

Impact of Transformational Leadership on Healthcare Professionals Performance and Citizenship Behaviour: The Mediating Role of Employee Engagement and Moderating Role of Organizational Justice

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Abstract

This study aims to examine the impact of transformational leadership on healthcare professionals' performance and organizational citizenship behaviour, with justice-driven engagement serving as a mediating mechanism. Data collected from a sample of 500 healthcare professionals (305 medical doctors and 195 nurses) drawn from public and private sector hospitals across five purposively selected cities of Pakistan. The hypothesized relationships were tested using PLS-SEM and applying SmartPls 4. The results suggested a significant partial mediation of employee engagement between transformational leadership and both employee performance and OCB. Additionally, the results revealed the moderating effects of organizational justice on transformational leadership and employee engagement linkage, suggesting that justice-driven employee engagement provides the underlying mechanism that enables transformational leadership to foster healthcare professionals' performance and discretionary citizenship behaviour. The study findings contribute to leadership and OB literature by elucidating the mediating mechanism through which transformational leadership drives key employee outcomes, especially in healthcare settings.

Keywords: Transformational Leadership, Organizational Justice, Employee Engagement, Organizational Citizenship Behaviour, Employee Performance, Healthcare Professionals

Introduction

In today's modern, yet complex and volatile organizational context, organizations are faced with the challenge of making strategic decisions that enable them to remain competitive and achieve sustained performance. In this regard, one of the key determinants influencing organizational success is effective management and development of human resources, as it is the employees of an organization, who being one of the core resources determine an organization's success or failure. Thus, considering today's dynamic workplace requirements, shaping of employees' attitudes and behaviors that benefit organizations becomes critical, and in the wake of conventional management practices proving to be inadequate in shaping desired attitudes and behaviours of employees, especially, in fostering employee engagement and discretionary citizenship behavior, the OB scholars have increasingly cited a pivotal role of leadership in encouraging and mobilizing employees around shared values and goals (Ramdas et al., 2024). And, one of the leadership paradigms, transformational leadership, initially introduced by Burns (1978), and later developed by Bass (1985) has garnered considerable importance due to its potential of inspiring, motivating and empowering employees to exhibit heightened engagement and transcend transactional expectations (Lorente & Salanova, 2024; Agazu, Kero, & Debela, 2025; Giergia, 2025). Transformational leaders through their charisma, compelling vision, individualized consideration, effective communication, and commitment to continuous development, nurture a culture of trust, admiration, and loyalty which in turn fosters employee motivation to exceed performance expectations (Bass, 1999; Northouse, 2025).

In parallel, the notion of employee engagement, a psychological condition that intrinsically motivates employees and enhances their psychological involvement which makes employees immerse themselves in their work emotionally, physically, and cognitively, has also garnered substantial empirical traction for being the critical determinant of both in-role and extra-role performance, leading to organizational effectiveness (Al Zeer, Ajouz, & Salahat, 2023; Andrić, Priyashantha, & De Alwis, 2023).

Since transformational leaders are deemed adept at impregnating intrinsic motivation among their followers, their role in fostering employee satisfaction, commitment, and engagement becomes critical. Furthermore, employees' justice-driven engagement paves path for increased level of performance and discretionary efforts (Ahmed et al., 2026). The present study aims to explore the determinants of employee engagement, employee performance, and organizational citizenship behaviour in the ever-evolving complex healthcare settings, where the patients' well-being, to greater extent depends upon the competence and dedication of the healthcare professionals, thus the critical role of transformational leadership becomes even more evident that as to how it motivates healthcare professionals to be dedicated, immersed, and go extra mile in delivering healthcare services to the patient and help organizations to achieve its goals (Qalati et al., 2022; Notarnicola et al., 2024).

Literature Review

Transformational Leadership

The emergence of Transformational leadership concept marked a significant deviance from the traditional leadership theories that shifted the focus from transactional exchanges, abundance, and contingent rewards to intrinsic motivation, building emotional connection, mutual development, and fostering commitment. The sociologist, Downton (1973) coined the

term 'transformational leadership' and used it in charismatic and revolutionary leadership context, distinguishing transformational leaders from transactional leaders. Later, Burns (1978) expounding the concept of transformational leadership by contrasting it with transactional leadership within the context of political leadership, specified it as an ongoing process through which both leaders and followers foster each other's motivation level and nurture greater sense of morality, making them transcend their self-interest to serve the collective interests. Bass (1985) further developed transformational leadership; conceptualizing it in organizational settings, and since then, this has been widely studied as a critical antecedent of positive outcomes for both employee and the organization. Transformational leadership style inspires followers to align their values and goals with organizational goals and stimulates them to perform beyond expectation (Brevaart et al., 2014), and transformational leaders achieve this by initiating followers' intrinsic motives, motivating them to achieve goals without expecting any reward for the positive outcome (Burns, 1978; Avolio & Yammarino, 2002).

Transformational leadership, as elaborated by Bass (1985) is characterized by four dimensions namely, idealized influence, inspirational motivation, intellectual stimulation. Idealized influence involves leaders' value-driven role modelling to shape followers' ethical behaviour, and inspiring trust, mutual respect, and ambition to transcend among followers. Inspirational motivation involves articulation of a compelling vision that infuses a clear sense of purpose and commitment to organizational objectives among the followers. Intellectual stimulation urges followers to question and think about problems objectively, challenge the status quo, generate new ideas, and seek continuous improvement. Individualized consideration refers to leader's personalized attention, consideration, mentoring, and seeking followers' growth and development (Bass, 1999; Northouse, 2025).

Empirical leadership studies have also recognized transformational leadership's significant role in driving positive outcomes across various organizational settings (Lorente & Salanova, 2024; Agazu et al., 2025; Giergia, 2025). Transformational leadership is often cited as the driving force that through inspiring and motivating followers, creates and nurtures an environment of trust, admiration, and loyalty which encourages employees to achieve higher performance levels and engage in extra-role behaviour (Habeeb & Eyupoglu, 2024), and has consistently been linked with employee satisfaction (Virgana & Fitriani, 2025), enhanced employee performance (Sidik et al., 2024; Wuryaningrat, Hidayat et al., 2024; Sewang, 2025), and organizational citizenship behaviour (Podsakoff et al., 1990; Qalati et al., 2022; Abdulrab et al., 2025; Hasibuan & Farisi, 2025). Overall, the transformational leadership literature indicates that it continues to remain an effective leadership approach for fostering positive employee and organizational outcomes.

Employee Performance

Employee performance is one of the key factors that contribute to achieving organizational goals (Aquinis & Burgi-Tian, 2023; Triansyah et al., 2023; Purwati & Sah, 2024; Wuryaningrat et al., 2024) and it is defined as the degree to which an individual successfully accomplishes the tasks and responsibilities assigned to him in an effective and efficient manner (Campbell, 1990; Yating et al., 2024). High-performing employees, through their work in quantity and quality, help organizations achieve increased productivity and enhanced quality of products or services, thereby making optimal performance of employees contingent for sustainable

success of the organizations (Garcia, 2025). The present research seeks to study the factors that both directly and indirectly affect employee performance, as our study aims to explore the effect of transformational leadership on employees' performance both directly and indirectly through employee engagement.

Organizational Citizenship Behaviour

Organizational Citizenship Behaviour (OCB) is one of the most widely studied topics in organizational behavior research (Bani-Melhem, et al., 2023; Deshmukh & Natu, 2023,2024; Ismail, Kertechian, & Blaique, 2023) and OCB, as derived from various theoretical perspectives, refers to employees' informal, discretionary behavior; not directly or explicitly recognized by the formal organizational rewarding system, and exceeding formal expectation of normal roles which in aggregate contributes to enhanced organizational effectiveness (Organ, 1988; Podsakoff, 2000). Some examples of OCB include employees going extra mile to support others in the organization, volunteering for the benefit of the organization, projecting a positive image of the organization, and being loyal to the organization (Ma, et al., 2023; Soelton, 2023).

OCB is a multidimensional construct, as it is often distinguished on the basis of the target, a) individual; OCB-I or b) organization; OCB-O (Williams & Anderson, 1991) or nature (Organ 1988), however, according to Ma, et al. (2023), a consensus is yet to be reached on differentiating its sub-dimensional level, particularly in the services sector. The review of OCB literature also reveals that categorizing of OCB sub-dimensions in the service context, often becomes challenging mainly due to conceptual overlap and ambiguity, higher levels of interpersonal interaction, cultural and contextual factors, intangible nature of services, dynamic work environment, and varying levels of intrinsic motivation of employees (Podsakoff et al., 2000; Organ, 2014).

The present study focuses on OCB in the healthcare industry as its manifestation in the form of patient-centered care, and going over and above their formal job requirement in providing compassionate care, and patients' concerns addressal ensure positive patient experience. Moreover, healthcare delivery, mostly depends on teamwork and OCBs such as voluntarily helping/ assisting colleagues, knowledge sharing, fostering collaboration, avoiding conflicts, and enhancing communication results in continuity of care and patient safety, thereby, leading to an overall improved healthcare delivery and organizational performance (Christian et al., 2023; Joshy & Varghese, 2024).

Employee Engagement

Employee engagement refers to employees' enthusiasm, commitment, and involvement during their role performances (Shaufeli et al., 2013). Engaged employees are energetic, passionate, and associate themselves with their roles emotionally, physically, and cognitively for optimal performance, and achievement of organizational goals (Kahn, 1990; Saks & Gruman, 2021). Olugbade and Karatepe (2019) have described employee engagement as a psychological condition that intrinsically motivates employees and enhances their involvement which makes employees immerse themselves in their work emotionally, physically, and cognitively.

Employee engagement has emerged as critical determinant of organizational effectiveness, and importance of engaged employees to organizational success has been documented by many authors (Al Zeer et al., 2023; Andrić et al., 2023; Santosa et al., 2025; Ahmed et al., 2026). The review of engagement literature shows that significant progress has been made in understanding the engagement construct and identification of the factors that drive engagement and its outcomes (Kisi, 2023; Awasthi et al., 2025). The determinants of employee engagement as identified by different researchers include leadership, organizational culture, perceived organizational support, work design, empowerment, teamwork, employee recognition, information and communication, work-life balance etc. (Ukonu, Pauline, & Dangana, 2024).

Additionally, Job Demands-Resource theory (Bakker & Demerouti, 2007) claims that employee engagement emerges as a result of reasonableness and sufficiency of job resources (e.g., autonomy, social support, performance feedback) to counterbalance high job demands (e.g., emotional demands, role ambiguity, and work pressure), and Bakker, Demerouti, & Sanz-Vergel (2023) further extending the JD-R theory have highlighted various exciting and important developments pertaining to the antecedents and consequences of employee engagement.

Organizational Justice

Organizational justice plays a pivotal role in shaping employee work attitudes and behaviours (Ho, 2025). It refers to employees' perception of fairness pertaining to processes, outcomes, and interpersonal treatment (Greenberg, 2011; Greenberg & Colquitt 2013; Colquitt, Hill, & Cremer, 2023). Organizational researchers, considering the applicability of justice across work events, have identified four types of justice including a) procedural justice: fairness of the processes/ procedures leading to outcomes, b) distributive justice: fairness of resource allocation and compensation, c) interpersonal justice: fair/ respectful treatment received from decision makers during decision making, and d) informational justice: fairness in interpersonal communication including adequate, timely, and truthful explanations for decisions (Colquitt et al, 2023; Bhatti, 2024; Parajuli & Shrestha, 2024; Supriya & Dadhabai, 2024).

Organizational Justice has been identified as one of the essential factors that ignite employees' positive feelings towards work and employing organization (Colquitt, 2001; Colquitt et al., 2023) and as a result has become a critical principle and practice in contemporary organizational management; ensuring that not only employees are subjected to organizational justice, but are also respected across the organization (Gayathri & Saarimuthu, 2025; Ahmed et al., 2026).

Hypothesis Development

Transformational Leadership and Employee engagement

Transformational leaders using their inspirational motivation, intellectual influence, individualized consideration, and idealized influence cultivate and nurture a positive and supportive work environment where employees feel valued, satisfied and motivated. The employees, as put forth by social exchange theory (Blau, 1964), perceiving transformational leaders' effective communication, support, recognition, and keenness in their professional growth feel obligated to reciprocate with enhanced levels of engagement. Employee

engagement, regarded as 'spontaneous involvement in role' is described as a positive, fulfilling, work-related psychological state characterized by vigor, dedication, and absorption (Schaufeli, 2021) has been identified as the antecedent of both in-role (Saks, 2019; Alnagbi et al., 2025) and extra-role performance of employees (Hayati & Rifani, 2025). Since engaged employees play a pivotal role in helping organizations achieve enhanced performance levels (Saks, 2006 & 2019), the leadership role becomes essential to motivate them in a manner that they while identifying themselves with organization, direct their efforts towards the work-roles, and in this regard, transformational leadership aligns well with the principles of engaging leadership (Schaufeli, 2021).

Transformational leadership characterized by leaders' charisma, strong interaction, attentiveness to followers' needs and professional development, and personalized support make employees feel valued, committed, and enthusiastic, resulting in enhanced engagement. Several empirical studies have proposed significantly positive effects of transformational leadership on employee engagement (Alamri, 2023; Rezeki et al., 2023; Abdul-Azeez et al., 2024; Nurmeksela et al., 2025). Therefore, based on the findings of the above-mentioned empirical studies, it is proposed that transformational leadership positively affects employee engagement.

H₁: Transformational leadership positively affects employee engagement.

Transformational Leadership and Employee Performance

Many researchers, since the presentation of transformational leadership theory by Burns (1978) and Bass (1985), have studied the association between transformational leadership and employee performance across various organizational contexts and their results showed that transformational leadership significantly positively affects employee performance (Bass, 1999; Sidiq et al., 2024; Wuryaningrat et al., 2024; Sewang, 2025). Transformational leaders through inspirational motivation, strong interaction, individualized attention, and personalized support, encourage followers to exhibit superior performance and personal growth (Bass, 2010; Broome, 2025). Employees, based on the goals they strive to achieve, do need support and guidance, and transformational leadership having an eye to perceive their needs ensures availability of customized supporting tools such as counseling, coaching, and mentoring, and inspiration to achieve higher levels of performance. Furthermore, by providing challenging and holistic goals ingrain confidence, sense of purpose, and drive to transcend among organizational members, thereby hustling them for optimal performance (Wuryaningrat et al., 2024).

Overall, based on the empirical evidence presented by leadership literature, it can be proposed that transformational leaders build up enthusiasm, cohesion, and drive among organizational members, which prompts them to embrace challenging goals and demonstrate exceeding performance (Fan et al., 2023; Broome, 2024; Sewang, 2025).

H₂: Transformational leadership positively affects employee performance.

Transformational Leadership and Organizational Citizenship Behaviour

In today's ever evolving and competitive business environment, organizations seek to enhance employee satisfaction, commitment, and motivation to deliver exceptional

performance (Kotter, Akhtar, & Gupta, 2025; Salameh-Ayanian et al., 2025), and OB researchers in this regard, focusing the performance triggers have proposed a significantly positive role of transformational leadership in stimulating followers to transcend and indulge in organizational citizenship behaviour (Podsakoff et al., 1990; Qalati et al., 2022; Abdulrab et al., 2025; Hasibuan & Farisi, 2025; Mohamed & Lahlimi, 2025); as the OCB making employees going beyond formal job duties contributes to organizational effectiveness (Organ; 2018; Mohamed & Lahlimi, 2025; Vargas-Hernandez & Gonzalez-Avila, 2025). Transformational leaders through their forward-looking vision, attention to individual needs, commitment to continuous development, effective communication, and ability to foster emotional bond, inspire and motivate followers to transcend transactional expectations which result in enhanced commitment and performance.

Transformational leadership, in the context of OCB, which involves discretionary behaviour that transcends formal job roles, plays a critical role by inspiring organizational members to align their values and goals with that of the organization's, thereby nurturing behaviours such as helping colleagues, taking initiatives, volunteering for additional tasks, and showing loyalty by promoting organizational interests (Yukl, 1989; Mohamed & Lahlimi, 2025). According to researchers, the prime objective of transformational leadership is to elevate followers from ordinary to extra ordinary level (Boal & Bryson, 1988), encourage them to transcend (Yukl, 1989), and surpass standard performance (Bass, 1999) thus the core focus of transformational leadership should be on enhancing employee's discretionary citizenship behaviour rather than in-role performance (Graham, 1988), and motivating them to go over and above the formal call of duty. The underlying framework of transformational leadership and OCB relationship can be further explained using Blau's (1964) social exchange theory (SET), as according to SET employees on perceiving support, recognition, and consideration from the leaders, they feel obligated to reciprocate with prosocial behaviours serving organizational interest.

Thus, based upon the findings of the above-mentioned studies it can be concluded that application of transformational leadership is one of the potential means to drive employees' OCB for better performance (Podsakoff, 1990; Qalati et al., 2022; Mohamed & Lahlimi, 2025) and leadership literature also presents evidence of both direct and indirect effects of transformational leadership on followers (Purnomo, Subiyanto, and Hadi, 2025).

H₃: Transformational leadership positively affects organizational citizenship behaviour.

Employee Engagement and Employee Performance

Employee engagement has fast emerged as a key factor that predicts employee outcomes and drives organizational success (Saks & Gruman, 2021). The consultants, practitioners, and researchers, given its potential, go on to claim that higher levels of employee engagement contributes to an organization's competitive advantage, and directly affects an organization's performance (Naqshbandi, Farhana, & Hisa, 2024; Gede & Huluka, 2024; Ahmed et al., 2026). Since an organization's performance is the outcome of the overall performance of its employees, the organizational researchers have always been keen on identifying the antecedents of employee performance and have reported that employees with higher levels of engagement demonstrate higher job performance which leads to higher organizational performance (Saks, 2021). Engaged employees due to their positive, fulfilling, work-related

state of mind; characterized by vigor, dedication, and absorption (Schaufeli et al., 2002; Saks, 2022) do not take their work as a burden; rather, they feel obligated and engross themselves in job performance and attainment of organizational goals (Kahn, 1990; Schaufeli, 2021).

Empirical research on engagement also reveals that engaged employees being satisfied, committed, motivated, and identifying themselves with organization's mission, values, and goals develop focus to perform, show functional behavior, develop teams, and make collaborative efforts to attain organizational goals and objectives (Bakker, 2022). Thus, organizations seeking to enhance employee performance should attend to enhance employee engagement, as several researchers have reported significantly positive effects of employee engagement on employee performance (Al Zeer et al., 2023). Therefore, based on the empirical evidence provided in the aforementioned studies, it can be synthesized that employee engagement is positively related to employee performance.

H₄: Employee Engagement positively affects Employee Performance.

Employee Engagement and OCB

Employee engagement-OCB relationship has been extensively studied in literature, highlighting a strong positive relationship between the two. Engaged employees carrying positive fulfilling, and work-related state of mind (Schaufeli & Bakker, 2008) indulge in their roles/ duties cognitively, emotionally, and physically and prove to be effective in the attainment of organizational goals (Kahn, 1990; Schaufeli, 2021). The performance of engaged employees does not include task performance only, rather, it due to employees' persistent and pervasive affective cognitive state (Schaufeli, 2021; Saks, 2022), does also include less formal 'emergent' behaviours that contribute to organization less directly (Motowidlo, Borman, & Schmit, 2014; Rich et al., 2010). Although, these emergent behaviours, labelled as Organizational Citizenship Behavior comprising helpfulness, sportsmanship, conscientiousness, and civic virtue (Organ, 1988; Rich et al., 2010), do not contribute to an organization's technical core directly but contribute to the organization by fostering an environment, conducive for the task attainment and overall job performance (Motowidlo et al., 2014).

According to researchers engaged employees who invest themselves more fully while at work than the less engaged ones, are found to be willing to go above and beyond their formally defined jobs and engage in acts that constitute organizational citizenship behaviour (Rich et al., 2010). This discretionary effort on part of engaged employees stems from their sense of belonging, commitment, and deeper alignment with the values and goals of their employment. Consequently, organizations striving to enhance employee engagement are likely to see an increase in OCB (Rich et al., 2010; Kisi, 2023; Pohl et al., 2023; Ting et al., 2024).

H₅: Employee engagement positively affects organizational citizenship behaviour.

Employee Engagement mediating the relationship between Transformational Leadership and Employee Performance

Several studies have confirmed the positive association between transformational leadership and employee performance, as transformational leaders through their inspiration, motivation, effective communication, intellectual stimulation, and concern for followers'

needs create such psychological conditions which drive followers to diverge from self-interest to collective-interest and invest themselves in achieving optimal performance (Bass, 1999; Sidik et al., 2024; Wuryaningrat et al., 2024; Sewang, 2025). Similarly, extant research suggests a positive relationship between transformational leadership and employee engagement, as employees on perceiving transformational leaders' vision, strong interaction, personalized support, and concern for their professional development start believing that they are valued, trusted, supported, and empowered which in turn prompts enhanced engagement (Alamri, 2023; Rezeki et al., 2023; Abdul-Azeez et al., 2024; Nurmeksela et al., 2025). These employees with higher levels of engagement develop both rational and emotional connections with organization and feel obligated to reciprocate with enhanced job performance (Kahn, 1990; Saks, 2021; Schaufeli, 2021).

This transformational leadership-employee performance link through employee engagement, can be elaborated using Balu's (1964) SET, and LMX (Graen and Uhl-Bien, 1995). According to these theories, the high-quality leader-follower relationship, characterized with support, trust, and fair treatment nurtures employee engagement which motivates employees to align their efforts with organizational goals and engross themselves in delivering optimal performance (Decuyper & Schaufeli, 2021). Thus, employee engagement, based on SET and LMX provides a psychological mechanism through which leaders' transforming behaviours are translated into enhanced employee performance.

Therefore, based on the above stated psychological mechanism and findings of other researchers (Pratama & Amalia, 2024; Gankhuyag et al., 2025; Helalat et al., 2025; Iddrisu & Mohammad, 2025; Layek & Koodamara, 2025), it is hypothesized that employee engagement mediates the relationship between transformational leadership and employee engagement.

H₆: Employee engagement mediates the relationship between transformational leadership and employee performance.

Employee Engagement mediating the Relationship Between Transformational Leadership and Organizational Citizenship Behaviour

A growing number of empirical studies have substantiated a significantly positive link between transformational leadership and organizational citizenship behaviour (Podsakoff, 1990; Qalati et al., 2022; Mohamed & Lahlimi, 2025). Transformational leaders using their inspirational motivation transform followers' attitudes, beliefs, and values which propel them to transcend performance expectations and indulge in discretionary citizenship behaviour (Northouse, 2025; Bolino, Klotz, & Whitney, 2024). Podsakoff (1990), while discussing the potential ways in which transformational leaders cause followers' OCB, stated that there could be both direct and indirect influence of transformational leaders on employees' OCB, and in this regard, many studies have been conducted to know and comprehend the underlying mechanisms that operationalize the influence of transformational leadership on employees' OCB, however, there still exist the debates over this linkage.

Researchers have used different theoretical approaches to understand this underlying mechanism, and one of the widely used theories is Blau's (1964) Social Exchange Theory (SET). As proposed by SET, a series of high-quality exchanges coupled with supportive environment, nurtures an interdependent relationship between transformational leaders and the

organizational members, where they, on perceiving leaders' support, recognition, trust, and fairness feel obligated to reciprocate by aligning and identifying their goals and values with that of organization, and showing greater engagement in the job roles (Simbula, Margheritti, & Avanzi, 2023). This enhanced engagement characterized with vigor, dedication, and absorption drives employees to transcend their formal job requirements and exhibit discretionary citizenship behaviour (Kisi, 2023; Pohl et al., 2023; Ting et al., 2024). Thus, This heightened engagement as a result of transformational leaders' inspirational motivation, recognition, trust, and psychological support shapes OCB, thereby setting up the path that transformational leadership leading to enhanced employee engagement, which in turn furthers employees' OCB. Empirical studies have also confirmed the mediating role of employee engagement between this relationship (Hidayat et al., 2024; Maulana, 2025; Rutherford, 2025) and have frequently cited employee engagement serving as the key underlying mechanism that links transformational leadership and OCB (Mohamed & Lahlimi, 2025).

H₇: Employee engagement mediates the relationship between transformational leadership and organizational citizenship behaviour.

Organizational Justice Moderating the Relationship Between Transformational leadership and employee engagement

Studying the moderation of organizational justice on the relationship between transformational leadership and employee engagement can be an interesting, yet complex research subject with in the domain of industrial-organizational psychology as the study of related literature reveals that no study has attempted to explore, as to how organizational justice might moderate the transformational leadership and employee engagement linkage, and this study seeks to understand and clarify the multifaceted interaction between transformational leadership, organizational justice and employee engagement, particularly the moderating role organizational justice between the relationship of transformational leadership and employee engagement.

The link between transformational leadership and employee engagement is well established in the related literature (Decuyper & Schaufeli, 2021; Schaufeli, 2021) as the transformational leaders using their charisma, genuine attention, and effective communication inspire and motivate employees which in turn furthers their satisfaction, commitment, and identification with the organizational goals, thus leading to heightened engagement (Alamri, 2023; Rezeki et al., 2023; Abdul-Azeez et al., 2024; Nurmeksela et al., 2025), and making employees to work enthusiastically for the benefit of organization. Additionally, employees' perception of organizational justice, i.e., perceiving fairness in decision-making processes, outcomes, and interactions, establishes their trust in the leadership which is likely to strengthen the positive link between transformational leadership and employee engagement. As mentioned above, no study has been conducted to determine the moderating role of organizational justice between transformational leadership and employee engagement, however, the moderating effects of organizational justice on transformational leadership and employee engagement link can be explained and substantiated using various theoretical lenses such as of Social Exchange Theory (SET), Leader-Member Exchange (LMX) Theory, Equity Theory, and Psychological Contract Theory.

Firstly, based on the propositions of SET, the perception of fair treatment in the organization fosters reciprocal high-quality exchange relationship between transformational leaders indicating that perception of higher organizational justice leads to stronger interdependent relationships; where transformational leaders initiate fair and positive behavior, and followers respond with enhanced levels of engagement and performance. Therefore, it can be proposed that based on the theoretical basis of SET, the reciprocal exchange relationship between transformational leadership and employee engagement is moderated by organizational justice. Second, using the fundamental principle of the LMX theory of leaders developing unique relationships with each of their follower, the moderating role of organizational justice becomes critical as all the LMX framework-based relationships may not be equal, leading to the emergence of in-groups and out-group, and employees, despite not experiencing quality LMX relationship with their leader, may still be satisfied, motivated, and engaged, provided they perceive fairness in decision making processes, outcomes, and interactional treatment. Next, considering Adam's (1963) equity theory, employees on perceiving fairness in their input and out in comparison to others, particularly the distribution of rewards and resources, experience equity and develop feelings of justice and may exhibit higher levels of engagement, thus providing evidence that perception of organizational justice may moderate transformational leader-engagement link. Further, Psychological Contract Theory can also be used to justify the moderating role of organizational justice between transformational leadership and employee engagement, as it refers to an unwritten agreement between employees and organization encompassing informal expectations and obligations that make up their relationship. And, similarly, transformational leaders by initiating positive behaviours create a psychological contract where employees due to trust in their leader for honoring the mutual expectations under fair treatment conditions, start reciprocating with enhanced commitment, engagement, and efforts, suggesting critical role of organizational justice in maintaining and strengthening this psychological contract leading to higher levels of employee engagement. Therefore, based on these theoretical perspectives it can be concluded that organizational justice reinforces the positive relationship between transformational leadership and employee engagement by ensuring a trust-based environment.

H₈: Organizational Justice Moderating the Relationship Between Transformational leadership and employee engagement

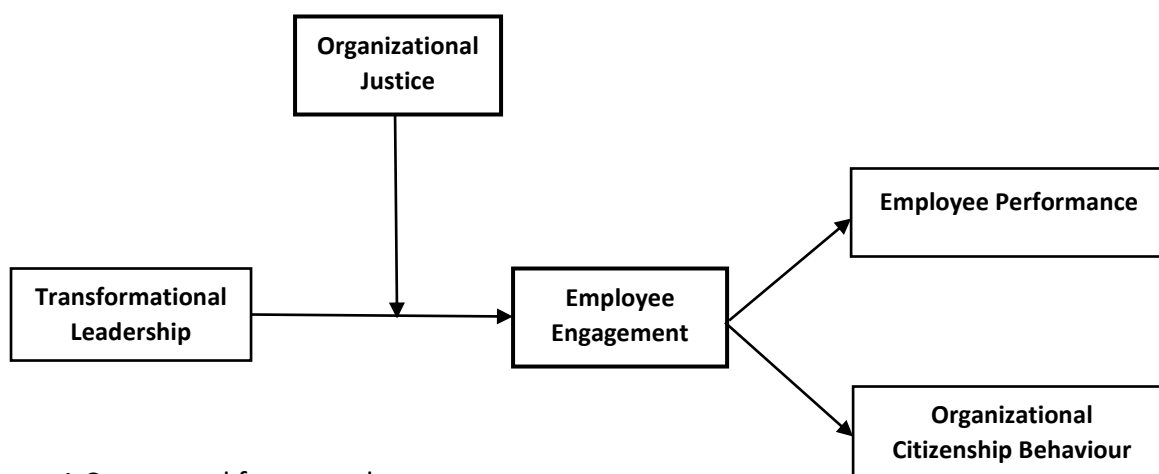


Figure 1 Conceptual framework

Source: developed by authors

Methodology

Figure 1 illustrates the constructs explored in the present study; providing the schematic description of the research model.

Research Design

This study using quantitative and cross-sectional research design studied the impact of transformational leadership on healthcare professionals' performance and organizational citizenship behaviour, with employee engagement as a mediating variable and organizational justice as a moderating variable.

Population and Sampling

Population for the presents study were the healthcare professionals (medical doctors and nurses) working in the private and public sector hospitals in Pakistan, and doctors (N = 274,994) registered with Pakistan Medical and Dental Council (PM&DC), and nurses (107643) registered with Nursing Council of Pakistan (PNC) constituted the total population. Sample was selected employing a three-stage sampling strategy, firstly, purposive sampling technique was used for the selection five cities of Pakistan. Secondly, five leading public sector tertiary care hospitals and five leading private sector tertiary care hospitals were identified from each of the five purposively selected cities in consultation with senior medical professors, experienced physicians, and senior officers in the Ministry of Health in Pakistan, ensuring that the selected hospitals were recognized for quality healthcare delivery. Next, using snowball sampling, healthcare professionals were recruited. The targeted sample size was determined using G*Power 3.1 software, and in parallel, considering the sample size best practices of PLS-SEM and recommendations of Hair et al. (2021) a sample of 500 respondents was employed.

Data Collection and Measures

Data was collected using a self-administered structured questionnaire. The first section of the questionnaire included 9 different aspects seeking information about respondents' demographic characteristics, while the second section included measures of the study variables. The latent variables included in the study model were measured using adopted and previously validated scales on a 5-point Lickert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Measures

The study model included one independent variable (transformational leadership), one mediator (employee engagement), one moderator (organizational justice), and two dependent variables (employee performance and organizational citizenship behavior. Transformational leadership was measured using 7-item scale developed by Carless, Wearing, and Mann (2000), employee engagement using 9-item Utrecht Work Engagement (UWES-9) scale developed by Schaufeli, Baker, & Salanova, (2006), employee performance using an 8-item scale adopted from Rodwell, Kienzle and Shadur (1998), organizational citizenship behaviour using Podsakoff et al.'s (1990) 16-item scale, and organizational justice using Colquitt's (2001) 20-item scale.

Statistical Analyses

Data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) as it is considered a preferred choice for complex study models (Hair et al., 2021) and SmartPLS 4

was used to perform SEM analysis for its aligning well with PLS-SEM with regard to handling complex study models, for its capability to examine a structural model with medium to small sample size, and for efficiently handling non-normally distributed data (Hair et al. 2021). The data analysis, as recommended by Hair et al. (2021) was performed using a two-step approach. At the first stage, the assessment of measurement model was performed for the estimation of reliability. It included examining the indicator reliability, internal consistency reliability by checking Cronbach's alpha and composite reliability, Convergent validity by checking the Average Variance Extracted (AVE), and Discriminant Validity using Fornell-Larcker Criterion and HTMT ratios. Whereas, at stage two, structural model was run using bootstrapping with 10000 samples and was assessed by examining the coefficients of determination (R^2), Predictive relevance of exogenous variables (Q^2), and path coefficients along with their significance. Further, the effect size was assessed to determine the impact of independent variable on dependent variables. Finally, statistical significance of the direct, mediating, and moderating effects was determined to provide basis for the acceptance or rejection of the proposed hypotheses.

Results

Demographic Profile of Respondents

In total, data from 500 healthcare professionals was collected. The analysis of the demographic data revealed that 305 doctors and 195 nurses participated in the study, of which 39.4 % were males, 60.2 % were females and .04 % opted 'rather not sat'. And most of the respondents had obtained Masters/ Fellowship and had more than 10 years of experience of working in healthcare organizations.

Assessment of Measurement and Structural Models

The present study included five reflective constructs, of which, four were higher-order constructs and one lower-order construct. Transformational leadership (TL), employee engagement (EE), organizational justice (OJ), and organizational citizenship behaviour (OCB) were categorized as higher-order constructs, whereas employee performance (EP) was categorized as lower-order construct. Following Hair et al. (2021)'s guidelines, the standard two-stage analysis process (measurement model assessment → structural model assessment) was performed.

Assessment of reflective measurement model

While assessing the measurement model, at stage one, the first/ lower-order model was analyzed, and indicators' reliability, internal consistency reliability, convergent validity, and discriminant validity were evaluated.

Firstly, the factor loadings were examined to ensure that all the indicators were loading on their respective constructs and their loading values were $> .70$, however, the items with loadings between $< .70$ and $> .40$ were further evaluated and such items were retained only if their respective constructs' composite reliability (CR) and AVE values were $> .70$ and $> .50$ respectively, whereas, in case of the AVE value of any construct being lower than the recommended threshold, the items with lower loadings were removed one by one till the AVE value of the respective construct exceeded 0.50 (Hair et al., 2021). While ensuring the AVE $> .50$ of all the constructs, the AVE of employee performance was found to be $< .50$ and 3 items EP1, EP3, and EP8 were deleted which improved its AVE. Additionally, OCBSP3 from the scale

of Organization Citizenship Behaviour (OCB) was also deleted for its loading being $< .40$ (See Table 1).

Following indicators' reliability assessment, the internal consistency reliability was assessed examining Cronbach's alpha and composite reliability of the constructs. However, CR for its being considered a better criterion than Cronbach's alpha was primarily followed (Fornell & Larcker, 1981, Hair et al., 2019). The CR of all the constructs found to be greater than 0.70 indicating satisfactory internal consistency of the first-order measurement scales (See Table 1). Next, in order to establish the convergent validity of each construct, the AVE value of each construct was examined. The AVE values of all the constructs were found to be $> .50$ demonstrating adequate convergent validity (See Table 1).

Table 1

Lower-Order Measurement Model: Outer Loadings, Reliability, and Convergent Validity

Construct/ Indicators	Loading	Cronbach's alpha	CR	AVE
Absorption		0.644	0.807	0.583
EEA1	0.797			
EEA2	0.782			
EEA3	0.709			
Dedication		0.752	0.857	0.668
EED1	0.856			
EED2	0.881			
EED3	0.705			
Vigor		0.668	0.819	0.607
EEV1	0.599			
EEV2	0.872			
EEV3	0.837			
Employee Performance		0.752	0.833	0.553
EP1	0.709			
EP4	0.713			
EP5	0.729			
EP6	0.756			
EP7	0.621			
Altruism		0.646	0.847	0.735
OCBA1	0.814			
OCBA2	0.899			
Civic Virtue				
OCBCV1	0.666	0.662	0.809	0.588
OCBCV2	0.808			
OCBCV3	0.817			
Courtesy		0.63	0.844	0.73
OCBCY1	0.858			
OCBCY2	0.851			
Conscientiousness		0.774	0.844	0.522
OCBCon1	0.562			

OCBCon2	0.741			
OCBCon3	0.732			
OCBCon4	0.803			
OCBCon5	0.753			
Sportsmanship		0.742	0.845	0.645
OCBSP1	0.781			
OCBSP2	0.763			
OCBSP4	0.863			
Distributive Justice		0.923	0.946	0.814
OJDJ1	0.872			
OJDJ2	0.923			
OJDJ3	0.913			
OJDJ4	0.899			
Interactional Justice		0.895	0.916	0.577
OJIJ1	0.777			
OJIJ2	0.715			
OJIJ3	0.722			
OJIJ4	0.752			
OJIJ5	0.822			
OJIJ6	0.809			
OJIJ7	0.713			
OJIJ8	0.759			
Procedural Justice		0.901	0.922	0.628
OJPJ1	0.794			
OJPJ2	0.804			
OJPJ3	0.811			
OJPJ4	0.792			
OJPJ5	0.824			
OJPJ6	0.791			
OJPJ7	0.731			
Individualized Consideration		0.613	0.836	0.718
TLIC1	0.805			
TLIC2	0.888			
Idealized Influence		0.734	0.851	0.657
TLII1	0.881			
TLII2	0.711			
TLII3	0.833			
Inspirational Motivation				
TLIM1	1.000			
Intellectual Stimulation				
TLIS1	1.000			

Source: Compiled by authors

Finally, the discriminant validity of the first-order measurement model established using Heterotrait-Monotrait (HTMT) ratio (Henseler et al., 2015) and Fornell-Larcker criterion (Fornell & Larcker, 1981). And, on finding the AVE's square root of each construct greater than its correlation with others (Fornell & Larcker, 1981), and the HTMT values lower than the recommended threshold of < 0.90 (as shown in Table 3), the discriminant validity of the lower-order measurement model was established (Hair et al., 2021).

Table 2

Fornell-Larcker Criterion

	AB S	AL T	CO NS	CO U	CV	DE D	DJ	EP	IC	II	IJ	IM	ISL	PJ	SP O	VI G
ABS	0.76															
ALT	0.47	0.86														
CO NS	0.38	0.49	0.72													
CO U	0.45	0.60	0.51	0.85												
CV	0.29	0.37	0.44	0.46	0.77											
DED	0.64	0.41	0.32	0.37	0.28	0.82										
DJ	0.29	0.25	0.28	0.32	0.25	0.33	0.90									
EP	0.44	0.45	0.47	0.46	0.40	0.43	0.44	0.71								
IC	0.28	0.27	0.26	0.27	0.18	0.31	0.38	0.47	0.85							
II	0.34	0.31	0.33	0.33	0.29	0.40	0.43	0.44	0.67	0.81						
IJ	0.24	0.26	0.23	0.25	0.23	0.28	0.34	0.35	0.27	0.32	0.76					
IM	0.26	0.29	0.23	0.28	0.19	0.33	0.38	0.44	0.63	0.63	0.28	1.00				
ISL	0.27	0.23	0.21	0.30	0.17	0.29	0.40	0.44	0.63	0.63	0.34	0.60	1.00			
PJ	0.31	0.29	0.28	0.32	0.26	0.38	0.78	0.48	0.40	0.46	0.37	0.40	0.42	0.79		
SPO	0.02	0.05	0.03	0.05	0.20	-0.08	0.15	0.08	0.05	0.16	0.11	0.13	0.16	0.18	0.80	
VIG	0.49	0.39	0.34	0.34	0.28	0.64	0.34	0.40	0.30	0.33	0.33	0.33	0.23	0.42	0.08	0.78

Note. ABS: Absorption; ALT: Altruism; CONS: Conscientiousness; COU: Courtesy; CV: Civic Virtue; DED: Dedication; DJ: Distributive Justice; EP: Employee Performance; IC: Individualized Consideration; II: Idealized Influence; IJ: Interactional Justice; IM: Inspirational Motivation; ISL: Intellectual Stimulation; PJ: Procedural Justice; SPO: Sportsmanship; VIG: Vigor.

Table 3

HTMT Values

	AB S	AL T	CO NS	CO U	CV	DE D	DJ	EP	IC	II	IJ	IM	ISL	PJ	SP O	VI G
ABS																
ALT	0.7 2															
CO	0.5	0.6														
NS	1	8														
CO	0.7	0.8														
U	0	9	0.73													
CV	0.4	0.5		0.7												
	4	5	0.59	1												
DED	0.8	0.5		0.5	0.4											
	9	9	0.42	5	0											
DJ	0.3	0.3		0.4	0.3	0.3										
	7	3	0.34	2	1	9										
EP	0.6	0.6		0.6	0.5	0.5	0.5									
	4	6	0.63	7	7	9	2									
IC	0.4	0.4		0.4	0.2	0.4	0.5	0.6								
	4	0	0.36	2	6	3	1	7								
II	0.4	0.4		0.4	0.3	0.5	0.5	0.6	0.8							
	9	3	0.41	9	9	2	2	4	9							
IJ	0.3	0.3		0.3	0.3	0.3	0.3	0.4	0.3	0.4						
	2	3	0.27	3	0	4	7	2	5	0						
IM	0.3	0.3		0.3	0.2	0.3	0.3	0.5	0.7	0.7	0.3					
	2	6	0.25	5	3	7	9	0	8	3	0					
ISL	0.3	0.2		0.3	0.2	0.3	0.4	0.5	0.7	0.8	0.3	0.6				
	3	8	0.23	8	0	3	2	1	9	0	5	0				
PJ	0.4	0.3		0.4	0.3	0.4	0.8	0.5	0.5	0.5	0.4	0.4	0.4			
	0	8	0.33	3	3	5	5	8	4	7	1	3	4			
SPO	0.2	0.1		0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
	2	3	0.12	8	8	6	7	5	3	8	3	3	8	0		
VIG	0.7	0.5		0.5	0.4	0.8	0.4	0.5	0.4	0.5	0.3	0.3	0.2	0.5	0.1	
	2	8	0.45	1	3	6	2	7	4	5	9	6	6	2	2	

Note. ABS: Absorption; ALT: Altruism; CONS: Conscientiousness; COU: Courtesy; CV: Civic Virtue; DED: Dedication; DJ: Distributive Justice; EP: Employee Performance; IC: Individualized Consideration; II: Idealized Influence; IJ: Interactional Justice; IM: Inspirational Motivation; ISL: Intellectual Stimulation; PJ: Procedural Justice; SPO: Sportsmanship; VIG: Vigor.

Assessment of Higher-Order, Reflective-Reflective Measurement Model

The study included four higher-order constructs and assessment of these reflective-reflective constructs was performed by examining their respective factor loadings, reliability, and validity. Firstly, the internal consistency reliability of the measurement model was established by examining the indicators' outer loadings, Cronbach's alpha and composite reliability of each higher-order constructs. In all cases, except for the sportsmanship dimension of OCB, their respective values (as shown in Table 4) were found to be greater than the threshold values of 0.70 (Hair et al., 2021). The sportsmanship dimension loading was 0.11 which was significantly lower than the recommended threshold and was negatively affecting the composite reliability and convergent validity of the higher-order OCB. The measurement

model was assessed by removing sportsmanship dimension which indicated significant improvement in the internal consistency and convergent validity of OCB. Therefore, sportsmanship dimension was excluded from the OCB construct and the study model before proceeding to the assessment of structural model.

Table 4

Higher-Order Measurement Model: Outer Loadings, Reliability, and Convergent Validity

Construct	Outer loadings	Alpha	CR	AVE
Transformational Leadership (TL)		0.874	0.913	0.725
IC <- TL	0.845			
II <- TL	0.889			
IM <- TL	0.827			
ISL <- TL	0.844			
Employee Engagement (EE)		0.807	0.886	0.722
ABS <- EE	0.834			
DED <- EE	0.887			
VIG <- EE	0.826			
Organizational Justice (OJ)		0.746	0.858	0.673
DJ <- OJ	0.881			
IJ <- OJ	0.657			
PJ <- OJ	0.902			
Organizational Citizenship Behaviour (OCB)		0.785	0.861	0.609
ALT <- OCB	0.804			
CON <- OCB	0.784			
COU <- OCB	0.837			
CV <- OCB	0.691			

Note. ABS: Absorption; ALT: Altruism; CONS: Conscientiousness; COU: Courtesy; CV: Civic Virtue; DED: Dedication; DJ: Distributive Justice; EP: Employee Performance; IC: Individualized Consideration; II: Idealized Influence; IJ: Interactional Justice; IM: Inspirational Motivation; ISL: Intellectual Stimulation; PJ: Procedural Justice; VIG: Vigor.

Following the assessment internal consistency reliability and convergent validity, the discriminant validity of the higher-order reflective-reflective constructs (TL, EE, OJ, and OCB) was established by employing Fornell-Larcker criterion and assessing HTMT ratios. The AVE's square root of each construct was found to be greater than its correlation with others (Fornell & Larcker, 1981) and similarly, HTMT values were lower than the recommended threshold of < 0.90 (Hair et al., 2021) thus establishing the discriminant validity of the reflective-reflective higher-order constructs included in the study model.

Table 5.

*Fornell-Larcker Criterion & Heterotrait-Monotrait (HTMT) Ratio***Organizational Citizenship Behaviour – Fornell-Larcker Criterion & HTMT Values**

Fornell-Larcker Criterion												
	ABS	DED	DJ	EP	IC	II	IJ	IM	ISL	PJ	VIG	OC B
OC B	0.5 2	0.45	0.35	0.5 8	0.3 1	0.3 9	0.3 1	0.3 2	0.2 9	0.3 7	0.4 4	0.7 8
HTMT												
	ABS	DED	DJ	EP	IC	II	IJ	IM	ISL	PJ	VIG	OC B
OC B	0.7 1	0.59	0.42	0.7 5	0.4 3	0.5 2	0.3 7	0.3 6	0.3 2	0.4 4	0.5 9	

Transformational Leadership – Fornell-Larcker Criterion & HTMT Values

Fornell-Larcker Criterion													
	ABS	ALT	CON S	CO U	CV	DE D	DJ	EP	IJ	PJ	SPO	VIG	TL
TL	0.3 4	0.33	0.31	0.3 5	0.2 5	0.3 9	0.4 7	0.5 4	0.3 6	0.5 0	0.1 6	0.3 7	0.8 5
HTMT													
	ABS	ALT	CON S	CO U	CV	DE D	DJ	EP	IJ	PJ	SPO	VIG	TL
TL	0.4 5	0.42	0.35	0.4 7	0.3 1	0.4 7	0.5 2	0.6 5	0.4 0	0.5 6	0.1 6	0.4 5	

Organizational Justice – Fornell-Larcker Criterion & HTMT Values

Fornell-Larcker Criterion														
	ABS	ALT	CON S	CO U	CV	DE D	IC	II	IJ	IM	ISL	SPO	VIG	OJ
OJ	0.3 4	0.32	0.32	0.3 6	0.3 0	0.4 1	0.4 3	0.5 0	0.6 6	0.4 4	0.4 7	0.1 8	0.4 4	0.8 2
HTMT														
	ABS	ALT	CON S	CO U	CV	DE D	IC	II	IJ	IM	ISL	SPO	VIG	OJ
OJ	0.4 9	0.47	0.42	0.5 3	0.4 2	0.5 4	0.6 3	0.6 7	0.8 5	0.5 1	0.5 5	0.2 3	0.6 0	

Employee Engagement – Fornell-Larcker Criterion & HTMT Values

Fornell-Larcker Criterion														
	ALT	CON S	COU	CV	DJ	EP	IC	II	IJ	IM	ISL	PJ	SPO	EE
EE	0.5 0	0.42	0.46	0.3 4	0.3 7	0.5 1	0.3 4	0.4 4	0.3 2	0.3 5	0.3 1	0.4 3	0.0 1	0.8 5
HTMT														
	ALT	CON S	COU	CV	DJ	EP	IC	II	IJ	IM	ISL	PJ	SPO	EE
EE	0.6 9	0.50	0.64	0.4 6	0.4 3	0.6 5	0.4 9	0.5 7	0.3 8	0.3 9	0.3 4	0.5 0	0.1 1	

Note. ABS: Absorption; ALT: Altruism; CONS: Conscientiousness; COU: Courtesy; CV: Civic Virtue; DED: Dedication; DJ: Distributive Justice; IC: Individualized Consideration; II: Idealized Influence; IJ: Interactional Justice; IM: Inspirational Motivation; ISL: Intellectual Stimulation; PJ: Procedural Justice; VIG: Vigor.

Structural Model Assessment

Following the assessment of measurement model and ascertaining the reliability and the validity of the constructs in the study, the next step was to proceed with the assessment of structural model. Structural model was assessed following the steps proposed by Hair et al (2021). Firstly, the VIF values were examined to ensure that there were no collinearity issues, and the results indicated no multicollinearity issue as all the VIF values were below the threshold value of < 0.5 (Hair et al, 2021). Secondly, path coefficients and their significance were evaluated. Secondly, the PLS-SEM algorithm was run to generate the coefficients of determination (R^2) for the endogenous variables which determined the predictive power of the model. The R^2 values of 0.294, 0.380, and 0.329 for employee engagement (EE), employee performance (EP), and organizational citizenship (OCB) respectively, indicated weak to moderate explanatory power of the model (Hair et al., 2021). These weak to modest, yet acceptable predictive powers provide adequate foundations for using and interpreting the path relationship among the latent constructs included in the structural model. Next, the Cohen's (1988) effect size (f^2) was evaluated to assess the contribution of the specific exogenous variable (TL) in the structural model. The results revealed that TL had the highest effect size (f^2) towards EP i.e. 0.198, suggesting medium to large effect size, followed by the effect size (f^2) of TL on EE i.e. 0.078, suggesting small to medium effect size. The third highest effect size (f^2) of TL was on OCB i.e. 0.044, suggesting small effect size (Cohen, 1988). Finally, Q^2 values (Geisser 1974; Stone 1974) were calculated to establish the predictive relevance of the model for the endogenous construct. The Q^2 values were calculated by employing blindfolding procedure and the Q^2 values of 0.204, 0.184, and 0.195 for EE, EP, and OCB respectively, and all of these Q^2 values being > 0.000 indicated small predictive relevance (Stone 1974; Geisser 1974).

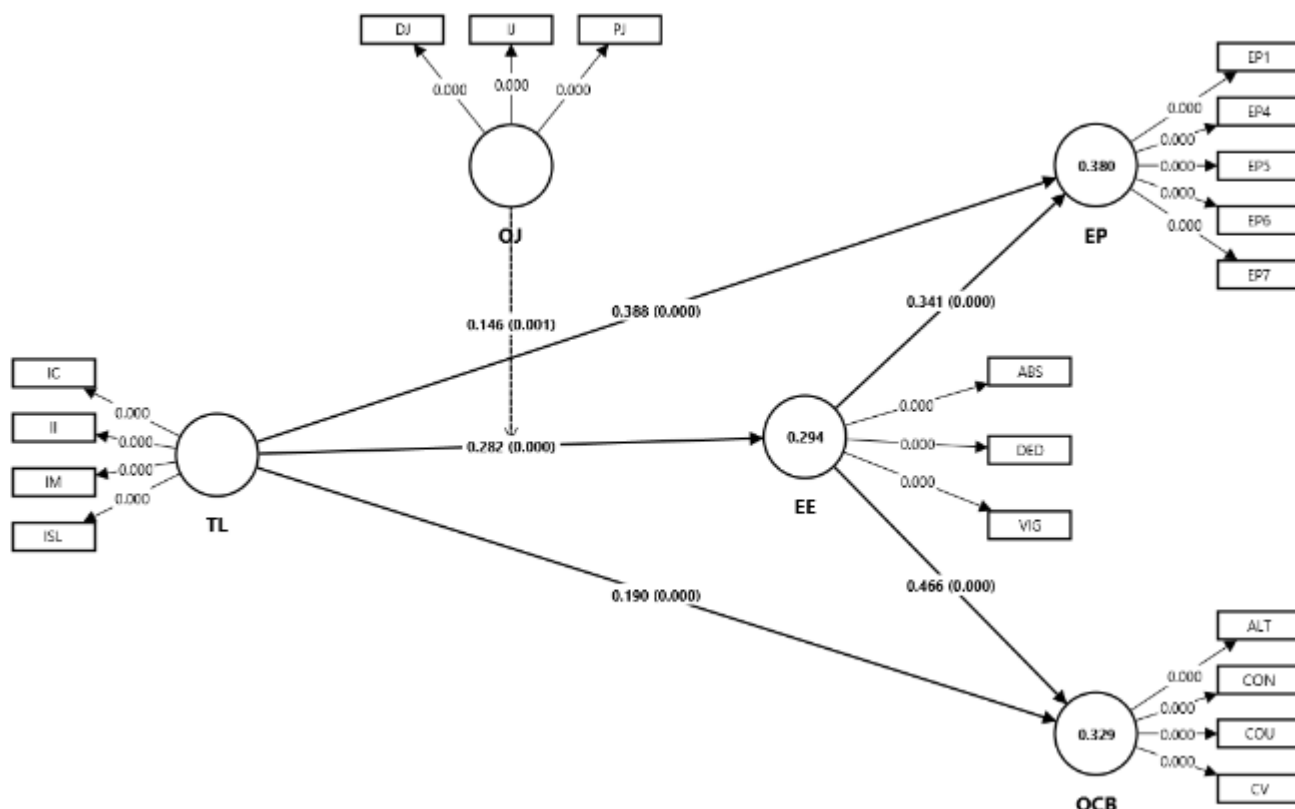


Figure 2 Structural Model

Source: Developed by authors

Path Coefficients and Hypothesis Testing

Using SmartPLS 4, the bootstrapping with 10,000 resamples was run to estimate the path coefficients and their significance to confirm the hypothesized direct, indirect, and moderating relationships. The acceptance and rejection of hypotheses were made on the basis of t -values > 1.96 and P -values < 0.05 (Hair et al., 2021).

Direct Relationship

The hypothesized direct relationship in the study (H_1 to H_5) were examined by employing bootstrapping procedure in PLS-SEM. The results, based on the recommended criteria of t -values > 1.96 and $P < 0.05$, confirmed the statistical significance of the hypothesized relationships. Specifically, the H_1 proposed a positive effect of transformational leadership on employee engagement, which was supported ($\beta = 0.282, t = 5.825, p < 0.001$). H_2 posited a positive effect of transformational leadership on employee performance, which was accepted ($\beta = 0.388, t = 8.469, p < 0.001$), while H_3 confirmed that transformational leadership positively affects organizational citizenship behaviour ($\beta = 0.190, t = 3.799, p < 0.001$). H_4 predicted that employee engagement positively affects employee performance, which was supported ($\beta = 0.341, t = 7.090, p < 0.001$), and finally, H_5 hypothesized a positive effect of employee engagement on organizational citizenship behaviour, which was supported ($\beta = 0.463, t = 10.306, p < 0.001$).

Table 6

Direct Relationships

	β	SE	t-values	p-values	Hypotheses
TL -> EE	0.282	0.048	5.825	0.000	H ₁ : Accepted
TL -> EP	0.388	0.046	8.469	0.000	H ₂ : Accepted
TL -> OCB	0.190	0.050	3.799	0.000	H ₃ : Accepted
EE -> EP	0.341	0.048	7.091	0.000	H ₄ : Accepted
EE -> OCB	0.463	0.046	10.306	0.000	H ₅ : Accepted

Note. TL: Transformational Leadership, EE: Employee Engagement, EP: Employee Performance OCB: Organizational Citizenship Behaviour

Mediation Analysis

The hypothesized mediating role of EE in the relationship between TL and EP was examined employing bootstrapping procedure with 10,000 resamples in PLS-SEM. The results showed that TL had a significant indirect effect on both EP and OCB through EE.

The mediating role of EE in the relationship between TL and EP was evaluated using the bootstrapping procedure in PLS-SEM. The results (as shown in Table 5) showed a significant indirect direct effect of TL on EP through EE (H₆: $\beta = .098$, $t = 4.597$, $p < .001$). TL's total effect on EP was found to be significant ($\beta = .0484$, $t = 12.520$, $p < .001$), and with the inclusion of mediator (EE), TL's effect on EP was still significant ($\beta = .388$, $t = 8.470$, $p < .001$). Since both direct and indirect effects of TL on EP were found to be statistically significant, thus confirmed the complementary partial mediating role of EE in the relationship between TL and EP, aligning with the theoretical model of the study. Additionally, the Variance Accounted For (VAR) was also tested and VAF value of 20.24% also suggested partial mediation (Hair et al, 2019).

Table 7

Mediation Results - TL -> EE -> EP

Total Effects (TL -> EP)			Direct Effect (TL -> EP)			Indirect Effects of TL on EP						
β	t-value	p-value	β	t-value	p-value	Hypothesis	β	SE	t-value	p-value	Percentile bootstrap 95% confidence interval	
											Lower	Upper
0.484	12.520	0.000	0.388	8.470	0.000	H6: TL -> EE -> EP	0.098	0.021	4.597	0.000	0.065	0.135

Note. TL: Transformational Leadership, EE: Employee Engagement, EP: Employee Performance, SE: Standard Error

Similarly, the mediation of EE in the relationship between TL and OCB was assessed using the bootstrapping procedure in PLS-SEM. The results (as shown in Table 8) showed a significant indirect direct effect of TL on OCB through EE (H₇: $\beta = .132$, $t = 5.162$, $p < .001$). TL's total

effect on OCB was found to be significant ($\beta = .0.432, t = 6.723, p < .001$), and with the inclusion of mediator (EE), TL's effect on OCB was still significant ($\beta = .190, t = 3.799, p < .001$). Since both direct and indirect effects of TL on OCB were found to be statistically significant, thus confirmed the complementary partial mediating role of EE in the relationship between TL and OCB, aligning with the theoretical model of the study. Additionally, the Variance Accounted For (VAR) was also tested and VAF value of 30.55% also suggested partial mediation (Hair et al, 2019).

Table 8

Mediation Results - TL -> EE -> OCB

Total Effects (TL -> OCB)			Direct Effect (TL -> OCB)			Indirect Effects of TL on OCB						
β	t-value	p-value	β	t-value	p-value	Hypothesis	β	SE	t-value	p-value	Percentile bootstrap 95% confidence interval	
											Lower	Upper
0.432	6.723	0.000	0.190	3.799	0.000	H7: TL -> EE -> OCB	0.132	0.025	5.162	0.000	0.093	0.177

Note. TL: Transformational Leadership, EE: Employee Engagement, OCB: Organizational Citizenship Behaviour, SE: Standard Error

Moderation Analysis

The moderation of Organizational Justice (OJ) on the relationship between Transformational leadership (TL) and Employee Engagement (EE) was evaluated by using two-staged approach in PLS-SEM. The results indicated that inclusion of interaction term (TL*OJ) resulted in an increase of EE's explained variance (R^2) from 0.182 to 0.294, indicating improvement in the model fit. Next, the assessment of the significance of OJ's moderating effect ($H_8: \beta = 0.146, t = 3.179, p < 0.05; 95\% \text{ CI } [0.0.076, 0.228]$) also confirmed OJ's significantly positive moderating effect (see Table 123). Furthermore, the Cohen's (1988) effect size also showed an f^2 value of 0.052, suggesting, though weak, yet a meaningful moderating effect of OJ on the relationship between TL and EE.

Slope Analysis

Moreover, the slope analysis also showed that the positive effect of TL on EE varies across different levels of OJ as OJ's steeper upward slope indicates a significant positive effect of TL on EE, a justice-perceived context which confirms the hypothesized moderating role on the relationship between TL and EE.

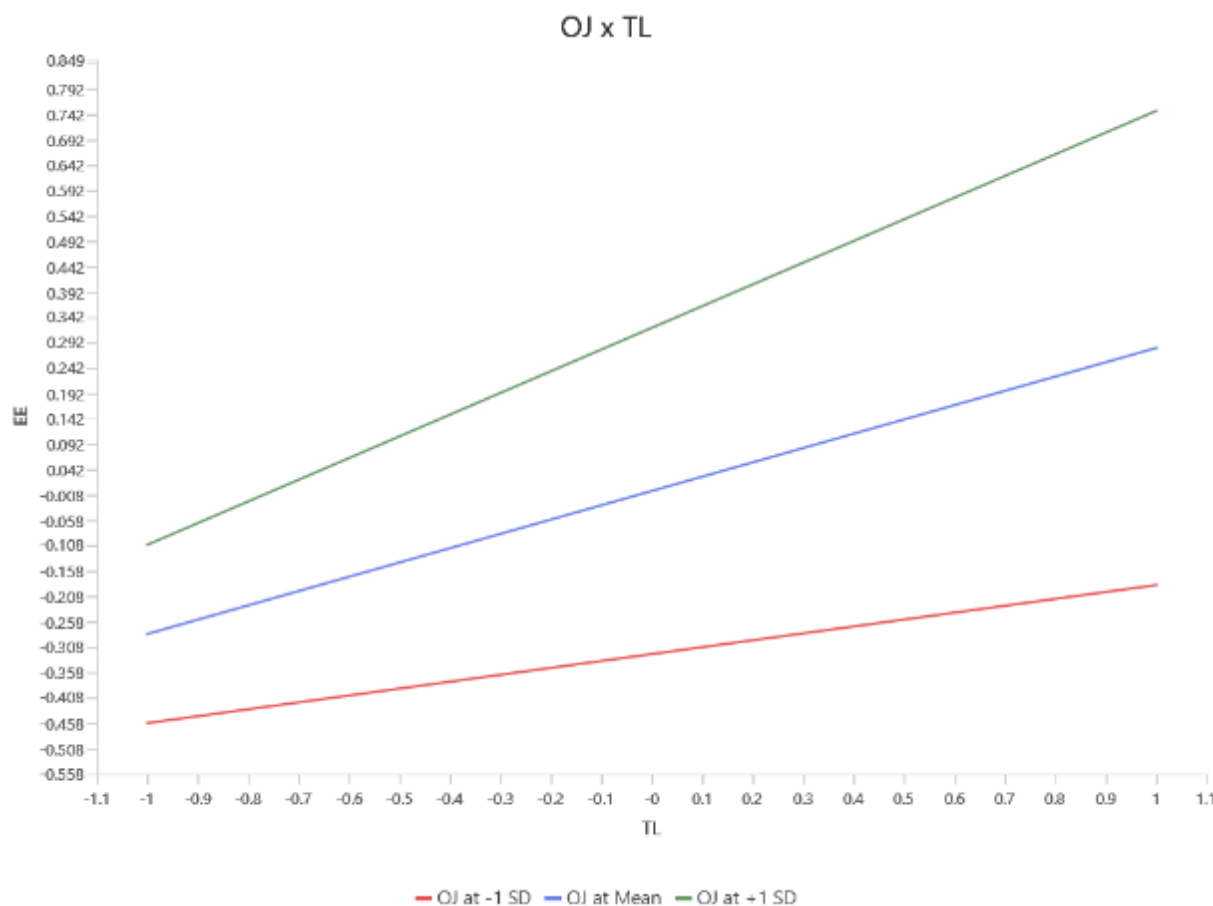


Figure 3

Discussion

The study explored the mediating role of employee engagement in the relationship between transformational leadership (TL) and two key employee outcomes, 1) employee performance (EP) and 2) organizational citizenship behaviour (OCB), specifically in the context of healthcare sector. Besides this, it also explored the moderating role of organizational justice on the relationship between transformational leadership and employee engagement. The results reveal that transformational leadership directly affects employee performance and OCB; and employee engagement partially mediates the relationship between transformational leadership and employee performance, and the relationship between transformational leadership and OCB, indicating that employee engagement serves as the underlying mechanism that links transformational leadership with employee performance and OCB. These results, consistent with Blau's (1964) SET, suggest that when transformational leaders exhibit inspirational motivation and individualized consideration, the followers develop feelings of trust, support, and recognition and are prompted to reciprocate with heightened engagement which leads to enhanced performance and discretionary behavior like OCB. Thus, transformational leaders play a pivotal role in prompting engagement among employees which propels them to perform their jobs effectively and indulge in discretionary citizenship behaviour. These results are consistent with the findings of previous studies exploring the mediating role of employee engagement in the relationship between transformational leadership and employee performance (Helalat et al., 2025; Manurung and Desiana; 2025) and in the relationship between transformational leadership and OCB (Hidayat

et al., 2024; Mohamed & Lahlimi, 2025; Ruthereford, 2025). Additionally, the moderation of OJ aligned with Adam's (1965) equity theory suggests that perceived fairness nurtures an environment characterized by trust which amplifies the transformational leadership's positive influence on employee engagement. Similarly, quality leader-member relationships as posited by Leader-Member Exchange (LMX) Theory, further employees' perception of justice which strengthens the relationship between transformational leadership and engagement.

Theoretical Contribution

This study contributes to leadership and OB literature in several ways. First, in response to the calls for further investigations to underpin the mechanism that governs transformational leadership and positive employee outcomes, it explores and confirms that employee engagement (EE) partially mediates the relationship between transformational leadership (TL) and employee performance (EP), and organizational citizenship behaviour (OCB), thus extends the previous findings by identifying as to how TL enhances employee performance and OCB by prompting engagement among employees, particularly the healthcare professionals. These findings aligning with the SET (Blau, 1964) and JD-R Model (Bakker & Damerouti, 2017) emphasize that healthcare leaders' transforming behaviour in the form of inspirational motivation, intellectual stimulation, and individualized consideration functions as critical job resource for the healthcare professionals that fosters feelings of trust, support, and recognition among them and in turn motivates them to reciprocate with enhanced engagement leading to higher levels of performance and discretionary citizenship behaviour. Second, it contributes to literature by confirming the moderating role of organizational justice on the relationship between transformational leadership and employee engagement.

Although, the previous researchers have highlighted the importance of organizational justice in drawing positive employee outcome but to the best of our knowledge, researchers have not yet attempted to explore the moderating role of organizational justice on the relationship between transformational leadership and employee engagement. The results, corroborating the propositions of Adam's (1965) Equity Theory, suggest that employees' perceptions of fairness result in strengthening the positive influence of transformational leaders on their engagement levels. Thus, in organizations, especially healthcare organizations with complex and high-demand environments, the healthcare professionals' perceptions of fair and equitable treatment become critical in developing their trust in their leadership that plays an instrumental role in keeping them motivated and engaged amid high-demand job environment.

Next, the study drawing on the LMX and Rousseau's (1995) Psychological Contract Theory proposes that employees' perceptions of fairness coupled with trust-based high-quality leader-follower relationships result in heightened engagement of employees which in turn, makes them exhibit enhanced performance and discretionary citizenship behaviour. Thus, transformational leaders in healthcare settings can be very effective if healthcare professionals believe that they are supported, valued, and treated fairly.

Overall, this study through its integrated theoretical framework linking transformational leadership, employee engagement, employee performance, and OCB as well as integrating organizational justice as a moderator, adds to the literature of leadership and organizational

behaviour. Moreover, the contextualization of present study in dynamic and high-demand healthcare settings offers a meaningful insight into the critical role of transformational leaders in nurturing supportive, justice-driven, and engaging work environments where healthcare professionals feel encouraged to deliver optimal performance and indulge in citizenship behavior.

Managerial Implications

For practitioners, especially the healthcare leadership and HR strategists, the findings of the study offer several key insights. First, based on the confirmation of partial mediation of employee engagement between transformational leadership and both employee performance and organizational citizenship behaviour, the healthcare leaders should adopt transformational leadership practices such as effective communication, reinforcing vision, attention to employees' needs, mentoring, and trust building through recognition and empowerment, as these transforming practices actively foster employee engagement which drives enhanced employee performance and discretionary citizenship behaviour. Second, given the importance of employees' perception of being trusted, valued, and treated fairly in prompting engaged behaviour, the healthcare administrators and policy makers should strategize to develop and promote a culture characterized with distributional, procedural, and interactional justice which while amplifying the impact of transformational leadership in fostering employee engagement could lead to heightened in-role and extra-role performance of healthcare professionals. Moreover, since leadership skills can be learned and developed through training (Barling et al., 1996), the healthcare institutions investing in leadership training programs can train their employees in leadership roles for transformational leadership skills and practices which can be very instrumental in affecting positive employee outcomes. Finally, healthcare institutions leveraging this study's insights in elevating healthcare professionals' morale, commitment, and engagement levels, and improving their effectiveness in delivering quality healthcare services.

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