Jinnah Business Review
July 2026, Vol. **14**, No. 2, pp. 1-28
doi.org/10.53369/EBCC7482

Unlocking Project Success: Exploring Influence of Project Managers' Transformational Leadership with mediating role of Project Teams' Psychological well-beingand moderating role of Teams' Psychological Capital

R. S. Qureshi[1], S. Ullah*[2], U. W. Qazi[3], M. S. Ashraf[4]

[1,2,3] *Air University, Islamabad, Pakistan*
[4] *Minhaj University Lahore, Pakistan*

Abstract. This study investigates the relationship between project managers' transformational leadership and project success, emphasizing the mediating role of team psychological well-being and the moderating role of psychological capital. Data was collected from 390 respondents across public and private sectors using a five-point Likert-scale questionnaire. Correlational and regression analyses revealed a strong positive association between transformational leadership and project success. Psychological well-being significantly mediated this relationship, indicating that supportive leadership enhances team morale and performance. Psychological capital further strengthened these effects, highlighting its importance in fostering resilience and commitment. The findings underscore the need for cultivating psychological resources and transformational leadership to achieve sustained project success in Pakistan's evolving industrial landscape.

Key words: Psychological Capital, Psychological Well-being, Project Success, Transformational Leadership, Team Performance

1 Introduction

Project management is becoming one of the key success factors for organizational performances in Governmental and commercial organizations in a competitive environment of Pakistan (Alvi, 2025). In their management approaches, project managers tend to focus on tools and structured methodologies such as cost, schedule, and quality control and mechanics but rarely account for human factors important in motivation and positive team dynamics (Qureshi et al., 2021). Internationally, it is being realized that leadership skills are essential to ensure a technical professional direction in projects through human resource management (Alharbi and Csala, 2020). Of all, transformation leadership has risen as a dominant practice that incorporates personal and group goals, encourages creativity as well as the development of a strong, productive

*Corresponding author.
Email: sanaullah@au.edu.pk

team. In the challenging corporate context of Pakistan, the subject of rapid and dynamic change, and fierce competition, making way for the emergence of transformational leaders.

Using inspirational vision, active encouragement and innovative stimulation, the transformational leaders assist the teams to achieve consistency in motivation and high levels of performance, according to Kim and Jang (2024). it is especially important for the public sector, especially where change is necessary, the private sector especially where demand for innovation determines productivity (Qureshi et al., 2021). Avrio works stress that transformational leadership leads to higher psychological capital, productivity and organizational resilience as well as lower turnover and burnout (Zhang and Ma, 2023). It equips leaders in tackling difficult tasks, enhancing employee morale as well as inspiring high performance. This type of leadership blends technological and people factors, making it advantageous. As for providing a competitive edge in creating togetherness and malleability of teams in various project settings. For expanding corporate sector in Pakistan, transformational leadership has proposed some benefits. A reasonable model to overcome challenges and guarantee effective outcomes in the long term.

New studies reveal how change brings improvement in the main organizational performance indicators including job satisfaction, employee morale, project delivery (Ali et al., 2024).A few sectors in the economy of Pakistan have been going through very high growth rate, such as banking sector, software houses, service sectors; poultry; MRO and infrastructure industries among others. Self-organizing work design has been quite important in the determination of the organizational performance in most of these industries' transformational leadership. These very challenging fields imply that it is necessary and sufficient to manage adequately technical and managerial, and people sides of the project. For leaders handling Pakistan's competitive economic situation, transformational leadership balancing these elements has become crucial by motivating teams and connecting them with project goals.

In Pakistan, where fast technology development and structural changes necessitate flexibility and creativity, transformational leadership is very important in helping to create high-performance project teams. Setting a clear goal, providing individualized support and encouraging innovation can help transformational leaders build an adaptable project culture (Naseem and Abbas, 2022). In project-based environments, this leadership approach helps to foster resilience and team cohesion, therefore benefiting the project. Moreover, innovation helps teams to satisfy public and commercial sectors of Pakistan's needs.

Though transformational leadership is becoming more popular, little studies have looked at its effects on team psychological capital and general well-being in Pakistan's project-based settings (Alvi and Alvi, 2023). The capacity of a team to overcome obstacles and reach project goals depends much on psychological capital, with optimism, resilience, and self-efficacy (Ahmad et al., 2024). Early research showed that transformational leaders who rate the well-being of their teams raise psychological capital, which leads to better project results. For Pakistan, where workers in the commercial sectors sometimes suffer from great stress because of economic unpredictability and fast industrial changes, this idea is very basic.

To get a better understanding of the relationships between the project managers' transformational leadership and team psychological well-beingas well as the project success in context of Pakistan, more research needs to be done (Aslam et al., 2021). Knowledge of these relationships would present valuable information to public and private organizations that wish to strengthen their project outcome and promote more sustainable, creative teams.

1.1 Research Gap

1.1.1 Theoretical Knowledge Gap

Although literature presents significant empirical evidence of the relationship between transformational leadership and organizational performance, very little theoretical work has addressed the relationship between transformational leadership and project success in Pakistan. Previous research primarily leverages transformational leadership within a more general organizational context and only sparse investigation of leadership type's impact on project-based measures such as budget compliance, schedule management, and stakeholder satisfaction (Alvi and Alvi, 2023). This gap prevents a richer exploration of how leadership processes define the success of organizational goals in industries like banking, software development, and infrastructure that need these values to foster growth.

However, the more emphasized use of psychological factors such as, psychological well-being and psychological capital where they act as a mediator and/ or moderator in the relationship between transformational leadership and project success has not extensively been investigated. A few theoretical works like the one from Aslam et al. (2021), indicate that an understanding of psychological well-being including job satisfaction, engagement and personal fulfillment may weaken this relationship, but this assertion has never been empirically proven, especially in pressurized environment like Pakistan. Another important factor which could improve the application of transformational leadership in most projects is psychological capital which includes resilience, optimism and self-efficacy.

1.1.2 Practical Knowledge Gap

From the point of view of practical application, the importance of transformational leadership in multifaceted, project-oriented environment studied insufficiently. While this leadership style is beneficial, the benefit of cross-functional team motivation is well documented, but it is not well understood how leadership enhances project team configuration for management of project complexity, cross functional teams and public sector projects (Kim and Jang, 2024). This paper emphasizes that in Pakistan's high-pressure work environments, there is a critical need for leadership development processes that foster psychological resilience, participation, and effective leadership strategies.

1.2 Problem Statement

Managing corporate objectives require efficient project management, however, in Pakistan, technical and structural needs dominate over the necessary human element that plays a crucial role for project success. Changing management roles continue to receive limited attention among business stakeholders, particularly with regards to project managers as transformative executives –those over a capacity to bring about change by implementing best practices of innovation, boosting team cohesiveness and cultivating empowering organizational climate –with Kim and Jang (2024) and (Ahmad et al., 2022). Although prior studies have established that transformational leadership has a positive effect on project outcomes, the degree of the effect is not well explicated.

On such project control variables as budget, time and stakeholders' satisfaction, further research is imperative (Bataineh, 2025). Since the knowledge, affect, and attitude of the team members were captured under the umbrella of psychological factors, one set of factors is likely

to define as psychological capital, including resilience, optimism, and self-efficacy, and psychological well-being.

To act as a moderator or mediator variable between transformational leadership and project success. To date, empirical investigation of these dynamics in Pakistan's relatively unexplored economic and organizational environment has been limited (Craft et al., 2024; Naiboğlu and Bilgivar, 2021). This gap is particularly important given the realities of a developing economy where enhanced resilience, enthusiasm and options of the team become valuable worth and drivers of overall project implementation success (Raziq et al., 2018; Zaman et al., 2020).

To fill these gaps, this study examines the interaction between transformational leadership and project success where psychological well-being has the mediating role and psychological capital acts as a moderator. These recommendations will guide policymakers and project managers in Pakistan to equip their prospective project teams with the best-suitable coping strategies and know how to handle the emerging challenges in the competitive organizational environment with a view to generator a maximum project success.

1.3 Research Aim and Objectives

The study sought to close in the noted gaps through direct influence of transformational leadership of project managers to project success. It was mostly engaged in enhancing the level of team members' psychological capital and managing their psychological well-being. With the focus on the continuous feedback of the respondents on aspects of leadership, the character of the project teams, and the successful completion of a project, the purpose of the study was to quantify the survey responses from participants occupying a range of organizational positions.

With focus on their insight into project leadership, team dynamics, and project success indicators, the major purpose of the study was to integrate quantitative analysis of the obtained data from people in several organizational roles. Research aims were:

1. To assess how transformational leadership of project managers relates to project success.
2. To explore mediating role of team members' psychological well-being in this relationship.
3. To analyze moderating role of team members' psychological capital on the relationship between transformational leadership and project success.
4. To examine the interactions of psychological capital (as a moderator) and team members' psychological well-being (as a mediator) in shaping the relationship between transformational leadership and project success.

2 Research Questions

This study investigated influence of project managers' transformational leadership style on project success, considering mediating role of team members' psychological well-being and moderating role of their psychological capital. By examining these relationships within the context of project management, this research aimed to interject to existing knowledge on leadership, project management and organizational behavior. Specific research questions included:

1. To examine how transformational leadership impacts project success
2. To analyze the mediating role of team psychological well-being in the relationship between transformational leadership and project success.

3. To investigate the moderating role of psychological capital on the relationship between transformational leadership and project success.
4. To explore the combined influence of transformational leadership, psychological well-being, and psychological capital on project success.

However, limited research has examined how transformational leadership shapes project success through both psychological well-being and psychological capital, particularly in Pakistan's high-demand project environments. This study seeks to fill this gap by developing and testing a dual-path framework that links leadership behaviors, psychological states, and project outcomes.

3 Literature Review

Transformational leaders align team goals with organizational objectives, encourage creativity, and empower autonomous decision-making (Bin Saeed et al., 2019; Olander, 2007). They support psychological safety through cross-function collaboration as well as providing and giving constructive feedback to enhance project performance (Bataineh, 2025). However, as an established technique in managing projects more research is needed to understand other factors that moderate the relationship between resilience and project success, such as the psychological capital and well-being of employees (Craft et al., 2024; Naiboğlu and Bilgivar, 2021).

3.1 Impact of Project Managers' Transformational Leadership Style on Project Success

Transformational leadership in the writings of Burns and Ward (1978) and Bass and Bass Bernard (1985), are about the direction of social change to accomplish the goals and collectively transform perceptions. Organizational leadership with this approach has been effective in many contexts as it enhances unity and encourages organization members toward their best performance (Bass and Riggio, 2006). In Pakistan, as the country is in the phase of rapid economic development and witnessing an increase in complex initiatives related to infrastructure and technological development, transformed leadership makes a huge difference in project success. Concepts such as efficiency, innovation and teamwork that are cardinal to the success of transformed leadership, reasonably suited Pakistani project environment that at times requires large amount of co-ordination between different project teams and stakeholders. In addition, transformational leadership concentrates on the ability of the team members to face new and growing challenges, which are crucial in Pakistan due to sociopolitical uncertainty and increased need for the ability to respond to change in market and legal requirements in a timely and effective manner contributes to Pakistan (Alvi and Alvi, 2023).

Transformational leadership is clearly vital for the ongoing success of any project. Research has shown that it increases major organizational outcomes like employee engagement, job satisfaction, and organizational commitment (Avolio et al., 1999; Naiboğlu and Bilgivar, 2021). Although further research in Pakistan's context is required, direct impact of transformational leadership on project measures (like adherence to budget, deadlines and stakeholder satisfaction) still demands for more attention. In view of the magnitude of the development needs in Pakistan, transformational project managers can lift these KPIs higher by establishing ethos that cultivate innovation and ownership. These attributes enable team members to become more of

'project owners,' which has resulted in the enhancement of many fields, cutting across public health, renewable energy, infrastructure, and software houses, inter alia. Nevertheless, despite stating that leadership is necessary for ultimate project success, Pinto et al. (1988), failed to provide answers to such questions as which of the leadership qualities is most significant. Recent studies have raised the imperative of a transforming strategy that is especially important in organizations where flexibility of operations and peculiar forward thinking are required, especially in complex project settings (Zaman et al., 2019).

Schaubroeck et al. (2021), also revealed that transformational leadership makes sure that the teams stay focused on goals; challenges occur due to the matching of team members with organizational objectives, which enhances resilience and cooperation among Pakistani project managers. Such leadership practice has enhanced the psychological safety of the teams in terms of stimulating positive thoughts and attributes for each of the team members and, therefore, enhancing the results of the project (Bataineh, 2025).

Closing these study gaps offers insightful information that would enable local leaders to properly apply transformational leadership to accomplish successful project results given Pakistan's complicated project scene. Drawing on this conversation, we formulate the following hypothesis:

H1: To analyze the relationship between transformational leadership and project success.

3.2 Mediating Role of Team Members' Psychological Well-being

Project managers have always assessed their performance mostly in terms of their capacity to finish projects on time and within budget. But without taking stakeholder satisfaction and general management process Wang and Chen (2024), these measures progressively seem insufficient. Project success, according to Pinto and Slevin (1987), and Baccarini (1999), depends on its capacity to satisfy client demands and expectations. underlined even more how effective projects have to take time and money, stakeholder satisfaction, end-user expectations, commercial value, environmental impact and safety. This change of viewpoint emphasizes the need to evaluate the long-term value and short-term results of programs (Chan, 2001). Lin (2018), and Lee and Kim (2022), supporting this point of view found as essential elements of project success efficiency, customer impact, future potential, and teamwork.

Particularly transformational leadership, which has been acknowledged as necessary for improving team performance, has great influence in this changing environment on project outcomes (Naiboğlu and Bilgivar, 2021). Transformational leaders in project management help to create a team where team members may flourish and a setting free from conflict. Recent studies underline the important influence of team members' psychological well-being as moderating element in the correlation between transformative leadership and project performance. Consequently, mentally strong teams are more motivated, engaged, and resilient; this helps much to meet project goals (Kim et al., 2021).

Psychological well-being (psychological well-being) includes emotional stability, self-efficacy and positive attitude; all of which encourage teamwork, creativity and adaptation inside teams (Zhang et al., 2022). Transformational leaders are more likely to align project goals and actively help to satisfy stakeholders when team members believe they value and support them. Moreover, leaders who give mental health of their teams' top priority aid to lower stress and burnout, thereby enabling consistent performance even under pressure (Zhu and Cheung, 2023). This strategy helps Pakistan, where organizational difficulties and economic changes can cause great workplace stress. Encouragement of psychological well-being valuing culture will help project

managers improve team performance generally and individual output.

One cannot emphasize the importance of psychological well-being in mediating the link between transformative leadership and project success. It is fundamental ingredient that helps teams to overcome obstacles more skillfully and produce superior output. In Pakistan, where projects can face several challenges including limited resources and changing stakeholder expectations, encouraging psychological well-being might help teams to keep focus and flexibility (Zhang et al., 2022).For long-term success in any sector, it results in better project output and a better working environment, which is essential. Project managers in Pakistan thus must understand the mediating function of team members' psychological well-being to attain continuous success. By integrating this understanding into their leadership practices, they can create more resilient teams capable of meeting demands of today's complex project landscape. Based on this discussion, we draw following hypothesis.

H2: To analyze the mediating effect of team psychological well-being on the relationship between transformational leadership and project success

3.3 Moderating Role of Team Members' Psychological Capital

Psychological capital encompasses positive psychological attributes. Individuals can develop and sustain to enhance their performance and overall well-being (Luthans and Youssef, 2004). This construct comprises four primary components: resilience, hope, optimism and self-efficacy. Self-efficacy reflects an individual's belief in overcoming challenges and achieving goals (Bandura, 1977). Optimism involves maintaining positive outlook and viewing setbacks as temporary (Bataineh, 2025). Hope is characterized by belief that one can achieve goals and surmount obstacles through effort and persistence (Restrepo-Morales et al., 2024). Finally, resilience is ability to endure adversity, recover from setbacks and move forward despite difficulties (Yang et al., 2020).

High Psychological capital team members are more suited in project management to face obstacles, adjust to changes and manage difficulties. In Pakistan, where project settings can be irregular and full of challenges, this capacity for psychological resilience is crucial. claims that resilience is the basic element of psychological capital that supports adaptability and recovery in such erratic surroundings. Moreover, Psychological capital detects the sense of value employees feel from their managers and companies, which is important for their general wellness (Hayat and Afshari, 2021).

Scholarly research also showed that organizations can create the context in which psychological capital can develop (Luthans and Youssef, 2004). Agarwal and Anantatmula (2021), defined that resilient are better placed to deal with challenges or adversity usually from backgrounds that nurture them. These results validate the need to activate positive psychological states in team members as a way of increasing the ability to manage project needs amongst these teams.

Transformational leadership and project success have a link much impacted by psychological capital. Motivated and inspiring their staff, transformational leaders help to build resilience and a positive culture. Kim and Jang (2024), asserts that apparent organizational support raises psychological capital, thereby affecting psychological well-being and job satisfaction. also found a significant relationship between employee psychological well-being and organizational support, suggesting that those who have optimism and encouragement from their companies are more likely to seize chances even in demanding circumstances.

Knowing and using moderating impacts of psychological capital will help Pakistani project managers produce better results. Leaders that support psychological capital will enable their

teams to handle obstacles more successfully and meet project objectives (Hayat and Afshari, 2021). In Pakistan particularly, it is crucial as insufficient funds, and economic uncertainties could compromise the success of projects. Eventually, fostering the development of psychological capital inside teams will help to raise degrees of engagement, motivation, and resilience, thereby contributing to improved project performance.

Thus, for the success of the project in Pakistan, team members' psychological capital's moderating effect is rather important. Project managers can build stronger teams able to survive among obstacles by including psychological capital into leadership techniques and company culture. This approach enhances project outcomes and contributes to healthier, more productive work environment. Based on this discussion, following hypothesis is drawn:

H3: To analyze the moderating role of psychological capital between transformational leadership and project success.

3.4 Meditating, Moderating Role of Psychological well-being and Psychological Capital in Shaping the Relationship Between Transformational Leadership and Project Success

The relationship between transformational leadership and project success is complex and involves various mediating and moderating mechanisms (Alvi and Alvi, 2023). New research indicates other factors that help explain or define the nature of the relationship between the two, including the perception of the team members' psychological well-being and psychological capital. In skillful TL it is understood to improve motivation, creativity and performance by persuasive vision, credibility and the encouragement of personal growth and development (Avolio et al., 1999). However, what these leadership behaviors mean for project success is mediated by psychological factors. Psychological well-being, which covers emotional and psychological well-being has been associated with organizational outcomes like job satisfaction, employee engagement and work performance as postulated by Schaubroeck et al. (2021).

Organizations led by transformational leaders that encourage work environments conducive to high levels of psychological well-being will likely experience high levels of organizational engagement. Leaders who prioritize well-being often promote trust, provide developmental opportunities and create supportive atmosphere that enhances employees' emotional and social functioning (Avolio et al., 1999). This mediating role of psychological well-being helps to explain why transformational leadership leads to project success; when team members experience higher well-being, they are more likely to engage fully with the project, manage stress effectively and demonstrate resilience under pressure (Zhang and Ma, 2023).

Psychological capital consisting of hope, optimism, resilience and self-efficacy, has also been recognized as critical individual resources that influence employees' ability to perform in challenging situations (Luthans and Youssef, 2004). As moderator, psychological capital influences how transformational leadership behaviors impact team performance and project success. Transformational leaders can foster psychological capital by promoting positive organizational climate, offering encouragement and supporting team members in developing these psychological resources. When employees possess high levels of psychological capital, they are better equipped to handle challenges, persist in face of obstacles and maintain positive outlook; all of which are critical for achieving project success (Avey et al., 2022). More confidence with the capacity to support a team and advocate for the project goals is an effect of having better self-efficacy, but higher degrees of resilience may help to overcome adversities (Gao et al., 2021). Psychological capital therefore enhances transformational leadership by amplifying the effects

on project success. Thus, enhancing the ability of members within the team to effectively manage the challenges and diligence to the projects' goals.

It seems that psychological well-being as a mediator and psychological capital as a moderator present an entire paradigm for the understanding of the impact of transformational leadership on the project success. Whereas psychological well-being mediates between transformational leadership and positive effects on performance to be an outcome of the formation of an emotionally supportive climate, psychological capital enhances this association by furnishing team members with mental instruments to overcome challenges. This relationship proves that it is possible to observe how projects' outcomes reflect fairly the state of emotional and cognitive health. In the future, more research should continue observing these relations closely as to how the dynamics of a team and the organizational environment influence them (Avolio et al., 1999). This debate enables one to develop the following theory:

H4: To analyze the combined effect of team psychological well-being and psychological capital on project success

While numerous studies have explored the relationship between transformational leadership, employee well-being, and performance Bass and Riggio (2006); Lee and Kim (2022); Luthans et al. (2007), most have been conducted in developed economies and organizational settings outside the project management context. These studies often examined either well-being as a mediator or PsyCap as a direct predictor but did not simultaneously test their interdependent roles within a unified framework. Furthermore, limited empirical evidence exists on how these psychological mechanisms operate under the high-pressure, resource-constrained, and collectivist work environments typical of project-based organizations in Pakistan. This study addresses these gaps by proposing and empirically testing a comprehensive model in which transformational leadership influences project success through psychological well-being as a mediator and psychological capital as a moderator. By integrating both constructs, the study contributes to a more nuanced understanding of how leadership behaviors translate into performance through psychological pathways in emerging economies.

3.5 Theoretical Framework

The theory also propounds that the effects of transformational leadership on project success are both direct and mediated by the improvement of the psychological health of the team. This study builds upon the foundational premise that transformational leadership significantly contributes towards project success, directly and indirectly. The theory posits that the phycological health of the project team-encompassing both psychological capital and psychological well-being plays critical role in this relationship. Specifically, transformational leaders inspire, motivate and intellectually stimulate their teams, creating an environment that supports emotional balance, stress management, job satisfaction and overall mental health.

Phycological capital (Psychological capital) comprising hope, resilience, optimism and self-efficacy acts as a vital mechanism by which teams become more adaptable, focused and performance driven. Concurrently, psychological well-being reflects positive emotional functioning and reduce burnout, further enhancing team's engagement and commitment. Together, these psychological resources significantly improve the team's ability to navigate project challenges and achieve objectives.

Moreover, the study introduces a moderation perspective, suggesting that leadership style influences the strength of the relationship between psychological factors and project outcome. In other words, the effectiveness of psychological capital and psychological well-being in achieving

project success is amplified under transformational leadership. This dule pathway mediation via psychological well-being and moderation through psychological capital forms the basis of the proposed theoretical model.

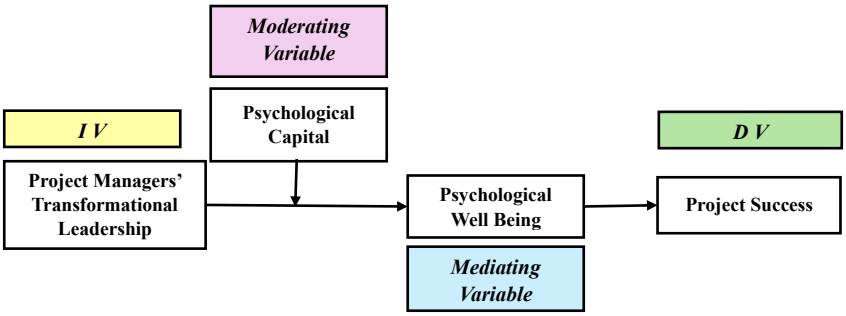

Figure 1: Hypothetical Model

The methodology taken for the research is conscripted by offering structured approach understanding multifaceted relationships of direct, mediating and moderating, between transformational leadership, teams' psychological capital, teams' psychological well-being and project success. The choice of quantitative research design underlines the intent to draw robust, generalizable understandings from diverse sets of data.

4 Methodology

4.1 Research Design

This paper examined the role of demography in the relationship between the transformational leadership style of project managers. It also explored mediating and moderating roles of psychological well-being and psychological capital of team members and their interrelation. By leading these factors, the research tried to bring perception, which could help several projects in different sectors like "banking & telecom sectors, service sectors, poultry sectors, MRO, and infrastructure" to be improved.

4.2 Quantitative Research Approach:

Since statistical analysis provides empirical data, this study adapts a quantitative research method. This strategy assists in searching for the relationships between variables, hence the testing of hypotheses and extension of results to other larger populations (Bryman, 2016). The research results are directly applied to the business decisions.

4.3 Methodology of Data Collection

Data for this study was gathered using convenience sampling, from the project team members from various organizational environments banking, software houses, services, poultry,

MRO and infrastructure). This sampling technique was selected due to the diverse and geographically dispersed nature of the above-mentioned target population across multiple sectors.This approach allowed for efficient data collection within practical constraints such as time, accessibility and resource availability. Unlike random or stratified sampling which would require controlled access to defined organizational databases convenience sampling facilitated engagement with professionals actively involved in project environments. While this method may limit generalizability, it enabled the acquisition of rich, sector-specific insights essential for exploring psychological and leadership dynamics in Pakistan's project-base settings.

4.4 Criteria of Participant Selection

The participants in the research were identified according to their positions within their companies or according to whether they were involved in some way in project management. It is done to make sure that the respondents understood the leadership styles used in the projects. Consequently, the study was able to collect valuable insights regarding the relationship between transformational leadership, psychological capital, psychological well-being, and project success from respondents with first-hand experience working in project environments. This focus helped to increase the credibility of the data collected as well as give a comprehensive account of leadership in different settings.

4.5 Survey Methodology

Using both distribution of the questionnaires in hard copies and posting questionnaires through electronic mailing, WhatsApp. This twin strategy improved the response rate of participants and increased accessibility.

4.5.1 Cross-Sectional Design

The cross-sectional design of this work allowed the data of concern to be gathered at a single point in time. This study intended to give an idea regarding the existing position of transformational leadership practices to highlight how and to what extent they impact the project performance in Pakistan by involving the participants' experience and perception at a single point.

4.5.2 Sample Size Determination

Since the population of the employees in this organization is relatively small, the sample size available for this research was limited. Krejcie and Morgan (1970), model offers a system that is easy to understand and applicable regarding how to determine the right number of participants regarding the population size, level of confidence, and error margin (**Annex I**). According to their formula, where the confidence level is 95%, the margin of error is 5%, and the proportion division is 0.5, the suggested sample size of an infinite population is 385 (Krejcie and Morgan, 1970). For the purpose of this work, a slightly larger population of the sample size of 390 was used to maximize the reliability and validity of the study.

4.5.3 Data Analysis Techniques

After collecting data, it was investigated using IBM-SPSS Statistics Modular and regression analysis under explicit technique of Hayes' PROCESS Macro (Hayes, 2018). Since organizational

research provides a comprehensive knowledge of complex link among variables, it has long established this analytical framework (Hayes, 2018; Zhao, 1991).

4.5.4 Ethical Considerations

Throughout the study, ethical rules on informed consent, confidentiality, and data protection were rigorously observed. Participants were advised on the goals of the study, voluntary participation, and anonymity of answers. Before they started the survey, informed permission was acquired from every participant. Data remains safe and only applied for research needs.

4.5.5 Triangulation of Data Sources

To reduce bias and improve the validity of the conclusions, data has been gathered from several sources including peer and supervisor assessments. Including the survey results of project sponsors, participants and supervisors have provided a more holistic view of the definition of project success. This allowed respondent confidence, which reduced social desirability bias and encouraged genuine answers.

4.6 Measurement Instruments

This study had a structured questionnaire with 54 items meant to assess important variables: on transformational leadership of project managers, on success of projects, on psychological conditions of team members and on psychological assets of the team. To measure these factors, respondents rated their level of agreement on the following statement on a Likert scale ranging 1 – strongly disagree to 5 – strongly agree. (**Annex II**)

4.6.1 Project Manager's Transformational Leadership

Adapted 10 items from established scales such as the Multifactor Leadership Questionnaire (Bass and Bass Bernard, 1985), were used to assess project manager's transformational leadership behaviors, including inspirational motivation, idealized influence, individualized consideration, and intellectual stimulation.

4.6.2 Project Success

Project success was measured using 14 multi-dimensional scale comprising indicators such as schedule adherence, budget compliance, stakeholder satisfaction and project outcomes achieved. Items were adapted from validated scales used in previous project management research (Aga et al., 2016; Pinto et al., 1988).

4.6.3 Team Members' Psychological Well-being

Psychological well-being of team members was assessed using validated scales such as the Warwick-Edinburgh Mental Well-being Scale (Tennant et al., 2007). The scale was comprised of 18 items related to positive affects, life satisfaction and psychological functioning.

4.6.4 Team Members' Psychological Capital

Psychological capital of team members was measured using the 12 Psychological Capital Questionnaire developed by Luthans and Youssef (2004). The questionnaire assessed four components: hope, efficacy, resilience, and optimism.

5 Data Analysis

5.1 Frequency Analysis: Demographic Data

Data analysisinvolved several steps to test the research hypotheses. Firstly, descriptive statistics were computed to summarize demographic characteristics of sample and variables of interest. Then, inferential statistical techniques such as correlation analysis, regression analysis and mediation/moderation analysis were employed to examine the relationships between variables and test the hypothesized model.

5.2 Participants' demographic information

The sample consisted of 215 males (55%) and 175 females (45%). This disparity was not surprising considering that most of the workplace in Pakistan tends to be dominated by males, especially the Project Management field. With respect to age, 159 (40.8%) respondents were between the ages 18 to 40, 202 (51.2%) were between the ages 41 to 60, whereas the remaining 29 (7.4%) were above 60 years. Regarding work experience, 170 (43.70%) respondents indicated less than Ten years' work experience, 156 (40%) were between the years 11 to 30, whereas the remaining 64 (16.3%) were above 30 years.

5.2.1 Control Variables

A one-way ANOVA test was conducted to identify potential control variables among demographic characteristics (gender, marital status, age, organizational type, position, and experience). The results indicated no significant control variables, as shown in Table 1. Therefore, no control variables were included in the analysis.

Table 1: One-way ANOVA

	PMTL		**PS**		**PWB**		**PC**	
	F Value	**P Value**	**F Value**	**P Value**	**F Value**	**P Value**	**F Value**	**P Value**
Gender	103.87	$< .001$	76.09	$< .001$	68.56	$< .001$	42.64	$< .001$
Material Status	87.75	$< .001$	69.42	$< .001$	164.23	$< .001$	33.95	$< .001$
Age	90.81	$< .001$	72.84	$< .001$	169.89	$< .001$	36.72	$< .001$
Organization	54.67	$< .001$	46.51	$< .001$	113.28	$< .001$	31.61	$< .001$
Position	14.92	$< .001$	15.68	$< .001$	36.06	$< .001$	1.54	0.191
Experience	60.76	$< .001$	56.25	$< .001$	127.47	$< .001$	27.45	$< .001$

Note: n=390 , PMTL= Project Manager's Transformational Leadership, PS= Project Success, PC= Psychological Capital, PSYCHOLOGICAL WELL-BEING= Psychological Well-being.

6 Results

This paper conveys findings from the analysis condemned to test the hypothesis that examined the linkages between the Project Manager's Transformational Leadership (PMTL), Project Success (PS), Psychological Capital (Psychological capital) and psychological well-being (psychological well-being) among project managers.

The study is structured as follows:

1. Descriptive statistics of continuous variables.
2. Reliability and correlation analysis.
3. Regression analysis, mediation analysis and moderation analysis based on the research hypothesis.

6.1 Descriptives Statistics for Continuous Variables

Descriptive statistics for continuous variables PMTL, PS, PC, and psychological well-being are provided inTable 2. The mean and standard deviation offer insight into the central tendencies and variability of these constructs.

Table 2: Descriptive Statistics

	Mean	**SD**
PMTL	3.922	0.794*
PS	3.796	0.721*
PC	3.833	0.748*
PSYCHOLOGICAL WELL-BEING	3.529	0.625 *

*Note: n=390, *p < 0.05, Cronbach's Alpha in brackets, PMTL= Project Manager's Transformational Leadership, PS= Project Success, PC= Psychological Capital, PSYCHOLOGICAL WELL-BEING= Psychological Well-being.*

6.1.1 Project Manager's Transformational Leadership (PMTL)

The average score for PMTL is 3.922, with a standard deviation of 0.794, indicating that most respondents view their project managers as strong transformational leaders. This leadership style, which emphasizes inspiring and motivating team members, fostering collaboration, and driving innovation, is often linked to improved team performance and morale. The consistency in responses suggests that these qualities are widely recognized among project managers in the sample.

6.1.2 Project Success (PS)

The mean score for project success is 3.796, with a standard deviation of 0.721, reflecting a generally positive perception of project outcomes. This includes factors like meeting objectives, staying on schedule, and satisfying stakeholders. The low variation in responses showed that

most participants share similar views on the success of their projects. Study suggests that effective communication, clear goal-setting, and strong leadership contribute significantly to project success. These findings align with the idea that transformational leaders can positively influence team dynamics and project outcomes, reinforcing the importance of leadership in ensuring projects meet or exceed expectations (Ilyas et al.).

6.1.3 Psychological Capital (PC)

Psychological Capital (PC) has mean score of 3.833 and standard deviation of 0.748, shown that most respondents demonstrate strong levels of resilience, optimism, confidence, and hope. These traits are essential for managing workplace challenges and enhancing performance. Although there is slight variability in individual perceptions, the overall trend reflects a workforce with positive psychological resources. Research indicate that higher Psychological Capital is linked to greater job satisfaction, improved productivity, and better stress management (Yang et al., 2020). These findings suggest that organizations can benefit from investing in initiatives that boost employees' mental and emotional resources, fostering a more resilient and motivated workforce.

6.1.4 Psychological well- being (Psychological Well-Being)

Psychological wellbeing scores the lowest mean of all the domain scores it has the mean score of 3.529 with standard deviation of 0.625 which suggests moderate psychological well-being among the respondents. This includes aspects like mental health, life satisfaction, and work-life balance. The low variability in responses showed that most participants share similar perceptions of their well-being. The relatively lower score highlights a potential need for organizations to focus more on employee well-being (Ilyas et al.). Research emphasizes that supportive leadership and healthy work environments can significantly improve employees' psychological well-being. These findings underscore the importance of implementing initiatives to promote work-life balance, reduce stress, and enhance overall employee satisfaction and productivity.

6.2 Reliability Analysis

Reliability analysis was conducted for all key constructs to assess internal consistency of the measurement instrument used. Cronbach's alpha for complete set of 54 questioners is 0.791. This high Cronbach's alpha value suggests that measurement tools used in this study are reliable and the variables measured are internally consistent. Item wise variables, Cronbach's alpha coefficients are summarized in Table 3 and are discussed below:

Table 3: Reliability

	Cronbach's Alpha
PMTL	0.815
PS	0.705
PC	0.871
PSYCHOLOGICAL WELL-BEING	0.791

Note: n=390

6.2.1 Project Manager's Transformational Leadership (PMTL)

The Cronbach's Alpha for PMTL is 0.815 thus is considered a highly reliable scale for this study. This indicates that the survey items applied in the study to capture transformational leadership by project managers are reliable and internally consistent. A figure greater than 0.8 is conventionally deemed beneficial in social scientific research thus underlining the solidity of this gauge. The reliability score makes the conclusion based on Project Manager's TL to have confidence with the respondent's views on leadership that enhances cooperation and productivity of the team.

6.2.2 Project Success (PS)

The reliability coefficient for PS is 0.705, reflecting an acceptable level of consistency for the scale. While slightly lower than the other measure, this value still meets the general threshold for reliability in behavioral research. This score suggests that the items assessing project success such as meeting objectives, adhering to schedules, and stakeholder satisfaction are reasonably consistent. Previous studies emphasize that leadership, teamwork, and effective communication are key drivers of project success. The reliability score supports the idea that the survey captured participants' perceptions of success accurately, providing valuable insights into the factors contributing to successful project outcomes.

6.2.3 Psychological Capital (PC)

With a Cronbach's Alpha of 0.871, PC demonstrates the highest reliability among all variables. This score indicates excellent internal consistency, ensuring that the items used to assess traits like optimism, resilience, and confidence are highly dependable. High reliability is crucial for measuring psychological resources, as they significantly impact employee performance, engagement, and stress management (Luthans and Youssef, 2004). The strong score confirms that the findings accurately reflect the psychological strengths of respondents, emphasizing the importance of fostering these attributes in the workplace to boost productivity and create a positive organizational culture.

6.2.4 Psychological well-being (Psychological Well-Being)

Psychological Well-Being has a Cronbach's Alpha of 0.791, which show that the scale is reliable to a good extent. This is demonstrated by using items that captured respondents' psychological well-being of life satisfaction and positive emotional health. The reliability coefficient indicates certain level of confidence in the survey findings, emphasizing the calls for management to embrace activities that boost employees' health to enhance perpetual organizational success.

6.3 Correlation Analysis

Correlation matrix between the four main variables (PMTL, PS, Psychological capital and psychological well-being) is also shown in Table 4. The correlation analysis offers understanding about these construct's interconnection.

Table 4: Correlations

	PMTL	PS	PC	PSYCHOLOGICAL WELL-BEING
PMTL	1			
PS	0.850	1		
PC	0.826	0.815	1	
PSYCHOLOGICAL WELL-BEING	0.833	0.847	0.759	1

Note: n=390, PMTL= Project Manager's Transformational Leadership, PS= Project Success, PC= Psychological Capital, PSYCHOLOGICAL WELL-BEING= Psychological Well-being. Correlation Significant at .01

6.3.1 PMTL to PS

The result shows that there is very strong positive relationship between PMTL and PS with correlation coefficient equals 0.850. This indicates that as the use of transformational leadership by project managers enhances, there is a direct positive impact on the level of project success. The Four processes being initiated; whereby transformational leaders reform the vision of the crowds; acquire their commitment; consolidate a common purpose of the project and a positive motivation; all in a way that affects the accomplishment of the objectives of the project. Turner and Müller (2005), endorse this finding noting that leadership plays a central task in determining the success of a project. This confirms the need for the growth of leadership competencies in project managers for enhanced project performance since transformational leadership does not only enhance team performance but also realignment with stakeholder expectations.

6.3.2 PMTL to PC

There is a direct relationship of 0.826 between PMTL and PC. This relationship shows project managers who display transformational leadership behaviors effectively improve team members' Psychological Capital which involves; resistance, posiness, confidence and hope (Alvi and Alvi, 2023). This fosters confidence and encourages one to deal with hinderances as well as retain optimism in the working place according to transformational leaders. According to Luthans and Youssef (2004), org south western's transformational leadership will help the organization in the building of psychological resources needed in enhancing engagement and performance. This evidence supports the notion that leadership is not only vision and behavioral change agents in accomplishing organizational goals and objectives but also the ability to build stronger and psychologically healthy workers.

6.3.3 PMTL to PSYCHOLOGICAL WELL-BEING

The mean value of PMTL is 47.89 and of psychological well-being is 55.89, and the statistical significance coefficient between PMTL and psychological well-being is 0.833, which suggests a positive relationship. For instance, transformational leaders are useful in enhancing employees' psychological climate since they encourage all members of employees. They motivate their teams, lower stress in the workplace and generally improve job satisfaction, all of which are critical components of well-being. This relationship underscores the importance of leadership development programs that should be invested in by organizations since these transformational leaders are well positioned to help formulate a healthier motivated and emotionally stable workforce.

6.3.4 PS to PC

PS and PC have a positive and highly significant linear relationship; the value of coefficient of determination being 0.815. The sub-elements of project success strongly correlate with Psychological Capital as goals setting provide a sense of accomplishment, confidence, and optimism within the employees and teams. Also, the research presents a higher level of PC that enhances cooperation and issue solving, both of which enhance projects. This result implies that organizations desiring to achieve uniformity on project delivery should also support pursuits geared toward the promotion of Psychological Capital while taking care that their employees grow as people who must realize success.

6.3.5 PS to psychological well-being

The relationship between PS and psychological well-being is strongly positive, r = 0.847. Successful projects are beneficial for the employees' psychological climate since they make them proud, satisfied and less stressed. On the other hand, the enhanced psychological well-being increases abilities, time management of the timely completion of projects, and team cohesiveness in contributing to project success (Yang et al., 2020). This relationship showed the need to foster a culture where success is not only seen by the product of a project but also by the effect on the health of employee, or their attitude to work.

6.3.6 PC to psychological well-being

The observed coefficient between PC and psychological well-being is 0.759 showing a high and positive degree. Higher Psychological Capital means better levels of psychological health among employees, because the defended state includes factors, such as such aspects as resilience and optimism in the face of difficulties and occupational stress. Thus, increased level of well-being can ensure productivity and active engagement together with satisfaction with the work (Ilyas, et al. 2023). It is perhaps with this in mind that the authors of these papers suggest that promoting PC through training and organizational support can create a virtuous circle leading to a higher level of well-being alongside the creation of a healthier and more productive workforce.

6.4 Regression Analysis

To test the hypotheses, Regression analysis of the hypotheses was conducted using IBM SPSS Statistics Modeler and Hayes' PROCESS Macro was used to test the relationships presented herein including mediation and moderation analyses. They showed that project success was directly influenced by transformational leadership and was mediated by psychological well-being and moderated by psychological capital. The results of regression analysis are presented in Table 5 below.

Table 5: Regression

Hypothesis	Beta	se	p-Value	LLCL	ULCL
PMTL PS	0.235	0.051	0.000	0.136	0.336
PMTL x PC PS	0.224	0.049	0.000	0.349	0.573
PMTL PSYCHOLOGICAL WELL-BEING PS	0.462	0.058	0.000	0.349	0.573
PMTL x PC PSYCHOLOGICAL WELL-BEINGPS	0.199	0.052	0.000	0.099	0.301

Note: n=390, PMTL= Project Manager's Transformational Leadership, PS= Project Success, PC= Psychological Capital, PSYCHOLOGICAL WELL-BEING= Psychological Well-being

6.4.1 Direct Effect of Transformational Leadership on Project Success

The regression analysis indeed reveals that PMTL all have positive significant regression weights on PS with the beta coefficient of 0.235; t = 12.295; $p < 0.001$. This suggests that need for change through adoption of transformational leadership by project managers is a key to the success of the project through fostering of teamwork, goal convergence and satisfaction of the stakeholders (Alvi and Alvi, 2023). The confidence interval (LLCL = 0.136, ULCL = 0.336) demonstrates that this relation is stable. These results support Turner and Müller (2005) wherein they discussed about transformational leaders and regards that they are persons responsible in guaranteeing that specific project goals are achieved through improving the team management and leadership self-organizing motivation (Alharbi, 2022; Kim and Jang, 2024).

6.4.2 Mediating Role of Psychological Well-being

The research also captures the moderating role played by PMTL and PC in the determination of PS with regression of 0.224 and $p < 0.001$. This research means that when transformational leadership is detected in the project environment, Psychological Capital strengthens the evidence in support of the influence of the independent and dependent variables on project success (Zhu and Cheung, 2023). The results also show that the project managers were effective in nurturing the employees with higher level of PC, which comprises of personal control, optimism, and confidence for improvement of project results due to transformational leadership style. These results can be supported by the confidence interval where LLCL = 0.349 and ULCL = 0.573.

6.4.3 Moderating Role of Psychological Capital

The mediating role of psychological well-being in the relationship between PMTL and PS is significant, with a beta coefficient of **0.462** ($p < 0.001$). This indicates that transformational leadership improves employees' psychological well-being, which in turn enhances project success. The confidence interval (LLCL = 0.349, ULCL = 0.573) reinforces the robustness of this mediation. Research by Zhang and Ma (2023), highlights that supportive leadership fosters well-being, enabling employees to work more effectively and contribute to project success. This underscores the importance of promoting well-being as a pathway to achieving better organizational outcomes. This emphasizes the need for inspiring psychological resources inside the teams. High Psychological capital helps team members stay strong and optimistic, therefore increasing their capacity to reach project goals in line with past studies (Gao et al., 2021).

6.4.4 Effect of Mediating and Moderating Variables on Relationship Between Transformational Leadership and Project Success

The interaction of PMTL and PC significantly predicts psychological well-being, which subsequently influences PS, with a beta coefficient of **0.199** ($p < 0.001$). This implies that Psychological Capital moderates the relationship between transformational leadership, at the individual level, and well-being since it improves the outcomes of the project. The confidence interval strengthens this relationship (LLCL = 0.099; ULCL = 0.301). This finding supports the research done by Luthans and Youssef (2004). showing that PC enhances leading well-being and performance of the workers and in organized enabling share with leadership support. These findings further stress the moderate role of leadership and of psychological resources for team outcomes. These findings suggest that interplay between psychological resource and emotional state clearly delineates when and how understanding of transformational leadership translates into project performance.

7 Discussion

This paper offers a synthesis of the findings obtained from the study of PMTL, PS, Psychological capital, and psychological well-being factors. The findings stress the importance of transformational leadership in enhancing project performance outcomes, with moderation-under-mediation integration of psychological characteristics. These relationships are analyzed qualitatively, theoretically, and empirically from the perspective of leadership on the overall organizational effectiveness as well as the quality of work life of employees.

7.1 Interpretation of Key Findings

7.1.1 Transformational Leadership and Project Success

As shown in table 3, the analysis establishes a tight positive link between transformational leadership and project success with beta coefficient of 0.235 ($t < 0.001$). This establishes that project managers with characteristics of transformational leaders in place of delivering creative visions, drawing together teams and promoting innovation improve the project performance. Organizational commitment by head of project team and the coordination of group efforts with project objectives leads to project effectiveness and project user satisfaction. These results support Alharbi (2022); Kim and Jang (2024), who underline the leadership focus as a key to organizational success. In addition, the strong correlation coefficient shown in the study ($r = 0.850$) affirms the subject leadership in managing various project issues. In this way, development of trust, commitment and enthusiasm contributes not only to success but also to establishing appropriate framework to continue active for further projects.

Organizational transformation provides a way of getting round some of the challenges that are typical in Pakistani businesses and organizations where scarcity of resources, time constraint, and high levels of stakeholder demands are often the order of the day. Those leaders who emphasize the use of idealized influence, inspirational motivation, and intellectual stimulation, enhance the group cohesiveness and creativity, which are fundamental in any project undertaking (Gao et al., 2021).

7.1.2 Mediating Role of Psychological Well-being

The results indicate that psychological well-being(PWB) partially mediates the relationship between project manager transformational leadership (PMTL) and project success (PS). The standardized indirect effect via PWB was $\beta = 0.462$, SE = 0.058, $p < .001$, 95% CI [0.349, 0.573], indicating a significant mediating pathway. The results suggest that PWB partially mediates the link between PMTL and PS, with a standardized indirect effect of $\beta = 0.462$ (SE = 0.058, $p < .001$, 95% CI [0.349, 0.573]). This finding indicates that transformational leadership enhances team psychological well-being, which in turn contributes to improved project outcomes. Organizational health is therefore an important pathway through which transformational leadership exerts its effects on project performance. This leads to higher levels of well-being when performance, creativity and engagement move to the advantage of the project. These outcomes support the stay of Zhu and Cheung (2023), that underlined the key importance of well-being to increase productivity at work. Management should encourage the increasing of organizational strategies that boost the health of their employees as they regard it as asset that enhances the leadership and success of the projects. This is consistent with older recommendations of well-being's importance in decreasing burnout and increasing efficiency.

7.1.3 Psychological Capital as a Moderator

The analysis shows that psychological capital interacts with PMTL-PS by moderating the relationship with a beta coefficient of 0.224 ($p < 0.001$). Transformational leaders enhance the impact of psychological capital traits-resilience, optimism, confidence and hope-on projects. As the Psychological capital of the employees improves; they stand a better chance of countering the odds and stay motivated while working in teams and generally improve on the performance of projects. This is supported by Avey et al. (2022), who further explain psychological capital as a crucial organizational-capital category. This is made even clearer by the positive and strong relationship between PMTL and Psychological capital, r = 0.826, and between psychological capital and PS, r = 0.815. These results indicate that it is necessary to include the psychological capital enhancement strategies in the leadership development programs to attain the highest performance under the transformational leadership (Yang et al., 2020). In the organizations located in Pakistan where comparatively economic and organizational dynamics are quite apparent, the psychological capital assumes the status of a resilience against stress and uncertainty. Managers who take the time to improve their subordinates' psychological capital can foster high levels of responsiveness and productivity and thrive nicely in uncertain conditions

7.1.4 Combined Effect of Psychological Well-Being and Psychological capital

The combined mediating role of psychological well-being and moderating role of psychological capital reveals a nuanced interplay between psychological factors and leadership in driving project success. The significant beta coefficient of 0.199 ($p < 0.001$) for this interaction underscores the synergistic impact of these variables. Besides the improvement of well-being, transformational leaders elevate psychological capital to maximize team effectiveness. These outcomes support Schaubroeck et al. (2021), and Luthans and Youssef (2004). arguing that when leadership support is combined with positive psychological resources, it creates resilience, decreases stress, and increases performance. This two-fold emphasis underlines the need for combined effort in leadership and psychological interventions for promoting both organizational and employee benefit. In other words, it is possible that factors other than leadership and psychological traits have a stronger impact on the performance of the work team and on successful

project completion (Zhu and Cheung, 2023).

7.1.5 Findings and Implications

Findings from this study offered several implications for organizations aiming to enhance project success through transformational leadership and psychological capital. Here are some key suggestions and recommendations based on the results.

7.2 Theoretical Implications

7.2.1 Advancing Leadership Theory

The investigation also contributes to transformational leadership literature by providing a reflection of its total and mediated impact on project success. It validates that transformational leadership does impact not only team level characteristics, but also personal level psychological resources, painting a clear picture of what it means to be an effective leader (Allen et al., 2023; Kim and Jang, 2024).

7.2.2 Integration of Psychological Constructs

The addition of psychological well-being and psychological capital into the leadership-success model brings out another view of organizational performance. In doing so, the study fulfills a void in extant literature by positing psychological facets of leadership while focusing on the psychological health of employees and their subsequent psychological capital to effect productivity enhancement (Zhu and Cheung, 2023).

7.2.3 Contribution to Organizational Psychology

The paper has implications to organizational psychology since it reveals some of the mediating and moderating roles of psychological constructs in leadership. This theoretical development should apply for leadership models that incorporate psychological health and capital as part of examining work environments.

7.3 Practical Implications

7.3.1 Leadership Development Programs

Organizations should invest in leadership training that emphasizes transformational qualities. Such programs can enhance leaders' ability to inspire, motivate, and align teams with organizational objectives, directly contributing to project success. (Avey et al., 2022).

7.3.2 Employee Well-being Initiatives

Given the mediating role of psychological well-being, organizations should prioritize initiatives that promote a balance of work-life, reduce stress, and foster a positive workplace culture. Providing resources such as mental health support, flexible work arrangements, and wellness programs can significantly enhance employee satisfaction and productivity (Hayes, 2018; Hayes et al., 2022).

7.3.3 Building Psychological Capital

To leverage the moderating effects of psychological capital, organizations should implement training programs that develop resilience, optimism, and confidence among employees. These initiatives can create a more adaptable and motivated workforce, capable of achieving high performance under transformational leadership (Yang et al., 2020).

To effectively strengthen psychological capital in project teams, organizations should implement structured development initiatives.Goal-setting and Self-efficacy Workshops can build confidence and enhance personal agency (Yang et al., 2020).

Resilience training, including stress management, cognitive reframing and mindfulness, can prepare teams to bounce back from setbacks and maintain performance under pressure (Gao et al., 2021). Hope and optimism development sessions that focus on solution-oriented thinking and future planning further nurture perseverance (Avey et al., 2022). In addition, mentorship programs and positive feedback loops help embed these traits into daily team culture. Embedding these practices into leadership training enables transformational leaders to amplify the psychological strengths of their teams, fostering adaptability, well-being and sustained project success (Zhu and Cheung, 2023).

7.3.4 Strategic Integration of Psychological Factors

The combined impact of psychological well-being and Psychological capital underscores the need for an integrated approach to leadership and employee development (Zhu and Cheung, 2023). Organizations should adopt holistic strategies that simultaneously address leadership effectiveness, psychological well-being, and capital, ensuring sustainable success and workforce engagement.

7.3.5 Sectoral Application of Transformational Leadership

Transformational leadership manifests uniquely across sectors based on operational complexity, innovation demand and human capital challenges. In Banking, it often focusses on aligning teams with digital transformation and regulatory compliance. In Software and Services, it fosters innovation and rapid adoption, promoting a culture of agility and creativity. In Poultry and MRO Sector, transformational leaders emphasize efficacy, workforce stability and quality assurance under pressure. In Infrastructure Projects, they manage diverse stakeholders and timelines, aligning teams to share long-term goals. These contextual differences highlight the adaptability of transformational leadership and inform sector-specific leadership development practices.

7.4 Recognizing the Study's Limitations

Despite valuable insights provided by this study, several limitations also needed to be acknowledged:

7.4.1 Cross-sectional Design Constraints

Thus, the study adopted a cross-sectional research design whereby data were collected at one specific period. Even though this method offers rich information about the existing relationship, the dynamics of the relationship are not considered. Studies could use cross-sectional designs in future work to also identify how these relationships may fluctuate during different phases of a project (Avey et al., 2022).

7.4.2 Self-reported Data Bias

The use of self-report data incorporated method biases, for example, social desirability bias and common method variance. That is why, despite efforts to assure anonymity, the use of peer review or some objective criteria in further studies is quite appealing (Pan et al., 2023).

7.4.3 Limited Generalizability

Despite the random sampling of different industries in Pakistan, the conclusion is likely not to generalize to other cultural/organizational contexts. It is imperative that different geographical locations and organizational sector concentrations have different problem characteristics and system environments, which could affect the generalizability of such findings.

7.4.4 Lack of Suitable Industry Analysis

Even though data was sourced from different sectors, the study did not take a close look at the peculiarities of each industry that would prove rather important for its success. In the future, researchers should examine a sector-related strategy and identify different strategies for addressing sector-related challenges based on an industry-oriented approach (Nassaji, 2021).

Addressing these limitations in future research will help provide more comprehensive understanding of relationships between transformational leadership, psychological capital, psychological well-being and project success.

7.5 Directions for Future Study / Research

To build on findings of this study, future research should consider following directions:

7.5.1 Long-term Studies

Future research needs to pursue such types of research design as longitudinal studies to capture the changes of transformational leadership, psychological well-being, and psychological capital over time. Such studies could help garner deeper understanding of how the nature of these factors affects projects in the different phases and under different conditions (Hayes, 2018; Hayes et al., 2022).

7.5.2 Sector-focused Research

Tackling specific sectors, like healthcare, technology, or manufacturing, could generate information more relevant because it addresses difficulties and possibilities of these business areas. Besides, in specific contexts, leadership development can be done more precisely

7.5.3 Exploring Cultural Dimensions

Values and norms of power distance, collectivism, and uncertainty avoidance are important sources of influence on leadership. Studying these dimensions would give a better understanding of the cross-cultural differences between leadership practices

7.5.4 Broadening the Scope

Subsequent research may include variables such as emotional literacy, climate of the organizations, and the composition of the teams in the model. These, of course, could expand the framework and present a more comprehensive picture of leadership outcomes (Gupta et al., 2023).

7.5.5 Experimental Approaches

Quantitative analysis in experimental and mixed-methods research can test causal hypotheses and, at the same time, allow for deeper exploration of phenomena. This could enrich a given quantitative research study and give a more comprehensive understanding of the teams and leadership patterns.

7.5.6 Conclusion

This study set out to examine how project managers' transformational leadership (PMTL) influences project success (PS) through the mediating role of team psychological well-being (PWB) and the moderating role of psychological capital (PsyCap). The empirical evidence, drawn from a robust dataset across public and private sector projects in Pakistan, provides strong support for the proposed relationships. The findings confirm that transformational leadership significantly enhances project success, both directly and indirectly, through improved team well-being. Moreover, PsyCap strengthens this association by amplifying the positive influence of leadership behaviors on team motivation, resilience, and commitment.

From a theoretical perspective, the study advances leadership and project management literature by integrating Transformational Leadership Theory, Conservation of Resources (COR) Theory, and Social Exchange Theory (SET). This integration clarifies the psychological mechanisms through which leadership behaviors translate into superior project performance. Specifically, transformational leaders cultivate an environment of trust, optimism, and empowerment that enables employees to conserve and accumulate psychological resources. These enhanced psychological states, in turn, foster proactive engagement and sustained performance, explaining the mediating role of PWB and the moderating role of PsyCap. By empirically validating these relationships, the study contributes to a more nuanced understanding of how leadership behaviors and psychological capacities jointly influence project outcomes in dynamic organizational contexts.

Practically, the results highlight the importance for organizations and project-based institutions to invest in leadership development programs that nurture transformational competencies among project managers. Such training should focus on emotional intelligence, individualized consideration, and inspirational motivation, the behaviors most strongly associated with building psychological well-beingand PsyCap within teams. In addition, organizations are encouraged to implement human resource policies that support psychological health, such as mentoring, recognition systems, and wellness initiatives, as these practices sustain high-performing teams capable of navigating uncertainty and change.

Despite its contributions, the study is not without limitations. The data were collected using a cross-sectional design, which restricts causal inference. Future research could employ longitudinal or experimental designs to establish temporal causality and explore how leadership and psychological dynamics evolve over time. Furthermore, this study was conducted within the Pakistani project environment; hence, comparative studies across different cultural or industrial contexts would enrich the generalizability of findings. Incorporating qualitative methods

or mixed-method designs may also provide deeper insights into the lived experiences of team members under transformational leadership.

This study underscores that project success extends beyond technical competencies and resource allocation it is deeply influenced by the psychological and behavioral dimensions of leadership. Project managers who demonstrate transformational qualities not only inspire their teams but also create the psychological conditions necessary for sustainable performance. By fostering psychological well-being and strengthening PsyCap, transformational leaders build resilient, motivated, and high-performing project teams capable of achieving long-term organizational success.

References

Aga, D. A., Noorderhaven, N., and Vallejo, B. (2016). Transformational leadership and project success: The mediating role of team-building. *International journal of project management*, 34(5):806–818.

Agarwal, U. A. and Anantatmula, V. (2021). Psychological safety effects on knowledge sharing in project teams. *IEEE Transactions on Engineering Management*, 70(11):3876–3886.

Ahmad, D., Gáspár, L., Bencze, Z., and Maya, R. (2024). The role of bim in managing risks in sustainability of bridge projects: A systematic review with meta-analysis. sustainability 2024, 16, 1242.

Ahmad, M. K., Abdulhamid, A. B., Wahab, S. A., Pervaiz, A. N., and Imtiaz, M. (2022). Direct and indirect influence of project managers' contingent reward leadership and empowering leadership on project success. *International Journal of Engineering Business Management*, 14:18479790211073443.

Alharbi, F. R. and Csala, D. (2020). Gcc countries' renewable energy penetration and the progress of their energy sector projects. *IEEE Access*, 8:211986–212002.

Alharbi, M. A. B. (2022). *Factors influencing project team effectiveness to achieve quality of building projects in the kingdom of Saudi Arabia*. PhD thesis, Queensland University of Technology.

Ali, M., Ilyas, Y., and Zia, M. S. (2024). Project success through project leadership and project management in the ngo sector of pakistan. *Regional Lens*, 3(1):104–120.

Allen, J. P., Kim, E. K., and Jimerson, S. R. (2023). Meta-analyses and systematic reviews advancing the practice of school psychology: The imperative of bringing science to practice. *School Psychology Review*, 52(2):87–94.

Alvi, I. A. and Alvi, I. S. (2023). Why dams fail: A systems perspective and case study. *Civil Engineering and Environmental Systems*, 40(3):150–175.

Alvi, S. F. (2025). Moderating effect of leadership styles on the relationship between employee engagement and performance excellence in the telecom sector of abu dhabi. *AJBMSS-Advance Journal of Business Management and Social Sciences*, 1(2).

Aslam, M., Gao, Z., and Smith, G. (2021). Integrated implementation of virtual design and construction (vdc) and lean project delivery system (lpds). *Journal of Building Engineering*, 39:102252.

Avey, J. B., Agarwal, U., and Gill, J. K. (2022). How does abusive supervision hurt employees? the role of positive psychological capital. *International Journal of Productivity and Performance Management*, 71(2):429–444.

Avolio, B. J., Bass, B. M., and Jung, D. I. (1999). Reexamining the components of transformational and transactional leadership using the multifactor leadership. *Journal of occupational and organizational psychology*, 72(4):441–462.

Baccarini, D. (1999). The logical framework method for defining project success. *Project management journal*, 30(4):25–32.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2):191.

Bass, B. M. and Bass Bernard, M. (1985). *Leadership and performance beyond expectations*, volume 25. Free press New York.

Bass, B. M. and Riggio, R. E. (2006). *Transformational leadership*. Psychology press.

Bataineh, D. M. (2025). *Strategic Choice-Making in Complex Spaces of Innovation*. PhD thesis, Illinois Institute of Technology.

Bin Saeed, B., Afsar, B., Shahjeha, A., and Imad Shah, S. (2019). Does transformational leadership foster innovative work behavior? the roles of psychological empowerment, intrinsic motivation, and creative process engagement. *Economic research-Ekonomska istraživanja*, 32(1):254–281.

Burns, E. M. and Ward, W. D. (1978). Categorical perception—phenomenon or epiphenomenon: Evidence from experiments in the perception of melodic musical intervals. *The Journal of the Acoustical Society of America*, 63(2):456–468.

Chan, A. (2001). Framework for measuring success of construction projects.

Craft, E., Quinn, B., and Silver, P. (2024). Applying project management skills to nsf atefunded grants: A roadmap to success for firsttime grantees. *Papers on Engineering Education Repository (PEER)*.

Gao, J.-L., Li, D.-S., and Conway, M.-L. (2021). Family support and entrepreneurial passion: The mediating role of entrepreneurs' psychological capital. *Social Behavior and Personality: an international journal*, 49(3):1–15.

Hayat, A. and Afshari, L. (2021). Supportive organizational climate: a moderated mediation model of workplace bullying and employee well-being. *Personnel review*, 50(7-8):1685–1704.

Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication monographs*, 85(1):4–40.

Hayes, C. F., Rădulescu, R., Bargiacchi, E., Källström, J., Macfarlane, M., Reymond, M., Verstraeten, T., Zintgraf, L. M., Dazeley, R., Heintz, F., et al. (2022). A practical guide to multi-objective reinforcement learning and planning: Cf hayes et al. *Autonomous Agents and Multi-Agent Systems*, 36(1):26.

Ilyas, I., Shofwan, I., Yusuf, A., and Saputra, S. F. Project-based entrepreneurship learning design to improve students'entrepreneurship skills at the tunas harapan community learning center in salatiga city.

Kim, H. and Jang, H. (2024). Predicting research projects' output using machine learning for tailored projects management. *Asian Journal of Technology Innovation*, 32(2):346–363.

Kim, J.-M., Bae, J., Son, S., Son, K., and Yum, S.-G. (2021). Development of model to predict natural disaster-induced financial losses for construction projects using deep learning techniques. *Sustainability*, 13(9):5304.

Krejcie, R. and Morgan, D. (1970). Sample size determination table. *Educational and psychological Measurement*, 30(3):607–610.

Lee, D. and Kim, K. (2022). Public r&d projects-based investment and collaboration framework for an overarching south korean national strategy of personalized medicine. *International Journal of Environmental Research and Public Health*, 19(3):1291.

Lin, J.-W. (2018). Effects of an online team project-based learning environment with group awareness and peer evaluation on socially shared regulation of learning and self-regulated learning. *Behaviour & Information Technology*, 37(5):445–461.

Luthans, F. and Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage.

Luthans, F., Youssef-Morgan, C., and Avolio, B. (2007). Psychological capital and beyond. oxford: Oxford university press.

Naiboğlu, G. and Bilgivar, O. O. (2021). The effect of authentic leadership on organizational communication: The mediating role of psychological well-being. *International Journal of Educational Research Review*, 7(2):99–113.

Naseem, A. and Abbas, R. (2022). Relationship between interpersonal skills in project success. *Archives of Business Research*, 10(7):198–210.

Nassaji, H. (2021). Effect sizes in quantitative and qualitative research.

Olander, S. (2007). Stakeholder impact analysis in construction project management. *Construction management and economics*, 25(3):277–287.

Pan, A., Chan, J. S., Zou, A., Li, N., Basart, S., Woodside, T., Zhang, H., Emmons, S., and Hendrycks, D. (2023). Do the rewards justify the means? measuring trade-offs between rewards and ethical behavior in the machiavelli benchmark. In *International conference on machine learning*, pages 26837–26867. PMLR.

Pinto, J. K. and Slevin, D. P. (1987). Critical factors in successful project implementation. *IEEE transactions on engineering management*, (1):22–27.

Pinto, J. K., Slevin, D. P., et al. (1988). Critical success factors across the project life cycle. Project Management Institute Drexel Hill, PA.

Qureshi, I., Pan, S. L., and Zheng, Y. (2021). Digital social innovation: An overview and research framework. *Information Systems Journal*, 31(5).

Raziq, M. M., Borini, F. M., Malik, O. F., Ahmad, M., and Shabaz, M. (2018). Leadership styles, goal clarity, and project success: Evidence from project-based organizations in pakistan. *Leadership & Organization Development Journal*, 39(2):309–323.

Restrepo-Morales, J., Echavarria, J., and Durango-Yepes, C. (2024). Strategic decision-making in project management: Applying fahp to select research agendas. *Journal of Infrastructure, Policy and Development*, 8(9):4627.

Schaubroeck, J., Peng, A. C., Hannah, S. T., Ma, J., and Cianci, A. M. (2021). Struggling to meet the bar: Occupational progress failure and informal leadership behavior. *Academy of Management Journal*, 64(6):1740–1762.

Turner, J. R. and Müller, R. (2005). The project manager's leadership style as a success factor on projects: A literature review. *Project management journal*, 36(2):49–61.

Wang, W.-T. and Chen, L.-J. (2024). Impacts of online-community-based collaborative learning on project scope appropriateness and stakeholder management. *Behaviour & Information Technology*, 43(12):2667–2688.

Yang, Y., Brosch, G., Yang, B., and Cadden, T. (2020). Dissemination and communication of lessons learned for a project-based business with the application of information technology: a case study with siemens. *Production Planning & Control*, 31(4):273–286.

Zaman, U., Jabbar, Z., Nawaz, S., and Abbas, M. (2019). Understanding the soft side of software projects: An empirical study on the interactive effects of social skills and political skills on complexity–performance relationship. *International Journal of Project Management*, 37(3):444–460.

Zaman, U., Nawaz, S., Tariq, S., and Humayoun, A. A. (2020). Linking transformational leadership and "multi-dimensions" of project success: Moderating effects of project flexibility and project visibility using pls-sem. *International Journal of Managing Projects in Business*, 13(1):103–127.

Zhang, C., Nong, X., Zhong, H., Shao, D., Chen, L., and Liang, J. (2022). A framework for exploring environmental risk of the longest inter-basin water diversion project under the influence of multiple factors: A case study in china. *Journal of environmental management*, 322:116036.

Zhang, L. and Ma, Y. (2023). A study of the impact of project-based learning on student learning effects: A meta-analysis study. *Frontiers in psychology*, 14:1202728.

Zhao, S. (1991). Metatheory, metamethod, metadata-analysis: What, why, and how? *Sociological perspectives*, 34(3):377–390.

Zhu, L. and Cheung, S. O. (2023). Incentivizing relationship investment for project performance improvement. *Project Management Journal*, 54(1):70–87.