needs, as theorized by Self-Determination Theory (Deci & Ryan, 1985). Similarly, Liu et al. (2023) provided further evidence through another diary study, showing that playful work design enhances daily flow experiences, fostering creativity. The mechanism proposed suggests that playful framing of work helps individuals balance skill and

challenge, facilitating deep concentration, enjoyment, and creative thought, core components of flow theory (Csikszentmihalyi, 1990). Bakker et al. (2020) supported these findings in a quantitative study showing that playful work design was positively associated with job performance through satisfying psychological needs, again emphasizing its motivational function. Most recently, Dishon-Berkovits et al. (2024) found that playful work design was significantly related to both in-role and extra-role performance and that this effect was mediated by work engagement.

In sum, the literature suggests that playful work design is a powerful and flexible self-regulatory mechanism that enhances employee functioning by increasing intrinsic motivation, fostering engagement, and promoting creativity and performance.

2.1.3 Transformational Leadership

Transformational leadership is one of the most widely studied leadership theories in organizational behavior. It is especially relevant in dynamic, innovation-driven, and team-based contexts such as agile environments. It was originally conceptualized by Burns (1978) and further developed by Bass (1985). Transformational leadership is a leadership style that goes beyond transactional exchanges and instead seeks to inspire, energize, and develop followers to achieve extraordinary outcomes. Transformational leadership creates commitment to shared goals, stimulates personal growth, and fosters intrinsic motivation by aligning individual and organizational values (Bass & Avolio, 1995). Bass and Avolio (1995) identified four behavioral dimensions of transformational leadership. The first dimension is idealized influence (charisma), which refers to leaders who serve as role models, act with integrity, and instill pride and trust in their followers. These leaders demonstrate a strong sense of purpose and moral conduct, encouraging followers to internalize the leader's vision and values (Avolio & Bass, 2004). The second

dimension is inspirational motivation, in which leaders articulate compelling visions of the future, often using stories, symbols, and metaphors. It enhances goal clarity and results in enthusiasm and optimism (Shamir, House, & Arthur, 1993). The third dimension is intellectual stimulation; transformational leaders encourage employees to challenge assumptions, reframe problems, and explore innovative solutions. They foster a culture in which creativity and experimentation are welcomed, mistakes are seen as learning opportunities, and critical thinking is rewarded (Eisenbeiss, Van Knippenberg, Boerner, 2008; Wang & Rode, 2010). The last dimension is individualized consideration, referring to leaders attending to each follower's unique needs, strengths, and developmental needs. They provide personalized coaching, listen empathetically, and cultivate a growth-oriented atmosphere where all team members feel seen and valued (Breevaart, Bakker, Hetland, Demerouti, Olsen, Espevik, 2014). Through these mechanisms, transformational leaders can influence individual attitudes (e.g., motivation, satisfaction) and group-level processes (e.g., cohesion, innovation climate).

The psychological mechanisms through which transformational leadership affects employee behavior are rooted in Self-Determination Theory (SDT) (Deci & Ryan, 1985). Transformational leaders fulfill the three basic psychological needs outlined in SDT by supporting autonomy, competence, and relatedness. This increases intrinsic motivation, engagement, and personal investment in work tasks (Hetland, Hetland, Schou Andreassen, Pallesen, Notelaers, 2011). Autonomy is achieved through empowering employees to make decisions and explore new approaches (via intellectual stimulation). Competence is enhanced through challenging assignments and supportive feedback (via inspirational motivation). Relatedness is cultivated through individualized attention and ethical role modeling (via idealized influence and individualized consideration). Moreover,

transformational leadership supports the fulfillment of basic psychological needs in ways that also nurture psychological dimensions such as confidence, optimism, and resilience (Luthans & Youssef-Morgan, 2017), thereby helping employees remain engaged and effective even under challenging conditions. Numerous empirical studies demonstrate the positive link between transformational leadership and innovative behavior (Jung, Chow, & Wu, 2003; Wang & Rode, 2010; Eisenbeiss et al., 2008). Transformational leadership encourages creative thinking and builds a safe and supportive climate in which experimentation is valued and mistakes are viewed as learning opportunities. For example, a meta-analysis by Rosing, Frese, and Bausch (2011) found that transformational leadership was strongly associated with radical and incremental innovation, especially in knowledge-intensive and agile environments. Similarly, Lei, Leaungkhamma, and Le (2020) argue that transformational leaders are critical in “breaking habitual thinking” and promoting cognitive flexibility among employees, essential for thriving in complex, uncertain contexts. These innovation-enhancing qualities of transformational leadership also create fertile ground for playful work design.

Despite its widely documented benefits, relatively little research has examined the direct role of transformational leadership in enabling playful work design. However, conceptual overlaps suggest a strong theoretical connection between these constructs. Transformational leadership fosters psychological safety, allowing employees to engage in playful experimentation without fear of negative evaluation. Transformational leadership also promotes proactive behavior, a key antecedent to self-initiated work redesign strategies such as playful work design (Tims & Bakker, 2010). Lastly, transformational leadership models enthusiasm and enjoyment, which can normalize playful attitudes toward work and legitimize non-traditional behaviors like gamifying

tasks or setting self-imposed challenges (Scharp et al., 2019). In this sense, transformational leaders create the contextual enablers (e.g., autonomy, trust, vision) and emotional cues (e.g., enthusiasm, optimism) that allow playful work design to emerge and thrive. Therefore, I hypothesize that:

Hypothesis 1: Transformational leadership will be positively associated with playful work design in agile teams

2.1.4 The Consequences of Playful Work Design

I also studied the consequences of playful work design in this thesis. I specifically investigated two performance outcomes, namely innovative behavior and task performance, and one motivational outcome, namely work engagement.

2.1.4.1 Innovative Behavior

Innovative behavior refers to the intentional generation, promotion, and realization of new ideas within a work role, team, or organization (Scott & Bruce, 1994; Wang, Fang, Qureshi, and Janssen, 2015). According to Janssen (2000), this behavior includes three core stages: idea generation, idea promotion, and idea realization. The first stage, idea generation, involves producing original and useful concepts or solutions to existing problems. Idea promotion refers to the social process of gaining support and securing resources for the new idea, often requiring interpersonal skills and political acumen. Finally, idea realization entails implementing the idea into practice, transforming creativity into a tangible and value-adding outcome for the organization. Innovative behavior is often confused with creativity; however, while creativity is concerned with the novelty and usefulness of ideas, innovative behavior includes action-oriented efforts to promote and implement those ideas. In this sense, innovative behavior is proactive, includes execution (Scott & Bruce, 1994; Janssen, 2000). Innovative behavior is a

function of both individual characteristics and contextual factors. At the individual level, intrinsic motivation, openness to experience, and proactive personality have been positively associated with innovation (Amabile, 1996; Janssen, 2000). However, organizational and team-level factors such as leadership style, psychological safety, job autonomy, and task variety are critical in determining whether employees feel empowered and supported to engage in innovative acts (Zhou & George, 2001; Edmondson, 1999; Hirst, Van Knippenberg, Chen, Sacramento, 2011). Among these, transformational leadership has been consistently linked to higher levels of innovation. Transformational leaders foster innovation by promoting a compelling vision, encouraging intellectual stimulation, and supporting individualized development (Eisenbeiss et al., 2008; Wang & Rode, 2010).

In agile environments, flow experiences, deeply immersive and intrinsically rewarding task states, have also been found to facilitate innovative behavior. According to Csikszentmihalyi's (1990) Flow Theory, employees experiencing high flow tend to enter a focused engagement where creativity flourishes, and novel ideas are more readily explored (Liu et al., 2023). Playful work design is a unique proactive strategy that can catalyze innovative behavior by enhancing intrinsic motivation and altering the cognitive framing of work tasks. By integrating elements of "designing fun" and "designing competition" into their daily routines, employees can transform routine work into engaging, stimulating, and creativity-conducive activities (Scharp et al., 2019; Liu et al., 2023). Through designing fun, employees introduce enjoyable elements to their task, such as gamification, humor, or self-initiated challenges, which create positive affect and broaden cognitive flexibility. Positive emotions, in turn, are known to facilitate divergent thinking, a key component of creative problem solving (Fredrickson, 2001). The joy and

autonomy associated with playful work design make employees more open to exploring unconventional ideas, increasing the likelihood of innovation (Scharp et al., 2022; Bakker et al., 2020).

“Designing competition,” another dimension of playful work design, can also enhance innovation by encouraging goal-setting and self-imposed performance standards. For instance, setting time records or competing with one’s past achievements introduces challenge and urgency in routine tasks. This can produce a state of “optimal arousal,” which, when paired with autonomy, is beneficial to both flow and creativity (Liu et al., 2023). Empirical studies support these theoretical connections. Scharp et al. (2019) found that playful work design significantly predicted daily creative performance, while Liu et al. (2023) demonstrated that flow mediated the relationship between playful work design and creativity. Furthermore, Bakker et al. (2020) highlighted the role of playful work design in stimulating proactive and innovative behaviors, particularly under crisis conditions where traditional motivation mechanisms are disrupted. In summary, innovative behavior encompasses a multi-stage process influenced by individual attributes and organizational context. Playful work design offers a powerful mechanism to unlock innovative potential in agile, team-based environments by incorporating joy, challenge, and autonomy into daily tasks. Based on these observations, I hypothesize that:

Hypothesis 2a: Playful work design will be positively associated with innovative behavior in agile teams

2.1.4.2 Task Performance

Another outcome that I investigated in the current study is task performance. Task performance refers to executing core duties and responsibilities formally prescribed as part of an employee’s organizational role. These duties often include activities such as

completing assigned tasks accurately and on time, maintaining quality standards, and meeting performance goals and targets (Wang, Oh, Courtright, and Colbert, 2011). Task performance is traditionally conceptualized as in-role behavior that directly contributes to the organization's technical core (Welbourne, Johnson, and Erez, 1998). Employees who consistently fulfill their responsibilities with precision, efficiency, and reliability are considered high performers. Clear role expectations, adequate resources, task autonomy, and supportive leadership have enhanced task performance (Goodman & Svyantek, 1999; Hirst et al., 2011).

In agile work contexts, where tasks are iterative and often team-based, task performance has a slightly more dynamic nature. Agile methodologies require employees to adapt to changing requirements, prioritize tasks in short sprints, and frequently deliver working outputs. Therefore, success is measured by technical completion, responsiveness, and adaptability (Dyba & Dingsoyr, 2009). Playful work design can serve as a motivational mechanism that enhances task performance by shifting the perception of tasks from being obligatory to being self-initiated and enjoyable. Through the elements of “designing fun” and “designing competition,” playful work design allows employees to reframe their work in a way that increases intrinsic motivation and engagement, both of which are positively associated with performance (Scharp et al., 2022). When employees integrate fun into their work (for example, by adding humor, setting self-imposed challenges, or finding creative ways to approach routine tasks), they are more likely to remain cognitively engaged and energized. This increased engagement promotes better focus, attention to detail, and problem-solving, all critical for high-quality task performance (Bakker et al., 2020; Dishon-Berkovits et al., 2024). Similarly, introducing elements of competition (for example, by racing against the clock or trying to beat one's

previous best) can create a type of motivation that enhances concentration and drives efficiency. As a result, employees may complete their tasks more quickly, with fewer errors, and at a higher standard. The empirical evidence supports this proposition. For instance, Dishon-Berkovits et al. (2024) found that playful work design predicted higher in-role performance through increased engagement. Bakker et al. (2020) similarly demonstrated that playful work design fosters job performance by satisfying core psychological needs, such as autonomy and competence. These discoveries suggest that when employees experience work as both enjoyable and challenging, they are more likely to accomplish results. In conclusion, task performance is a fundamental outcome of organizational functioning, particularly in agile environments that demand speed, quality, and adaptability. Playful work design provides a proactive and self-determined strategy to increase task-related focus and motivation, improving performance outcomes. Therefore, I hypothesize that:

Hypothesis 2b: Playful work design will be positively associated with task performance in agile teams

2.1.4.3 Work Engagement

The last dependent variable that I investigated in this thesis is work engagement. Work engagement is a positive, fulfilling, work-related state of mind characterized by three core dimensions: vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá, and Bakker, 2002). Vigor refers to high levels of energy and mental resilience while dedication reflects a sense of significance, enthusiasm, and challenge, and absorption describes being fully concentrated and happily involved in one's work. Unlike job satisfaction, which reflects a more passive emotional response to work, engagement emphasizes active involvement, motivation, and psychological presence in job tasks

(Bakker & Demerouti, 2008). Engaged employees typically show higher performance levels, lower turnover intentions, and greater innovation, making it a critical indicator of individual and organizational effectiveness.

In agile environments, engagement is especially crucial due to the tasks' iterative and dynamic nature. Agile methodologies need teams to work in short, focused cycles (sprints), rapidly integrate feedback, and continuously adapt to changing requirements (Rigby et al., 2016; Dyba & Dingsoyr, 2009). These conditions foster interactive learning, collaboration, and personal responsibility, all of which strongly align with the core drivers of engagement (Junker et al., 2022). Moreover, agile teams tend to operate with high autonomy and decentralized decision-making, giving employees the psychological ownership that fosters intrinsic motivation and task involvement. Agile systems also encourage feedback loops and continuous communication that allow individuals to see their work's immediate impact, reinforcing dedication and purpose (Serrador & Pinto, 2015).

Playful work design is a proactive way to increase engagement by empowering employees to shape their work experiences in personally meaningful and enjoyable ways. By intentionally introducing elements of fun or competition into daily work routines, employees use psychological resources that sustain energy, focus, and enjoyment, which are the foundations of engagement (Scharp et al., 2022; Bakker et al., 2020). From the lens of Self-Determination Theory (Deci & Ryan, 1985), playful work design helps satisfy basic psychological needs for autonomy (freedom to choose how to work), competence (feeling effective), and relatedness (connection with others). These fulfilled needs, in turn, fuel intrinsic motivation and create an environment conducive to vigor and dedication (Scharp et al., 2022). Additionally, playful work design supports the emergence of flow

experiences, and enjoyment in work (Csikszentmihalyi, 1990), which are closely linked to high engagement. For instance, Liu et al. (2023) showed that playful work design fosters flow, boosting creativity and engagement. Dishon-Berkovits et al. (2024) also demonstrated that employees who engage in playful work design report higher in-role and extra-role performance, primarily as a result of increased work engagement. In summary, work engagement represents an essential psychological state that energizes and sustains employee performance in dynamic work settings. Playful work design strengthens the conditions that foster engagement. It also encourages employees to take ownership of their motivation, which makes playful work design an especially valuable strategy in agile teams where energy, adaptability, and creativity are critical. Hence, I hypothesize that:

Hypothesis 2c: Playful work design will be positively associated with work engagement among agile team members

2.2 The Mediating Role of Playful Work Design

Recent research increasingly points out the importance of understanding the psychological mechanisms through which leadership behaviors influence employee outcomes (Hetland et al., 2011; Tims & Bakker, 2010). In this context, playful work design offers a promising mediating pathway that helps explain how transformational leadership translates into higher levels of innovation, performance, and engagement, particularly within agile teams (Scharp et al., 2019; Liu et al., 2023). Transformational leaders, by articulating an inspiring vision, fostering intellectual stimulation, and providing individualized support, cultivate a work environment that encourages autonomy, psychological safety, and experimentation, conditions under which playful work design is more likely to flourish (Bass & Avolio, 1995; Wang & Rode, 2010). When employees perceive their leaders as empowering and motivating, they may feel

psychologically enabled to proactively reframe their work experience, introducing elements of fun and self-imposed challenge (Scharp et al., 2019). In this way, transformational leadership behaviors serve not only as direct drivers of positive outcomes but also as contextual enablers that facilitate playful self-regulation at work (Tims & Bakker, 2010; Scharp et al., 2022).

Through playful work design, employees activate personal resources such as intrinsic motivation, energy, and creativity, which are critical for succeeding in dynamic and complex work settings like agile teams (Bakker & van Woerkom, 2017; Liu et al., 2023). This self-initiated reframing of work tasks reinforces engagement, enhances focus, and stimulates innovative thinking, thus functioning as a key psychological mechanism that transmits the positive influence of transformational leadership onto individual outcomes (Scharp et al., 2019; Dishon-Berkovits et al., 2024). By recognizing playful work design as a mediator, this study contributes to a more specific understanding of how leadership style shapes employee behavior, highlighting the proactive role employees themselves play in crafting their work experience in response to contextual leadership cues (Hetland et al., 2011; Bakker et al., 2020). Thus, I hypothesize that,

Hypothesis 3a: Playful work design will mediate the relationship between transformational leadership and innovative behavior in agile teams

Hypothesis 3b: Playful work design will mediate the relationship between transformational leadership and task performance in agile teams

Hypothesis 3c: Playful work design will mediate the relationship between transformational leadership and work engagement in agile teams

CHAPTER III

METHODOLOGY

3.1 Sample and Procedure

This study employed a quantitative, cross-sectional research design to examine the relationships among transformational leadership, playful work design, and individual-level outcomes (innovative work behavior, task performance, and work engagement) within agile teams. The research study aimed to test a mediation model in which playful work design serves as an intermediary mechanism through which transformational leadership influences employee outcomes. The design was chosen to capture perceptions and self-reported experiences of employees working in agile teams across multiple organizations. Data were collected using a structured online survey instrument, including previously validated scales.

The target population for this study consisted of employees working in agile teams within private-sector organizations in Turkey. Agile teams were defined as cross-functional, self-organizing units that apply iterative processes and adaptive planning to deliver value in dynamic environments. A non-probability purposive sampling strategy was employed to ensure participants had relevant experience with agile work settings, a key contextual criterion for the proposed model. Data were collected through an online questionnaire, administered using Qualtrics XM. The survey link was distributed via professional networks, organizational contacts, and online platforms related to agile

project management and organizational development. Participation was voluntary and anonymous, and respondents were informed that their data would only be used for academic purposes. A total of 254 valid responses were obtained after excluding incomplete or ineligible submissions. To qualify for inclusion, respondents had to confirm that they currently work in a team that applies agile principles (e.g., Scrum, Kanban). The final sample represented various industries, including technology, finance, telecommunications, consulting, insurance, and manufacturing sectors such as factories and production plants. Demographic characteristics of the sample were as follows: the majority of participants worked in Scrum teams (68.9%), while 31.1% were part of Kanban teams. In terms of gender, 55.5% identified as female, 39.8% as male, and 4.7% preferred not to disclose their gender. The age distribution indicated that most participants were between 25 and 30 years old, and the mean age of all participants was 41. Regarding work experience, participants had an average of 10.8 years of professional experience.

All procedures in this study complied with standard ethical guidelines for research involving human participants. The Ethics Committee of Bilkent University approved the study before data collection. Participation in the study was entirely voluntary, and respondents were informed of their rights and the purpose of the research through an informed consent statement on the first page of the online questionnaire. The following ethical principles were followed: participants were given the informed consent outlining the aim of the study, the approximate duration of the survey, the voluntary nature of their participation, and their right to withdraw at any time without any negative consequences. Anonymity and confidentiality were assured by not collecting any identifying personal information. Responses were recorded anonymously, and all data were stored securely and handled in compliance with data protection regulations. The survey study was

conducted with minimal risk, meaning the study posed no foreseeable risk to participants. The survey included no sensitive questions, and participants were not subjected to deception, stress, or discomfort. Lastly, I put emphasis on the ethical usage of data, and the data collected was analyzed and reported with integrity. Findings were presented honestly, and no fabrication or manipulation of data occurred. These ethical precautions ensured that participants' rights, privacy, and dignity were protected throughout the research process

3.2 Measures

All constructs in this study were measured using previously validated, multi-item scales from the organizational behavior literature. The items were adapted to fit the agile work context where necessary, and all were assessed using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The survey instrument was originally developed in English and then translated into Turkish using a back-translation procedure (Brislin, 1986) to ensure linguistic and conceptual equivalence. To minimize common method bias, the order of the scales was randomized, and items from different constructs were randomly placed in the questionnaire. All items were treated as reflective indicators of their respective latent constructs. The full item list can be found in Appendix A.

3.2.1 Transformational Leadership

It was measured using a 10-item scale adapted from the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1995). This widely validated scale captures four core dimensions of transformational leadership. Participants were asked to rate the extent to which their team leader or direct supervisor, in agile terms, "Scrum or Kanban Masters," demonstrated transformational leadership behaviors in their agile team context. Sample items included *"My team leader articulates a compelling vision of the*

future.” and “My team leader gets me to look at problems from many different angles.”

Responses were recorded on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale demonstrated excellent internal consistency reliability in the present study.

3.2.2 Playful Work Design

It was measured using a 12-item scale developed by Scharp et al. (2019), which conceptualizes playful work design as a proactive job crafting strategy to make one’s work more enjoyable and stimulating. The scale includes two distinct but related subdimensions. The first subdimension is “Designing Fun” which includes 6 items and refers to efforts to make work more enjoyable by introducing humor, fun, and playful elements into the task itself. A sample item is *“I look for ways to make my work more fun.”*) The second subdimension is “Designing Competition,” which also includes 6 items, referring to creating self-imposed goals or challenges to enhance motivation and engagement through gamification or personal contests. A sample item is *“I try to set time records in my work tasks.”*) Participants rated the extent to which they engaged in these behaviors on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

3.2.3 Innovative Behavior

It was measured using a 5-item scale adapted from Janssen (2000), which captures how employees engage in idea generation, idea promotion, and idea realization in their work. A sample item is *“I search out new working methods, techniques, or instruments.”* Respondents rated each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

3.2.4 Task Performance

It was assessed using a 3-item scale adapted from Tjosvold, Hui, and Yu (2003), focusing on how effectively employees carry out their core job responsibilities. A sample item is: *“I always complete my duties specified in my job description.”* This scale also used a 7-point Likert response format.

3.2.5 Work Engagement

It was measured using the 3-item Utrecht Work Engagement Scale (UWES-3), developed by Schaufeli, Shimazu, Hakanen, Salanova, and De Witte (2019). This short form captures the core dimensions of engagement: vigor, dedication, and absorption in a concise and psychometrically sound format. A sample item is: *“At my job, I feel bursting with energy.”* Items were rated on the same 7-point Likert scale, and the scale showed satisfactory internal consistency. Despite its short length, the UWES-3 has been validated in multiple organizational contexts and has proved adequate for capturing general engagement levels in agile teams (Schaufeli et al., 2019).

CHAPTER IV

RESULTS

A multi-stage quantitative analysis strategy was adopted to test the hypothesized relationships and evaluate the measurement and structural components of the proposed model. The analysis was conducted using R statistical software based on the Structural Equation Modeling (SEM) approach. The data analysis process consisted of the following steps. The first step was to conduct the preliminary analysis, including descriptive statistics, scale reliability, and bivariate correlations to assess the variables' basic psychometric properties and rule out multicollinearity issues. The second step consisted of measurement model evaluation: A Confirmatory Factor Analysis (CFA) was conducted to examine the factorial validity of the constructs. Competing models (3-factor, 4-factor, and 5-factor) were compared to determine the best-fitting measurement structure. The third step was conducting structural model testing, in which the hypothesized paths, including direct effects (e.g., TFL → INN), indirect effects (e.g., TFL → PWD → ENG), and total effects, were tested using structural equation modeling with bootstrapping (1,000 resamples). The last step was model fitting, and explanatory power was evaluated using R^2 values.

All constructs' reliability and validity were assessed before testing the structural model, following established guidelines for measurement model evaluation in structural equation modeling (Hair, Black, Babin, & Anderson, 2021). Internal consistency was

evaluated using Cronbach's alpha (α) with 95% confidence intervals (Bonett & Wright, 2015) and composite reliability (CR). All constructs exceeded the commonly accepted thresholds of $\alpha > .70$ and $CR > .70$, indicating satisfactory reliability. Specifically, the Cronbach's alpha for transformational leadership was calculated as .94 with a 95% confidence interval of [.939, .940] and a composite reliability of .97. For playful work design, the Cronbach's alpha was .89 with a 95% confidence interval of [.885, .890] and a composite reliability of .91. The innovative behavior scale had a Cronbach's alpha of .88 with a 95% confidence interval of [.882, .887] and a composite reliability of .90. Task performance showed a Cronbach's alpha of .83 with a 95% confidence interval of [.822, .835] and a composite reliability of .83. Finally, work engagement demonstrated a Cronbach's alpha of .72 with a 95% confidence interval of [.707, .740] and a composite reliability of .76. These results demonstrate that the latent constructs were measured consistently and reliably across items.

Convergent validity was also assessed using average variance extracted (AVE). All constructs had average variance extracted values exceeding the threshold of 0.50 (Fornell & Larcker, 1981), suggesting that their underlying latent constructs explain a substantial proportion of variance in the observed variables. The average variance extracted value for the transformational leadership construct was 0.73; for playful work design it was 0.61; and for the outcome variables innovative behavior, task performance, and work engagement, they were 0.64, 0.63, and 0.52, respectively. Furthermore, discriminant validity was established using the Fornell-Larcker criterion and cross-loading analysis. Fornell-Larcker comparisons confirmed that the square root of average variance extracted for each construct was greater than its correlations with any other construct. Additionally, items loaded highest on their respective constructs compared to

others, supporting discriminant validity. Despite a relatively high correlation between playful work design and innovative behavior ($r = .78$), confirmatory factor analysis and chi-square difference tests confirmed that these constructs are empirically distinct and should not be merged. In addition, the Variance Inflation Factor (VIF) values were calculated to assess potential multicollinearity among predictors. All variance inflation factor values were well below the critical threshold of 5, with the highest being 1.253, indicating no serious multicollinearity concerns.

4.1 Descriptive Statistics

Table 1 also displays Pearson correlation coefficients among the study variables. All correlations were positive and statistically significant, indicating preliminary support for the hypothesized relationships. Transformational leadership was positively correlated with playful work design ($r = .54$), innovative behavior ($r = .51$), task performance ($r = .39$), and work engagement ($r = .49$). The strongest bivariate relationship was observed between playful work design and innovative behavior ($r = .78$), followed by innovative behavior and work engagement ($r = .75$), and task performance and work engagement ($r = .63$). These findings are consistent with theoretical expectations and prior empirical research, suggesting strong associations between playful work design and key performance-related outcomes. Additionally, the magnitude of the correlations supports the discriminant validity of the constructs, as none exceeded the multicollinearity threshold of $r = .85$ (Kline, 2015).

Table 1: Descriptive Statistics

	Mean	Standard Deviation	α	Transformational Leadership	Playful Work Design	Innovative Behavior	Task Performance	Work Engagement
Transformational Leadership	5.33	1.14	0.94	1.00				
Playful Work Design	5.26	0.98	0.89	0.54	1.00			
Innovative Behavior	5.65	0.94	0.88	0.51	0.78	1.00		
Task Performance	6.09	0.82	0.83	0.39	0.42	0.57	1.00	
Work Engagement	5.68	0.95	0.72	0.49	0.69	0.75	0.63	1.00

4.2 Confirmatory Factor Analyses

Confirmatory Factor Analysis was conducted to examine the validity of the measurement model and to assess whether the observed variables adequately represent the latent constructs proposed in the theoretical framework. Although the primary model tested in this study was a five-factor structure comprising transformational leadership, playful work design, innovative work behavior, task performance, and work engagement, additional models were included for comparison purposes. Specifically, concerns regarding potential overlap between these two constructs emerged due to the high correlation observed between playful work design and innovative behavior ($r = 0.78$). To further investigate discriminant validity and ensure the robustness of the measurement structure, two alternative models were tested: a four-factor model that combines playful work design and innovative behavior into a single outcome factor, and three-factor model that aggregates all outcome variables into one latent construct. The five-factor, which is the hypothesized model, was ultimately retained as the best-fitting and theoretically most coherent structure by comparing these nested models using multiple fit indices and chi-square difference testing (see Table 2). It proved to be the most comprehensive and theoretically aligned model, offering the highest level of construct differentiation. The results, which can be seen in Appendix B, indicated that the vast majority of items demonstrated substantial and statistically meaningful loadings onto their respective latent constructs. Specifically, most loadings exceeded the widely accepted threshold of 0.50, with many falling well above 0.70, suggesting strong convergent validity across all factors. For instance, items measuring Transformational Leadership displayed consistently high loadings ranging from 0.709 to 0.855, while items reflecting Playful Work Design also demonstrated adequate loadings, with several items exceeding 0.75.

Although a few playful work design items (e.g., PWD9 = 0.533, PWD10 = 0.506, and PWD12 = 0.432) exhibited relatively lower loadings, they remained within acceptable limits for inclusion in exploratory or early-stage theoretical models. Innovative Work Behavior items had some of the highest loadings in the analysis, with all values above 0.74 and several above 0.80, indicating a particularly robust measurement of this construct. Likewise, items for Task Performance loaded strongly on their factor (e.g., 0.910, 0.865, 0.609), and the Work Engagement items also showed satisfactory loadings, ranging from 0.585 to 0.846. Overall, the pattern and magnitude of factor loadings across all items and constructs supported the appropriateness of the measurement model and reinforced the conceptual distinctions between the latent variables included in this study.

To evaluate the quality of the measurement models, a series of widely accepted fit indices were examined: chi-square (χ^2), degrees of freedom (df), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). These indices offer complementary perspectives on model fit, with lower χ^2 , RMSEA, and SRMR values and higher CFI and TLI values indicating better fit. Table 2 below summarizes the results for each model:

Table 2: Confirmatory Factor Analyses

	CFI	TLI	RMSEA	SRMR	χ^2	df	$\Delta \chi^2$	Δ df	p-Value
Hypothesized 5-Factor Model TFL + PWD + INN + TASK + ENG	0.842	0.828	0.086	0.064	1494.262	517.000			
3-Factor Model TFL + PWD + (INN + TASK + ENG)	0.804	0.790	0.095	0.070	1733.778	524.000	239.52	7	p < .001
4-Factor Model TFL + (PWD + INN) + TASK + ENG	0.812	0.798	0.094	0.066	1680.205	521.000	185.94	4	p < .001

Note: TFL = Transformational Leadership, PWD = Playful Work Design, INN = Innovative Behavior, TASK = Task Performance, ENG = Work Engagement

To statistically determine whether the five-factor model provided a significantly better fit than other models, chi-square difference tests were performed. When comparing the five-factor model to the four-factor model, the chi-square difference was 185.94 with 4 degrees of freedom, which was statistically significant at $p < .001$. Similarly, the comparison between the five-factor model and the three-factor model yielded a chi-square difference of 239.52 with 7 degrees of freedom, also statistically significant at $p < .001$. These results indicate that the five-factor model offered a significantly better explanation of the data than both the four-factor and three-factor alternatives.

4.3 Hypotheses Testing

Structural Equation Modeling results are estimated via the SEM in R package (Hair et al., 2021; Lowry & Gaskin, 2014). The model tests both direct and indirect effects of transformational leadership on individual-level outcomes: innovative work behavior, task performance, and work engagement via playful work design. The analysis was based on 254 valid responses from employees working in agile teams. Bootstrapping with 1,000 resamples was employed to assess the statistical significance and construct confidence intervals (Hair et al., 2021). The results are structured into direct, indirect (mediated) effects, total effects, and assessments of model fit (R^2). Direct paths were tested between transformational leadership, playful work design, and outcome variables (innovative behavior, task performance, and work engagement), indirect effects were calculated to assess the mediation role of playful work design, and total effects were examined to capture the full influence of transformational leadership. The model demonstrated strong explained variance for innovative behavior ($R^2 = 0.546$) and work engagement ($R^2 = 0.406$), and moderate variance for task performance ($R^2 = 0.182$).

Table 3 summarizes the direct paths in the model. All direct relationships from

transformational leadership to playful work design and the outcome variables were statistically significant. Likewise, playful work design demonstrated significant predictive power for each outcome.



Table 3: Direct Effects and Bootstrapped Confidence Intervals

	Original Est. (β)	Standard Error	R ²	t-Value	95% CI	p-Value
TFL $\rightarrow$ PWD	0.449	0.054	0.202	8.243	[0.35,0.56]	<0.001
TFL $\rightarrow$ INN	0.173	0.055	0.546	3.125	[0.07,0.29]	<0.002
TFL $\rightarrow$ TASK	0.191	0.062	0.182	3.111	[0.07,0.31]	<0.002
TFL $\rightarrow$ ENG	0.165	0.060	0.406	2.757	[0.05,0.29]	<0.006
PWD $\rightarrow$ INN	0.645	0.043	0.546	14.846	[0.56,0.73]	<0.001
PWD $\rightarrow$ TASK	0.304	0.072	0.182	4.253	[0.16,0.45]	<0.001
PWD $\rightarrow$ ENG	0.546	0.051	0.406	10.669	[0.45,0.64]	<0.001

As theorized (Bass & Riggio, 2006), transformational leadership had a strong and statistically significant effect on employees' perception of playful work design, suggesting that transformational leaders contribute to crafting a work environment where tasks are perceived as more autonomous, meaningful, and enjoyable (TFL $\rightarrow$ PWD: $\beta = 0.449$, $p < .001$). Playful work design, in turn, strongly predicted all three outcomes, especially innovative behavior (PWD $\rightarrow$ INN: $\beta = 0.645$), confirming its central mediating role. Moreover, transformational leadership also exerted significant direct effects on innovative behavior, task performance, and engagement, although path coefficients were moderate.

To assess whether playful work design acts as a mediating mechanism in the relationship between transformational leadership and employee outcomes, specific indirect effects were tested using nonparametric bootstrapping, and the results are given in Table 4. The results provide strong evidence of mediation. The indirect effect from transformational leadership to innovative behavior via playful work design is particularly notable ($\beta = 0.290$, $p < .001$). Significant mediated effects were also observed for task performance and work engagement, reinforcing that playful work design translates leadership into performance outcomes in agile environments.

Table 4: Specific Indirect Effects via Playful Work Design

	Original Est. (β)	Standard Error	R ²	t-Value	95% CI	p-Value
TFL → PWD → INN	0.290	0.039	0.546	7.465	[0.22,0.37]	<0.001
TFL → PWD → TASK	0.137	0.037	0.182	3.700	[0.07,0.21]	<0.0002
TFL → PWD → ENG	0.245	0.039	0.406	6.309	[0.18,0.33]	<0.001

Table 5: Hypothesis Table with Paths, Beta Values, t-Values, Confidence Intervals

Hypothesis	Path	Original Est. (β)	t-Value	95% CI	Supported
H1	TFL $\rightarrow$ PWD	0.449	8.243	[0.35,0.56]	Yes
H2a	PWD $\rightarrow$ INN	0.645	14.846	[0.56,0.73]	Yes
H2b	PWD $\rightarrow$ TASK	0.304	4.253	[0.16,0.45]	Yes
H2c	PWD $\rightarrow$ ENG	0.546	10.669	[0.45,0.64]	Yes
H3a	TFL $\rightarrow$ PWD $\rightarrow$ INN	0.290	7.465	[0.22,0.37]	Yes
H3b	TFL $\rightarrow$ PWD $\rightarrow$ TASK	0.137	3.700	[0.07,0.21]	Yes
H3c	TFL $\rightarrow$ PWD $\rightarrow$ ENG	0.245	6.309	[0.18,0.33]	Yes

To assess the model's explanatory power and the contribution of individual predictors, R^2 values were calculated, following recommendations by Hair et al. (2021). (Table 5). The strongest effect in the model was from PWD $\rightarrow$ INN ($\beta = 0.645$), revealing that playful work design plays a crucial role in fostering innovation. The most robust indirect effect was observed for the TFL $\rightarrow$ PWD $\rightarrow$ INN path ($\beta = 0.290$), confirming the importance of playful work design as a mediating mechanism in agile team settings. Although transformational leadership had only moderate direct effects on outcomes, the combined (total) effects were considerably strong, emphasizing leadership's dual path (direct + mediated) influence.

CHAPTER V

DISCUSSION

This study is aimed at investigating the role of transformational leadership in fostering playful work design and its subsequent impact on three individual-level outcomes within agile teams: Innovative work behavior, task performance, and work engagement. Drawing upon theories of leadership, job crafting, and employee motivation, the research proposed a mediation model in which playful work design serves as the core mechanism through which transformational leadership influences individual job outcomes. The key findings provide strong empirical support for the proposed theoretical framework. First, the path coefficient from transformational leadership to playful work design was statistically significant, indicating that transformational leaders create work environments that encourage playfulness, autonomy, and engagement. This is consistent with previous findings suggesting that transformational leaders can directly influence motivation and creativity (e.g., Avolio et al., 2004; Eisenbeiss et al., 2008). Second, playful work design would predict innovative behavior, task performance, and work engagement were all supported. Among these relationships, the strongest relationship was observed between playful work design and innovative behavior, highlighting the critical role of playful work design in promoting creative and innovative behaviors. Playful work design also significantly predicted task performance and work engagement, indicating its broad relevance for various performance dimensions in agile work settings. Third, the

mediation hypothesis suggesting that playful work design would mediate the relationships between transformational leadership and the three outcomes, were empirically validated through bootstrapped indirect effect testing. The indirect effect from transformational leadership to innovative behavior via playful work design was particularly noteworthy, suggesting that much of the influence of leadership on innovation operates through playful work processes. These results imply that leaders who foster autonomy, play, and meaning at work indirectly promote employee innovation, confirming insights from Wrzesniewski & Dutton (2001) and Scharp et al. (2022). Similarly, indirect effects were significant for task performance and work engagement, as well, further confirming the mediating role of playful work design.

The total effects of transformational leadership on innovative behavior, work engagement, and task performance indicate that transformational leadership remains a key driver of individual performance outcomes even beyond its indirect influence via playful work design. This supports the dual-path model proposed in the literature, in which leadership directly impacts employee outcomes through job design mechanisms. The findings confirm that transformational leadership facilitates a playful work climate, enhancing innovation, performance, and engagement among agile team members. These results contribute to growing evidence that job design actions, particularly those fostering autonomy, enjoyment, and creativity, are essential for sustaining employee performance in dynamic and fast-paced organizational environments.

5.1 Theoretical Contributions

This study offers several important theoretical contributions to the literature on leadership, job design, and employee outcomes within agile work environments. By integrating concepts from transformational leadership theory (Bass, 1985; Bass & Riggio,

2006), job crafting and playful work design (Tims, Bakker, & Derks, 2012; Scharp et al., 2019; Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012), and motivational work design frameworks (Hackman & Oldham, 1980; Wrzesniewski & Dutton, 2001), the findings advance our understanding of how leadership behaviors can shape individual-level performance and well-being through proactive work design.

First, one of the central theoretical contributions of this study is the empirical validation of playful work design as a mediating mechanism linking transformational leadership with key employee outcomes such as innovation, task performance, and work engagement. While previous studies have emphasized the role of leadership in motivating employees and enhancing creativity (Amabile, Schatzel, Moneta, & Kramer, 2004; Eisenbeiss et al., 2008), relatively few have explored the intermediary role of work design strategies, particularly playful ones, in explaining this relationship. By demonstrating that playful work design significantly mediates the effects of transformational leadership on individual outcomes, it supports the notion that leaders can indirectly influence employee behavior by influencing how work is experienced, rather than just by providing direct motivation or goal-setting. This reinforces the importance of viewing leadership as an interpersonal dynamic and a contextual enabler of proactive job redesign.

Secondly, this study enriches the conceptualization of playful work design in agile contexts. These findings are consistent with the previous research emphasizing job crafting, autonomy, and playfulness as critical pathways for enhancing innovation and engagement in modern, agile workplaces (Wrzesniewski & Dutton, 2001; Scharp et al., 2022). Although playful work design is a relatively recent construct first mentioned in 2019, the current findings demonstrate its relevance and predictive validity in agile work settings, where flexibility, creativity, and intrinsic motivation are critical. The strong

effects observed between playful work design and innovative behavior and engagement suggest that introducing playfulness into job roles is feasible and highly effective in complex, team-based environments.

Third, this study extends transformational leadership theory. The findings contribute to transformational leadership theory by elucidating how transformational leadership influences individual-level outcomes in agile environments. While prior studies have established direct links between transformational leadership and outcomes such as creativity and engagement (Zhang & Bartol, 2010; Bono & Judge, 2003), this study uncovers a critical indirect pathway through playful work design. In agile contexts characterized by autonomy, self-management, and distributed authority, the direct effects of transformational leadership on outcomes may be weaker than traditionally assumed (Bono & Judge, 2003; Eisenbeiss et al., 2008). Instead, playful work design may serve as a more salient behavioral translation of leadership influence in such environments. This confirms that transformational leaders foster environments that empower employees to shape their work experiences, leading to more desirable outcomes. By doing so, this study expands the transformational leadership literature by demonstrating that its effectiveness is not limited to hierarchical or traditional organizations. Still, it is highly relevant in agile, cross-functional, and self-managed team contexts, where empowerment and flexibility are especially important.

Lastly, the study contributes to the emerging literature at the intersection of agile methodologies and organizational behavior by integrating them. Even though agile practices are widely implemented in software development and project management, empirical research on the psychological mechanisms that drive individual performance in agile teams remains limited. By positioning playful work design as a significant process

variable within agile contexts, this study provides a new lens for understanding how leadership and job design collectively influence performance and engagement in dynamic work environments. This integration also responds to gaps in the agile literature, which has traditionally focused on structural or process outcomes (Moe, Dingsoyr, & Dyba, 2010; Tripp, Riemenschneider, & Thatcher, 2016), by offering a behavioral science perspective that emphasizes autonomy, experimentation, and intrinsic motivation as key drivers of performance. This integration enhances our understanding of how agile teams' functionality can be optimized through structural or procedural changes and motivational and psychological mechanisms that promote autonomy, joy, and innovation.

5.2 Practical Implications

The findings of this study provide several valuable insights for organizations, human resource practitioners, and team leaders looking to improve employee performance, innovation, and engagement within agile work environments. As organizations increasingly adopt agile frameworks to adapt to dynamic market conditions, understanding how leadership and job design interact becomes essential for sustainable team effectiveness. The first practical contribution of this study is that it empowers the concept of transformational leadership within agile teams. The results underscore the central role of transformational leadership in shaping positive psychological and behavioral outcomes. Organizations should invest in leadership development programs that cultivate transformational leadership behaviors, particularly idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation (Bass & Riggio, 2006). These leadership behaviors significantly enhance employees' experience of playful work design, which drives innovation and engagement. Training programs can incorporate simulations, coaching, and feedback sessions that help leaders foster

autonomy, promote experimentation, and support individual growth, and agile team leaders should be encouraged to take a motivational and vision-oriented approach rather than relying only on task structuring and control.

Secondly, one of the most actionable findings is the significant predictive power of playful work design on key outcomes such as innovative behavior and engagement. This suggests that organizations can benefit from formally recognizing and encouraging playful elements in job design, especially in agile and creative environments. For example, human resources (HR) teams can promote playful work design workshops where employees are encouraged to reflect on how they can infuse their roles with fun, creativity, and personal meaning, and managers should support and legitimize playful behaviors (e.g., humorous communication, gamified tasks, informal brainstorming activities), as they contribute to a more intrinsically motivating and innovative work culture.

Third, this study suggests redesigning performance systems to support autonomy and creativity. It suggests that traditional, more controlled performance systems may be insufficient in agile settings, where outcomes depend more on employee motivation, autonomy, and creativity. Organizations should therefore shift from rigid KPIs to flexible, developmental goals that allow employees to explore and iterate; reward not only task completion but also exploratory behaviors, knowledge sharing, and creative problem-solving; and incorporate team-level recognition systems that highlight playful yet productive contributions to organizational goals.

Fourth, this study contributes to the practice by emphasizing the importance of creating an organizational climate that encourages psychological flexibility. The success of playful work design also depends on an organizational culture that allows experimentation, humor, and interpersonal risk-taking. Leaders and HR professionals

should aim to create a climate of psychological safety and openness, which allows employees to engage in playful behaviors without fear of negative evaluation. This may involve flattening hierarchies, increasing voice opportunities, reframing failure as learning, and aligning with agile principles, and providing physical or virtual spaces for creative expression, informal collaboration, or “playful pauses,” which may enhance cognitive flexibility and idea generation.

Lastly, this study gives practical guidance for agile transformation efforts. For companies undergoing agile transformations, this research shows that people-oriented practices such as leadership style and job design are as critical as process reengineering. Successful agile implementation requires equipping leaders with agile frameworks (e.g., Scrum, Kanban) and the soft skills to lead through influence and inspiration; emphasizing continuous team reflection, where teams can redesign roles and rituals to better support joy, ownership, and engagement; and embedding playful work design principles into onboarding, team charters, and retrospectives, making them part of the team’s DNA rather than isolated interventions.

5.3 Societal and Ethical Contributions

This study not only advances theoretical understanding and provides practical insights for organizations but also offers important societal and ethical contributions. By examining the role of transformational leadership and playful work design within agile teams, the findings focus on broader issues of employee well-being, autonomy, and dignity at work, which are elements that are central to ethical organizational practices and to creating more humane and inclusive workplaces.

First, the study contributes to societal conversations about the future of work. With the increasing adoption of agile methodologies and the acceleration of digital

transformation, there is a risk that work environments become overly task-focused, transactional, and mechanistic, potentially undermining human creativity and psychological well-being. By demonstrating that playful work design fosters innovation, engagement, and task performance, this study suggests that introducing playfulness, autonomy, and intrinsic motivation into work design can help mitigate some of these risks. It encourages a vision of workplaces where employees are empowered to reinterpret their tasks creatively and bring more of their authentic selves to work, promoting a healthier, more sustainable work culture at a societal level.

Second, the findings offer ethical guidance for leadership development and human resource practices. In modern workplaces, especially those adopting agile frameworks, leadership increasingly requires balancing performance pressures with care for employees' psychological needs. The evidence that transformational leadership fosters playful work design underscores the ethical responsibility of leaders to support autonomy, meaning, and enjoyment at work, not only for performance gains but also for respecting employees as whole individuals with psychological and emotional needs. Ethical leadership, in this view, involves creating conditions where employees can thrive, innovate, and experience joy in their work, reinforcing the moral imperative to humanize the workplace.

Another important societal contribution is related to inclusion and diversity in agile teams. The work environments where playful work design is encouraged can potentially create more inclusive team climates where diverse voices feel heard and valued. However, organizations must remain mindful of who feels able to participate in playful behaviors and who may feel excluded due to cultural, gender, or generational differences in perceptions of play at work. Ethically responsible organizations should

ensure that playful work environments are designed to be inclusive and participation in them is voluntary, not mandatory.

Finally, this study contributes to a broader conversation about balancing efficiency and human values in modern organizations. The pressure for rapid innovation and adaptability in agile settings may sometimes conflict with employees' need for meaning, well-being, and respect. The findings suggest that playful work design offers a low-cost strategy for meeting these demands, allowing organizations to enhance performance while protecting employees' well-being. This ethical balance is particularly crucial in today's fast-changing, high-pressure work environments.

In sum, this study's societal and ethical contributions highlight how leadership behaviors and work design practices can humanize agile workplaces, foster innovation in ways that respect employee autonomy, and promote inclusive and culturally sensitive approaches to playful work practices. By drawing attention to these dimensions, this research encourages organizations to consider how to improve performance in ethically responsible and socially sustainable ways.

5.4 Limitations and Suggestions for Future Research

While the present study provides important theoretical and practical insights into the relationships among transformational leadership, playful work design, and individual-level outcomes in agile teams, several limitations should be acknowledged. These limitations are about the research design, sample characteristics, measurement choices, and analytical approach. The study employed a cross-sectional survey design, restricting the power to draw causal inferences between variables. A three-time-point design, for example, could allow researchers to longitudinally separate the predictor (e.g., transformational leadership), the mediator (e.g., playful work design), and the outcomes

(e.g., innovative behavior, task performance and engagement), therefore enabling stronger inferences about causality and mediation processes. Such designs would also allow for exploring dynamic changes in leadership influence or playful work design over time, especially in fast-paced agile environments where team compositions, roles, and task demands frequently evolve. Although structural equation modeling can suggest directional relationships based on theory and statistical fit, time-based order cannot be confirmed. For example, while the model assumes that transformational leadership leads to increased playful work design and better outcomes, highly engaged or innovative employees may perceive their leaders as more transformational or craft their jobs more playfully. A longitudinal or experimental design would allow for stronger causal claims and a clearer understanding of how these relationships evolve.

All data were collected via self-reported questionnaires, which may introduce common method variance (CMV) or social desirability bias. Although measures were taken to reduce common method variance (e.g., anonymity, varying scale formats, validated instruments), the potential for inflated relationships due to single-source bias remains a concern. Future research may benefit from incorporating multi-source data (e.g., supervisor ratings, peer evaluations) or objective performance metrics to reduce method bias. Moreover, the sample consisted of 254 individuals working in agile teams within private-sector organizations in Turkey. While this provides valuable insights into agile work contexts, the sample's organizational and sectoral characteristics may limit the generalizability of the findings. Additionally, although statistically distinguishable, the high correlation between playful work design and innovative behavior suggests potential construct proximity that warrants further conceptual refinement. Future research could explore alternative operationalizations of playful work design or consider second-order

factor structures that differentiate between playfulness, autonomy, and task engagement more explicitly.

Another limitation was that the present study focused exclusively on individual-level constructs, despite being situated in agile team contexts. Agile teams are inherently interdependent, and team-level factors such as psychological safety, shared leadership, team cohesion, or sprint structure may influence how leadership and job design processes unfold. Future studies could extend this work by testing multi-level models that capture the nested nature of team dynamics and explore how team-level moderators or mediators shape the effects observed at the individual level. For example, team psychological safety (Edmondson, 1999) represents a promising boundary condition as a team-level construct influencing individual perceptions and behaviors. Team psychological safety refers to a shared belief that the team is safe for interpersonal risk-taking, which may significantly influence whether individuals feel empowered to engage in playful, creative, or self-directed work behavior. Prior research has shown that psychological safety enhances team learning, voice behaviors, and creativity (Newman, Donohue, & Eva, 2017; Kark & Carmeli, 2009), suggesting that its presence could amplify the effectiveness of leadership-driven job design interventions. Testing psychological safety as a moderator could clarify under what conditions transformational leadership is more likely to foster playful work design and when playfulness translates into improved innovation and engagement. This would advance the theoretical integration between team climate theories and job design mechanisms. Moreover, understanding this moderation effect could provide practical insights for organizations on how to create climates that maximize the benefits of both transformational leadership and playful work design.

Furthermore, playful work design's role as a moderator on the relationships

between transformational leadership and individual outcomes (i.e., innovative behavior, engagement, and task performance) could also be examined. High levels of playful work design could strengthen the direct effects of transformational leadership on innovative behavior, engagement, and task performance by creating a psychologically enhanced and intrinsically motivating work environment that increases the effects of leadership influences (Bakker & van Woerkom, 2017; Scharp et al., 2019). On the other hand, when playful work design is low, employees may lack the cognitive and emotional resources needed to fully respond to transformational leadership behaviors, decreasing the leader's overall impact. This perspective aligns with interactionist theories of work design (Grant & Parker, 2009), suggesting that leadership effectiveness depends on leaders' behaviors and on the degree to which employees proactively shape their work experiences. Future studies could test these potential moderation effects, offering a more comprehensive understanding of how transformational leadership and playful work design jointly contribute to positive outcomes in agile work settings.

CHAPTER VI

CONCLUSION

This thesis explored the dynamics of playful work design in agile teams, specifically focusing on its mediating role between transformational leadership and three key individual-level outcomes: innovative behavior, task performance, and work engagement. Drawing on theories of motivation, leadership, and job design, including Self-Determination Theory and Flow Theory, the study proposed and tested a conceptual model using survey data from 254 employees working in agile teams across diverse private-sector organizations in Turkey. The findings confirm that transformational leadership positively predicts playful work design and, which in turn, significantly enhances innovative behavior, task performance, and work engagement. Furthermore, playful work design partially mediates the relationship between transformational leadership and these outcomes, indicating that how leaders shape motivational climates can activate proactive job crafting strategies like playful work design, improving employee functioning.

This research advances theoretical and practical understanding in three key ways by situating playful work design in agile work environments characterized by high autonomy, collaboration, and rapid iteration. First, it introduces playful work design as a novel mechanism linking leadership to employee outcomes in agile contexts. Second, it empirically validates the motivational function of playful work design in dynamic team

settings. Third, it provides actionable insights for organizations seeking low-cost, high-impact ways to enhance innovation, performance, and engagement. Overall, this thesis demonstrates that playful work design is not only a form of self-entertainment but a strategic, proactive behavior that supports adaptive functioning in agile teams. As organizations increasingly turn to agile methodologies to thrive in complex and uncertain environments, integrating leadership and job design approaches such as those tested in this study will be essential for fostering sustainable employee motivation, creativity, and performance.

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APPENDICES

Appendix A: Survey Items

a. Playful Work Design Survey Questions (Scharp et al., 2019)

i. Designing Fun Survey Questions

- I look for ways to make tasks more fun for everyone involved
- I look for humor in the things I needed to do
- I use my imagination to make my job more interesting
- I approach my tasks creatively to make them more interesting
- I approach my work in a playful way
- I look for ways to make my work more fun

ii. Designing Competition Survey Questions

- I compete with myself at work – not because I have to, but because I enjoy it.
- I approach my job as a series of exciting challenges.
- I try to set time records in my work tasks.
- I push myself to do better, even when it isn't expected
- I try to make my job a series of exciting challenges
- I try to keep score in all kinds of work activities

b. Transformational Leadership Survey Questions (Bass & Avolio, 1995)

i. Idealized Influence Survey Questions

- The leader in this company talks about his/her most important values and beliefs.
- The leader in this company specifies the importance of having a strong sense of purpose.
- The leader in this company considers the moral and ethical consequences of decisions.
- The leader in this company emphasizes the importance of having a collective sense of mission.
- The leader in this company instills pride in me for being associated with him/her.
- The leader in this company goes beyond self-interest for the group's good.
- The leader in this company acts in ways that builds my respect.
- The leader in this company displays a sense of power and confidence.

ii. Inspirational Motivation Survey Questions

- The leader in this company talks optimistically about the future.
- The leader in this company talks enthusiastically about what needs to be accomplished.
- The leader in this company articulates a compelling vision of the future.
- The leader in this company expresses confidence that goals will be achieved.

iii. Intellectual Stimulation Survey Questions

- The leader in this company re-examines critical assumptions to question whether they are appropriate.
- The leader in this company seeks differing perspectives when solving problems.
- The leader in this company gets me to look at problems from many different angles.
- The leader in this company suggests new ways of looking at how to complete assignments.

iv. Individual Consideration Survey Questions

- The leader in this company spends time teaching and coaching.
- The leader in this company treats me as an individual rather than just a member of a group.
- The leader in this company considers me as having different needs, abilities, and aspirations from others.
- The leader in this company helps me to develop my strengths.

c. Individual Level Innovative Behavior Survey Questions (Janssen, 2000)

- I create new ideas for difficult issues (idea generation)
- I search out new working methods, techniques, or instruments (idea generation)
- I mobilize support for innovative ideas (idea promotion)
- I acquire approval for innovative ideas (idea promotion)
- I transform innovative ideas into useful applications (idea realization)
- I introduce innovative ideas into the work environment in a systematic way (idea realization)

d. Individual Level Task Performance Survey Questions (Tjosvold et al, 2003)

- I always complete my duties specified in my job description.
- I fulfill all responsibilities required by my job.
- I never neglect aspects of the job that I am obligated to perform.

e. Work Engagement Survey (Schaufeli et al., 2019)

- I feel bursting with energy at work.
- I am enthusiastic about my work.
- I am immersed in my work.

Appendix B: Confirmatory Factor Analysis, Factor Loading Values of the 5-Factor Model

Items	Factor Loadings
Work Engagement (ENG) 2	0.846
Work Engagement (ENG) 1	0.713
Work Engagement (ENG) 3	0.585
Innovative Behavior (INN) 3	0.852
Innovative Behavior (INN) 1	0.825
Innovative Behavior (INN) 6	0.792
Innovative Behavior (INN) 5	0.776
Innovative Behavior (INN) 4	0.748
Innovative Behavior (INN) 2	0.743
Playful Work Design (PWD) 6	0.809
Playful Work Design (PWD) 8	0.771
Playful Work Design (PWD) 4	0.763
Playful Work Design (PWD) 7	0.763
Playful Work Design (PWD) 3	0.758
Playful Work Design (PWD) 5	0.727
Playful Work Design (PWD) 1	0.696
Playful Work Design (PWD) 11	0.694
Playful Work Design (PWD) 2	0.687
Playful Work Design (PWD) 9	0.533
Playful Work Design (PWD) 10	0.506
Playful Work Design (PWD) 12	0.432
Task Performance (TASK) 1	0.910
Task Performance (TASK) 2	0.865
Task Performance (TASK) 3	0.609
Transformational Leadership (TFL) 4	0.855
Transformational Leadership (TFL) 7	0.832
Transformational Leadership (TFL) 8	0.816
Transformational Leadership (TFL) 6	0.811
Transformational Leadership (TFL) 10	0.809
Transformational Leadership (TFL) 5	0.790
Transformational Leadership (TFL) 2	0.752
Transformational Leadership (TFL) 1	0.741
Transformational Leadership (TFL) 9	0.710
Transformational Leadership (TFL) 3	0.709