IMPACT OF LEADERSHIP STYLE ON EMPLOYEES’ MOTIVATION: THE CONTRIBUTION OF PSYCHOLOGICAL CAPITAL AND EMPLOYEES’ ENGAGEMENT

a Wejdan Mohammed Al Showdai, b Nadia A. Abdelmegeed Abdelwahed

ABSTRACT

Purpose: Developing employee motivation has excellent significance in attaining organizational success with massive performance. The present study explores the impact of transformational leadership style (TLS) on employees’ motivation (EM) directly and through psychological capital (PC) and employee’ engagement (EE).

Design/Methodology/Approach: Through the questionnaire, the researchers targeted the employees of King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) in Al-Ahsa. Consequently, the researchers used 242 samples to infer the results.

Findings: Through path analysis using analysis of moment structures (AMOS) version 26.0, the outcomes suggested a positive effect of TLS on PC and EM. On the other hand, the impact of TLS on EE is negative. Moreover, the PC and EE factors appeared as positive predictors of EM. With regard to mediation, the study found a positive contribution of PC and EE in developing the association between TLS and EM.

Research, practical and social implications: The study’s findings offer practical guidance for organizational leaders by highlighting the importance of adopting effective leadership styles that nurture PC and enhance EE by providing actionable strategies to improve workplace dynamics. Moreover, the findings would enhance organizational performance by emphasizing the pivotal role of leadership in shaping employee motivation and engagement.

Originality/value: This study empirically addresses the gaps in the integrated framework, meaningfully confirmed among King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) employees in Al-Ahsa.

Keywords: transformational leadership, psychological capital, employee engagement, employee motivation.

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a MBA student and Food Services Operational Inspector II, King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) in Al-Ahsa, E-mail: 222401960@student.kfu.edu.sa, Ornid: https://orcid.org/0009-0000-8090-1690
PhD in Human Resource Management (HRM), Department of Business Management, College of Business Administration, King Faisal University, Al Hofuf, AlAhsa, Saudi Arabia, E-mail: nabelwahed@kfud.edu.sa, Ornid: https://orcid.org/0000-0002-6778-321
RESUMO

Propósito: Desenvolver a motivação do funcionário tem excelente importância em alcançar o sucesso organizacional com desempenho maciço. O presente estudo explora o impacto do estilo de liderança transformacional (TLS) na motivação dos funcionários (EM) diretamente e por meio de capital psicológico (PC) e engajamento dos funcionários (EE).

Design/Metodologia/Abordagem: Através do questionário, os pesquisadores tiveram como alvo os funcionários da King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) em Al-Ahsa. Assim, os pesquisadores usaram 242 amostras para inferir os resultados.

Constatações: Através da análise de caminho usando análise de estruturas de momento (AMOS) versão 26.0, os resultados sugeriram um efeito positivo do TLS no PC e EM. Por outro lado, o impacto do SLT na EE é negativo. Além disso, os fatores PC e EE apareceram como preditores positivos da EM. No que diz respeito à mediação, o estudo encontrou uma contribuição positiva da PC e EE no desenvolvimento da associação entre TLS e EM.

Pesquisa, implicações práticas e sociais: As conclusões do estudo oferecem orientação prática para os líderes organizacionais, destacando a importância de adotar estilos de liderança eficazes que estimulem o PC e melhorem o EE, fornecendo estratégias acionáveis para melhorar a dinâmica do local de trabalho. Além disso, as descobertas melhorariam o desempenho organizacional ao enfatizar o papel fundamental da liderança na formação da motivação e do engajamento dos funcionários.

Originalidade/valor: Este estudo aborda empiricamente as lacunas na estrutura integrada, significativamente confirmada entre os funcionários da Universidade Rei Saud bin Abdulaziz para Ciências da Saúde (KSAU-HS) em Al-Ahsa.

Palavras-chave: liderança transformacional, capital psicológico, engajamento dos funcionários, motivação dos funcionários.

1 INTRODUCTION

Transformational leadership is pivotal in cultivating high employee motivation (EM) levels within an organization (Hu et al., 2013). Through articulating an inspiring vision for the future, transformational leaders imbue their teams with a sense of purpose and direction, fostering a collective commitment to shared goals (Rolfe, 2011; Soomro et al., 2019). The charismatic qualities often associated with these leaders create an infectious positive atmosphere that motivates employees to exceed expectations. Transformational leaders instil a sense of ownership and accountability, driving intrinsic motivation by recognizing and appreciating individual strengths, providing intellectual stimulation, and empowering team members with responsibilities. Moreover, a commitment to continuous learning and development, coupled with positive feedback and
recognition, reinforces desired behaviours and encourages sustained high performance (Nguyen et al., 2023; Alhitmi et al., 2023). In times of challenge, the resilience and optimism displayed by transformational leaders motivate employees to persevere, contributing to a dynamic and motivated workforce that actively engages in the organization’s success (Kehr et al., 2023; Tu et al., 2023).

Psychological capital (PC) and employee engagement (EE) are integral factors in developing EM within an organization (Li et al., 2018; Setiawan and Negoro, 2023). PC encompasses four key components: hope, efficacy, resilience, and optimism. These elements collectively contribute to an individual’s positive psychological state, fostering a mindset conducive to motivation. When employees have a sense of hope and optimism, confidence in their abilities (efficacy) and the resilience to overcome challenges, they are more likely to be motivated to achieve personal and organizational goals. On the other hand, EE reflects individuals' commitment, enthusiasm, and involvement in their work. Engaged employees are emotionally connected to their roles, colleagues, and the organization's overall mission. The synergy between PC and EE is potent in motivating employees. A high PC level enhances an individual's resilience and efficacy, contributing to a positive engagement cycle. Engaged employees, in turn, are more likely to display positive PC, creating a reinforcing loop that boosts overall motivation. Therefore, organizations that actively foster PC and EE create an environment where individuals are motivated, resilient, optimistic, and committed to achieving their best, ultimately benefiting the organization (Singh et al., 2023; Abdullahi et al., 2023).

In the literature, the role of factors such as TLS, PC and EE is found to be massive and meaningful in achieving the EM among several contexts (Mufeed, 2018; Hayati et al., 2014; Azim et al., 2019; Rezeki et al., 2023; Atik et al., 2023). Moreover, the mediation contribution of PC and EE in between TLS and EM is also reinforced by the domain literature (Chinyamurindi and Tsvangirai, 2019; Gupta and Gomathi, 2017; Cattermole, 2018; Otyola et al., 2023; Ahmeti, 2023; Novita and Meilani, 2023; Hameed et al., 2023). However, in the context of Saudi higher education institutes, this investigation takes serious concentration. Thus, we proposed the questions:

**RQ1:** What is the role of TLS in developing PC, EE and EM among employees of KSAU-HS?

**RQ2:** How do PC and EE mediate the relationship between TLS and EM among employees of KSAU-HS?
The study seeks to elucidate the overarching role of TLS in shaping PC, EE, and EM among KSAU-HS employees, which sets the stage for understanding the broader impact of TLS on employee growth and well-being. Moreover, the outcomes delve deeper into the dynamics by exploring how PC and EE mediate the relationship between TLS and EM, uncovering the intricate causal pathways and mechanisms through which TLS influences EM, and providing practical implications for leadership strategies and organizational practices at KSAU-HS.

2 LITERATURE REVIEW

The relevant literature demonstrates a consistent and robust relationship between TLS, PC, EE and EM. PC, which includes qualities such as optimism, resilience, self-efficacy, and hope, plays a crucial role in this association, according to multiple research (Lei et al., 2020; Schuckert et al., 2018; Wang et al., 2018; Baig et al., 2021; Karimi et al., 2023). The research findings indicate that individuals who possess higher levels of PC demonstrate improved ability to innovate (Lei et al., 2020), engage in service innovation (Schuckert et al., 2018), exhibit creativity (Soomro et al., 2021), maintain job engagement (Li et al., 2018), and achieve superior performance (Gooty et al., 2009).

According to Lei et al. (2020), transformational leaders who possess inspiring and motivating attributes have substantially impacted employees’ PC, leading to the development of good attitudes and behaviours in the workplace.

In their study, Morkevičiūtė and Endriulaitienė (2020) examined the relationship between work motivation and TLS, focusing specifically on a group of female employees. Moreover, the studies conducted by Arman et al. (2019), Lee and Hidayat (2018), and Alqatawenh (2018) have provided evidence that TLS has a beneficial impact on both motivation and employee performance. In their study, Ekhsan and Setiawan (2021) discovered that motivation played a crucial role in mediating the favourable effect of TLS on employee performance. Similarly, Bastari et al. (2020) investigated the impact of TLS on job performance, emphasizing job motivation as a crucial mediating element. The scholars in the field, including Vinh et al. (2023), Muharam (2023), Al Amin et al. (2023), and Hasan (2023), have presented further evidence to substantiate the correlation between TLS, job satisfaction, work motivation, and employee performance in various sectors, such as tourism, finance, and organizational culture. Metwally et al. (2014) discovered that employee satisfaction, which arises from TLS, favours motivation. The research
conducted by Akeel and Indra (2013) shows that TLS positively influences the motivation of employees in the public sector. According to the study conducted by Ahmad et al. (2014) and Gopal and Chowdhury (2014), it has been determined that TLS has a positive and significant effect on EM in the telecommunication and oil industries, respectively. The empirical study conducted by Long et al. (2014) presents data supporting the positive impact of TLS on job satisfaction, finally demonstrating a good association with EM. In their study, Chua and Ayoko (2021) clearly explain self-determined motivation and establish a strong association between TLS and job engagement. In a survey conducted by Syaifuddin (2016), the impact of work stress and time loss syndrome (TLS) on work motivation was examined, with a focus on the effects on employee performance.

Furthermore, the literature consistently shows a clear and positive relationship between the TLS and EE across many industries and situations. The influence of TLS on employee performance is significant, with a specific focus on employee engagement as a contributing factor (Rezeki et al., 2023). In their study, Rezeki et al. (2023) investigated the correlation between employee performance, task load stress (TLS), and EE. Atik et al. (2023) emphasized the influence of TLS, EE, and work environment on employee performance within organizational contexts. They also identified work discipline as a mediating element. In their study, Bismala et al. (2023) examined TLS which affects organizational citizenship behaviour, with EE as a mediator. Milhem et al. (2019) propose that perceived TLS benefits EE, and the leader's emotional intelligence mediates this effect. Chin et al. (2019) and Mozammel and Haan (2016) have found that TLS benefits EE. The study conducted by Mansor et al. (2017) focused on examining the influence of TLS on the level of EE within the Generation Y demographic. There is a good correlation between TLS and EE in the mining industry, as stated by Bezuidenhout and Schultz (2013).

Otyola et al. (2023) and Ahmeti (2023) have found that EE is crucial in gaining a competitive advantage. This highlights the significance of effectively managing satisfaction and work motivation to attain organizational objectives. The literature also encompasses sector-specific research, such as the studies conducted by Novita and Meilani (2023) and Hameed et al. (2023), which indicate the adaptability of the motivation-engagement connection in various organizational settings. Riyanto et al. (2021) examine that EE mediates work motivation, job satisfaction, and employee performance. Chinyamurindi and Tsvangirai (2019) found that EM moderates workplace
surveillance and engagement. This highlights the significance of motivation in determining how employees react to organizational practices. The study by Shaheen and Farooqi (2014) in a Pakistani university explores the connection between EM, commitment, job involvement, and engagement. It highlights the intricate interaction between motivation and many aspects of engagement. Casey and Sieber (2016) found that sustainability and corporate social responsibility influence EE, demonstrating that broader organizational considerations can simultaneously boost motivation and engagement.

The research conducted by Viseu et al. (2016) provides a thorough examination and suggests that teacher motivation and work satisfaction are the factors that can be used to predict PC. The study conducted by Schuckert et al. (2018) examined how authentic and transformational leaders impact employees' PC and its connection to service innovation behaviour. Avey et al. (2010) contribute to the field by researching the relationship between positive PC and employee performance. Blasco-Giner et al. (2023) examine the phenomenon of employees' exploration within social networks. The study indicated a favourable correlation between PC, autonomous motivation, and inventive activity. Recent research, such as the study by Li et al. (2023), explores the impact of PC and intrinsic drive on employees' creative behaviour in the context of spiritual leadership. The study conducted by zpolat et al. (2022) yielded information regarding the correlation between instructors' PC, organizational commitment, and motivation levels.

As a result, the above literature demonstrates the effect of TLS on EE, PC, and EM in diverse contexts. However, the literature still does not see the mediating influence of PC on EE. Moreover, in the context of King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) in Al-Ahsa, the employees’ leadership style, motivation and PC are not explored in an integrated way. Therefore, based on these gaps and existing relationships in the literature, the researchers proposed the model (figure 1) for investigation among (KSAU-HS) Al-Ahsa employees.
3 HYPOTHESES DEVELOPMENT

3.1 TRANSFORMATIONAL LEADERSHIP STYLE (TLS), PSYCHOLOGICAL CAPITAL (PC), EMPLOYEE ENGAGEMENT (EE) AND EMPLOYEES’ MOTIVATION (EM)

The relevant literature demonstrates a consistent and robust relationship between TLS and PC (Lei et al., 2020; Schuckert et al., 2018; Soomro et al., 2021; Gooty et al., 2009). Transformational leaders, characterized by their inspirational and motivational qualities, have significantly influenced employees’ PC, fostering positive attitudes and behaviours within the workplace (Lei et al., 2020). PC, encompassing aspects like optimism, resilience, self-efficacy, and hope, acts as a critical mediator in this relationship across various studies (Lei et al., 2020; Schuckert et al., 2018; Wang et al., 2018; Baig et al., 2021; Karimi et al., 2023). The studies reveal that employees with higher PC exhibit enhanced innovation capability (Lei et al., 2020), service innovation behavior (Schuckert et al., 2018), creativity (Soomro et al., 2021), work engagement (Li et al., 2018), and performance (Gooty et al., 2009).

The association between TLS and EM is positive and significant in the organizational context. Several investigations explore the impact of TLS on employee performance, with motivation often identified as a critical mediating factor. Ekhsan and Setiawan (2021) found that motivation significantly mediated the positive effect of TLS on employee performance. Similarly, Bastari et al. (2020) investigated the impact of TLS on job performance, identifying job motivation as a crucial mediating variable. According to Metwally et al. (2014), employee satisfaction, as an outcome of TLS, positively influences motivation. The role of TLS in motivating public sector employees is found to
be positive (Akeel and Indra, 2013). According to Ahmad et al. (2014) and Gopal and Chowdhury (2014), the impact of TLS on EM in the telecommunication and oil industries is positive and significant in a respective way. The empirical assessment of Long et al. (2014) demonstrates the positive impact of TLS on job satisfaction, which leads to developing a positive relationship with EM. Chua and Ayoko (2021) shed light on self-determined motivation and suggest a positive connection with TLS and work engagement. Morkevičiūtė and Endriulaitienė (2020) studied work motivation through TLS, particularly in a sample of female employees. Furthermore, the research by Arman et al. (2019), Lee and Hidayat (2018), and Alqatawenh (2018) supported the positive influence of TLS on motivation and employee performance. In the same aspect, Syaifuddin (2016) examined the impact of work stress and TLS on work motivation, suggesting implications for employee performance. The scholars of the domain, like Vinh et al. (2023), Muharam (2023), Al Amin et al. (2023), and Hasan (2023), further reinforced the relationship between TLS, job satisfaction, work motivation, and employee performance in various industries, including the tourism sector, finance, and organizational culture contexts. The consistent findings across these studies underscore the integral role of TLS in fostering EM and, consequently, enhancing overall job performance and satisfaction.

Similarly, the literature also reveals a consistent and positive relationship between TLS and EE across various industries and contexts. Milhem et al. (2019) suggest the positive effect of TLS on EE, with the mediating effect of the leader's emotional intelligence. According to Chin et al. (2019) and Mozammel and Haan (2016), TLS positively affects EE. Mansor et al. (2017) specifically investigated the impact of TLS on EE among Generation Y. The mining industry has a positive association between TLS and EE (Bezuidenhout and Schultz, 2013). Tims et al. (2011) suggest that transformational leaders influence the daily work engagement of followers. Employing SEM analysis, Milhem et al. (2019) and Khoso et al. (2021) confirmed a positive effect of TLS on EE and job satisfaction. Likewise, the role of TLS is high towards employee performance, focusing on EE as a contributing factor (Rezeki et al., 2023). The same results are supported by Evelyn and Hazel (2015), Ariyani and Hidayati (2018), Mufeed (2018), Hayati et al. (2014), Azim et al. (2019), and Lai et al. (2020) showing the positive effects of TLS on EE. Moreover, Sultana and Jabeen (2018) investigated the relationship between transformational leadership, turnover intentions, and EE. Rezeki et al. (2023)
reappeared, focusing on employee performance and the role of TLS and EE. In organizational performance, Atik et al. (2023) emphasized the influence of TLS, EE, and work environment on employee performance, with work discipline as an intervening factor. Bismala et al. (2023) explored the impact of TLS on organizational citizenship behavior mediated by EE.

\[
\begin{align*}
H1: & \text{TLS significantly predicts PC among employees of KSAU-HS.} \\
H2: & \text{TLS significantly predicts EM among employees of KSAU-HS.} \\
H3: & \text{TLS significantly predicts EE among employees of KSAU-HS.}
\end{align*}
\]

### 3.2 EMPLOYEE ENGAGEMENT (EE) AND EMPLOYEES’ MOTIVATION (EM)

In the literature, EE has a robust role in developing EM. For instance, Engidaw (2021) explores the effect of motivation on EE in the public sector and highlights the significance of motivated employees in fostering higher levels of engagement. The relationship among EM, commitment, job involvement, and engagement in the context of a Pakistani university demonstrates the interplay between motivation and various dimensions of engagement (Shaheen and Farooqi, 2014). According to Casey and Sieber (2016), sustainability and corporate social responsibility have an impact on EE, illustrating that broader organizational concerns can enhance motivation and engagement simultaneously. Riyanto et al. (2021) contribute by investigating the mediating role of EE between work motivation, job satisfaction, and employee performance. The study of Evangeline and Ragavan (2016) focuses on organizational culture and claims that motivation acts as an instigator for EE. Role efficacy and its impact on EE and EM, adding a nuanced perspective to understanding how employees perceive their roles and how it influences their engagement (Sinha et al., 2014). According to Chinyamurindi and Tsvangirai (2019), EM has a moderating effect on workplace surveillance and engagement shows the role motivation plays in shaping employees' responses to organizational practices. Scholars like Gupta and Gomathi (2017) and Cattermole (2018) explore the potential of gamification in motivating and engaging employees, showcasing an innovative approach to enhancing motivation. In higher education, motivation and EE are associated with each other. According to Otyola et al. (2023) and Ahmeti (2023), EE encourages competitive advantage, which shows the importance of satisfaction and work motivation management in achieving organizational goals. The literature further expands to include sector-specific studies, such as those by Novita and Meilani (2023) and
Hameed et al. (2023), suggesting the versatility of the motivation-engagement relationship across different organizational contexts.

As a result, the literature demonstrates a positive association between EE and EM. However, these relationships further need to be confirmed by employees of KSAU-HS. Therefore, we proposed:

**H4: EE significantly predicts EM among employees of KSAU-HS.**

### 3.3 Psychological Capital (PC) and Employees' Motivation (EM)

The literature confirms the relationship between PC and EM in several arenas. The study of Viseu et al. (2016) offers a comprehensive review and proposes that teacher motivation and work satisfaction are the predictors of PC. The survey of Peterson et al. (2011) establishes the positive impact of PC on employee performance. Çavuş and Gökçen (2015) underline the connection of PC with motivation. In the study of Schuckert et al. (2018), the influence of authentic and transformational leaders on employees' PC linked it to service innovation behaviour. Similarly, Yu et al. (2019) delve into the role of PC in fostering employee creativity and the positive influence of this psychological resource on individual-level outcomes. The relationship between PC, work engagement, and organizational commitment among call centre employees in South Africa is positive and significant (Simons and Buitendach, 2013). Avey et al. (2010) contribute through field studies examining the association between positive PC and employee performance. Likewise, Newman et al. (2014) offer a review and synthesis of the PC literature, consolidating knowledge on this construct and its relevance in organizational behaviour. Siu et al. (2014) confirm the role of PC among university students and its relationships with study engagement and intrinsic motivation. Blasco-Giner et al. (2023) examine the exploration of employees in social networks. The study's outcomes suggested a positive link between PC, autonomous motivation, and innovative behaviour. Recent studies such as Li et al. (2023) investigate the role of PC and intrinsic motivation in inspiring employees' creative behaviour under spiritual leadership. The survey by–zpolat et al. (2022) also provided evidence about the relationship between teachers' PC, organizational commitment, and motivation levels. Scholars like Rodríguez-Cifuentes et al. (2020), Luo et al. (2022), Schuckert et al. (2018) and Su and Hahn (2023) demonstrated the mediating effect of PC in developing a connection between motivational factors of leadership and EE.
In conclusion, the literature consistently highlights the positive relationship between PC and EM across diverse organizational contexts, shedding light on PC influences employee attitudes, behaviours, and organizational outcomes. However, these connections need to be confirmed among KSAU-HS employees. Hence, we proposed:

**H5: PC significantly predicts EM among employees of KSAU-HS.**

3.4 PSYCHOLOGICAL CAPITAL (PC) AND EMPLOYEE ENGAGEMENT (EM) AS MEDIATORS

The literature recognizes the role of factors such as PC and EE as mediators. Transformational leadership, characterized by inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence, has been consistently linked to enhanced EM (Wardani and Anwar, 2019; Li, 2019). Building on these findings, the proposed research posits that PC, a positive psychological state encompassing hope, efficacy, resilience, and optimism, may mediate this relationship (Ngwenya and Pelser, 2020; Paek et al., 2015). Similarly, EE, defined as a positive, fulfilling work-related state of mind, is another potential mediator (Xu et al., 2017). By synthesizing insights from studies on hospitality employees (Paek et al., 2015), knowledge workers (Li, 2019), and various industries in Zimbabwe (Ngwenya and Pelser, 2020), this research seeks to contribute to the understanding of the underlying mechanisms through which TLS influences motivation in diverse organizational settings. In addition, Nguyen (2020) explored the mediating role of psychological empowerment between TLS and EE. Determining motivation and performance shows the mediating factors of job satisfaction, EE, and leadership (Susanto et al., 2023). Siswanto et al. (2021) explore the mediating role of EE and motivation in linking rewards to employee performance. The mediating role of PC in the relationship between decent work and work motivation is also confirmed by Ferraro et al. (2018). Last but not least, the effect of human resources management practices and TLS on turnover intention, mediated by work engagement, among state-owned bank employees (Nawardi and Berliyanti, 2023).

Consequently, the literature offers the consistent mediating role of PC and EE in developing the relationship between TLS and EM among the employees of diverse organizations. However, these mediating roles are further needed for confirmation among employees of KSAU-HS. Thus:
H6: PC mediates the relationship between TLS and EM among employees of KSAU-HS.

H7: EE mediates the relationship between TLS and EM among employees of KSAU-HS.

4 METHODS

4.1 SURVEY STRATEGY AND RESPONDENTS

Using quantitative tools to address the proposed issue is justified for multiple reasons. These methodologies provide a means to measure objectively, allowing for accurate and standardized assessment of the subject matter (Hancock et al., 2010). Statistical analysis of numerical data enables researchers to detect patterns and relationships, thus strengthening the reliability of findings and facilitating their applicability to a broader population. In addition, quantitative methods are recognized for their efficacy and cost-efficiency, making them especially appropriate for research projects with limited resources and time constraints. The capacity to compare data across different groups or variables is a significant benefit, as it helps in gaining a thorough grasp of the relationships being studied (Long and Nelson, 2013). Furthermore, the impartiality and ability to be reproduced inherent in quantitative research enhance the dependability of findings. Quantitative approaches are essential for accurately measuring and evaluating the effects of interventions or treatments, as they offer numerical precision (Gallucci et al., 2023).

4.2 RESPONDENTS OF THE STUDY AND SAMPLE SIZE

The study participants consist of personnel from King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) located in Al-Ahsa. The selection of respondents from KSAU-HS in Al-Ahsa for a study on TLS and EM is justified by the unique characteristics of the healthcare and academic environment. This setting ensures the relevance and applicability of the research findings to the specific challenges and motivators inherent in the health sciences field. The target population, consisting of specialized and knowledgeable individuals, allows for an in-depth exploration of how transformational leadership influences motivation in a context where both leadership and motivation play critical roles (Al-Moamary et al., 2016). The homogeneity in organizational culture within the university facilitates a focused analysis, and the direct
relevance to KSAU-HS enhances the practical applicability of the study's results. Finally, the researchers used 242 valid samples to infer the outcomes.

4.3 RESPONDENTS OF THE STUDY AND SAMPLE SIZE

The researchers applied a survey questionnaire to get responses from respondents. The researchers used convenience sampling to target the respondents. Before proceeding with the surveys, we took care of the respondents' ethical considerations by concentrating on a single institution, respecting privacy and consent. Moreover, the support of the university administration and resource efficiency further strengthen the strategic choice of respondents, ultimately contributing to a more comprehensive understanding of the dynamics between TLS and EM in this specific organizational context.

4.4 MEASURES

The researchers applied a five-point Likert scale ranging from strongly agree to strongly disagree. More specifically, TLS was measured on five items, PC on eight items, EE on twelve items, and EM on seven items. These items are adopted from literature like Podsakoff et al. (1996), Susanto et al. (2023), Siswanto et al. (2021), Ferraro et al. (2018), Nawardi and Berliyanti (2023), Ragavan (2016), Sinha et al. (2014), Chinyamurindi and Tsvangirai (2019), Gupta and Gomathi (2017), Cattermole (2018) and Otyola et al. (2023).

5 ANALYSIS AND RESULTS
5.1 MEASUREMENT MODEL

Loadings, AVE, CR and alpha (α): We evaluated three critical elements within the measurement model: loadings, average variance extracted (AVE), and composite reliability (CR). As indicated in Table 1, the loadings values are more significant than 0.708, which is considered excellent. Similarly, the AVE values are above the allowed threshold of 0.5. We observed that the values of CR, which were greater than 0.7, exhibited satisfactory scores (Hair et al., 2020). In addition, it is worth noting that Cronbach's alpha for all the constructs has achieved favourable ratings (> 0.700) (Hair et al., 2020).
Table 1. Measurement model assessment

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Loadings</th>
<th>AVE</th>
<th>CR</th>
<th>A</th>
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<tr>
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<td>TLS5</td>
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<tr>
<td>Psychological capital</td>
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<tr>
<td></td>
<td>EE6</td>
<td>0.810</td>
<td></td>
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<tr>
<td></td>
<td>EE7</td>
<td>0.800</td>
<td></td>
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<td></td>
<td>EE8</td>
<td>0.792</td>
<td></td>
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<tr>
<td></td>
<td>EE9</td>
<td>0.772</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE10</td>
<td>0.721</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee motivation</td>
<td>EM1</td>
<td>0.872</td>
<td></td>
<td></td>
<td>0.893</td>
</tr>
<tr>
<td>[EM]</td>
<td>EM2</td>
<td>0.866</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EM3</td>
<td>0.837</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EM4</td>
<td>0.822</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>EM5</td>
<td>0.812</td>
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<td>EM6</td>
<td>0.799</td>
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<td></td>
<td>EM7</td>
<td>0.763</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Source: Estimated by the researchers

**Discriminant validity:** In addition, the researchers thoroughly evaluated discriminant validity (DV) to verify the uniqueness of notions according to recognized empirical criteria (Hair et al., 2019). We confirmed the existence of discriminant validity in the measurement model by applying Fornell and Larcker's (1981) criteria. According to Hair et al. (2019), the square root of Average Variance Extracted (AVE) values is an important indicator that shows substantial connections between constructs and their associated indicators, confirming appropriate divergence. Furthermore, the analysis uncovered that the correlation between external components remained lower than the required criterion of 0.85, as suggested by Hair et al. (2019). This discovery indicates that the constructs maintain a satisfactory level of autonomy. The discriminant validity of all model constructs is satisfactorily established, as detailed in Table 2.

Table 2. Discriminant validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>Transformational leadership style</th>
<th>Psychological capital</th>
<th>Employee engagement</th>
<th>Employee motivation</th>
</tr>
</thead>
</table>

Discriminant validity: In addition, the researchers thoroughly evaluated discriminant validity (DV) to verify the uniqueness of notions according to recognized empirical criteria (Hair et al., 2019). We confirmed the existence of discriminant validity in the measurement model by applying Fornell and Larcker's (1981) criteria. According to Hair et al. (2019), the square root of Average Variance Extracted (AVE) values is an important indicator that shows substantial connections between constructs and their associated indicators, confirming appropriate divergence. Furthermore, the analysis uncovered that the correlation between external components remained lower than the required criterion of 0.85, as suggested by Hair et al. (2019). This discovery indicates that the constructs maintain a satisfactory level of autonomy. The discriminant validity of all model constructs is satisfactorily established, as detailed in Table 2.
5.2 STRUCTURAL MODEL

The researchers confirmed the hypotheses applying path analysis through Analysis of Moment Structures (AMOS), where showed a positive effect of transformational leadership style on psychological capital and employee motivation \([H1=\text{TLS} \rightarrow \text{PC} = \text{Est}: 0.388; \text{CR} = 2.917; p < 0.01]\) \((H2=\text{TLS} \rightarrow \text{EM} = \text{Est}: 0.366; \text{CR} = 3.075; p < 0.01)\). As a result, H1 and H2 are supported. On the other hand, the transformational leadership style has the negative effect on employee engagement \((H3=\text{TLS} \rightarrow \text{EE} = \text{Est}: -0.133; \text{CR} = 0.886; p > 0.01)\), which rejected H3. Moreover, effect of psychological capital and employee engagement on employee motivation is positive and significant \((H4=\text{PC} \rightarrow \text{EM} = \text{Est}: 0.378; \text{CR} = 4.344; p < 0.01)\) \((H5=\text{EE} \rightarrow \text{EM} = \text{Est}: 0.270; \text{CR} = 6.585; p < 0.01)\). As a result, H4 and H5 are also supported (Table 3 and Figure 2).

<table>
<thead>
<tr>
<th>Hypothesized paths</th>
<th>Estimate</th>
<th>SE</th>
<th>CR</th>
<th>p-values</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1. TLS → PC</td>
<td>0.388</td>
<td>0.133</td>
<td>2.917</td>
<td>0.001</td>
<td>Yes</td>
</tr>
<tr>
<td>H2. TLS → EM</td>
<td>0.366</td>
<td>0.119</td>
<td>3.075</td>
<td>0.003</td>
<td>Yes</td>
</tr>
<tr>
<td>H3. TLS → EE</td>
<td>-0.133</td>
<td>-0.150</td>
<td>0.886</td>
<td>0.768</td>
<td>No</td>
</tr>
<tr>
<td>H4. PC → EM</td>
<td>0.378</td>
<td>0.087</td>
<td>4.344</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H5. EE → EM</td>
<td>0.270</td>
<td>0.041</td>
<td>6.585</td>
<td>0.000</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note(s): TLS=transformational leadership; PC=psychological capital; EE=employee engagement; EM=employee motivation; SE=standard error; CR=critical ratio

With regard to indirect paths, the analysis confirmed a mediating effect of psychological capital and employee engagement between transformational leadership and employee motivation \((H6=\text{TLS} \rightarrow \text{PC} \rightarrow \text{EM} = \text{Est}: 0.330; \text{CR} = 2.773; p < 0.01)\) \((H7=\text{TLS} \rightarrow \text{EE} \rightarrow \text{EM} = \text{Est}: 0.235; \text{CR} = 5.108; p < 0.01)\). As a result, H6 and H7 are accepted (Table 4 and Figure 2).

<table>
<thead>
<tr>
<th>Hypothesized paths</th>
<th>Estimate</th>
<th>SE</th>
<th>CR</th>
<th>p-values</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H6. TLS→PC→EM</td>
<td>0.330</td>
<td>0.119</td>
<td>2.773</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H7. TLS→EE→EM</td>
<td>0.235</td>
<td>0.046</td>
<td>5.108</td>
<td>0.000</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note(s): TLS=transformational leadership; PC=psychological capital; EE=employee engagement; EM=employee motivation; SE=standard error; CR=critical ratio
6 DISCUSSION AND CONCLUSION

The study proposed to investigate the effect of TLS on EM directly and also contribution of PC and EE among employees of King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) in Al-Ahsa. The study found a positive effect of TLS on PC, EM and EE. These results are in line with various scholars like Lei et al. (2020), Schuckert et al. (2018), Wang et al. (2018), Baig et al. (2021), Karimi et al. (2023), Soomro et al. (2021), Gooty et al. (2009), Ekhsan and Setiawan (2021), Vinh et al. (2023), Muharam (2023), Al Amin et al. (2023), and Hasan (2023),  Milhem et al. (2019), Rezeki et al. (2023), Rezeki et al. (2023), Atik et al. (2023) and Bismala et al. (2023). These results suggest its relevance to organizational success and the unique dynamics of the healthcare and academic environment. The TLS influences motivation, which is
essential for creating a work environment that fosters productivity and employee well-being in a sector where educational and healthcare practices converge. Exploring PC’s role adds depth to the analysis, acknowledging the importance of optimism, self-efficacy, hope, and resilience in influencing motivation. Furthermore, by considering EE as a mediator, the study aims to unravel how leadership style impacts motivation, providing actionable insights for tailored interventions and strategic decision-making. Ultimately, the research promotes a positive organizational culture within KSAU-HS, offering valuable implications for leadership practices and EM in the distinctive context of health sciences education and healthcare.

Moreover, the results confirm a positive effect of PC on EM, which are supported by the literature like Engidaw (2021) Shaheen and Farooqi (2014), Casey and Sieber (2016), Riyanto et al. (2021), Chinyamurindi and Tsvangirai (2019), Gupta and Gomathi (2017), Otyola et al. (2023) and Ahmeti (2023). These results reflect that the intricate interplay between psychological well-being and work-related drive. This outcome suggests that employees with higher levels of PC, encompassing attributes like self-efficacy, optimism, resilience, and hope, are more likely to exhibit heightened motivation in the workplace. Enhanced self-efficacy contributes to a belief in one's capabilities, fostering a proactive and motivated approach to tasks. Optimism cultivates a positive outlook, encouraging employees to approach challenges enthusiastically rather than trepidation. Resilience equips individuals to navigate setbacks maintaining motivation in the face of adversity. Besides, the hope component implies a forward-looking attitude, with employees motivated by a clear vision of future success. This positive psychological state influences individual motivation and aligns employees more closely with organizational values and goals. Overall, the positive impact of PC on EM underscores the importance of fostering a resilient and optimistic mindset in the workforce for sustained engagement and performance.

Furthermore, the findings also confirmed a positive effect of PC and EM, which is supported by domain studies (Çavuş and Gökçen, 2015; Schuckert et al., 2018; Simons and Buitendach, 2013; Siu et al., 2014; Blasco-Giner et al., 2023). These results reflect that higher self-efficacy, optimism, resilience, and hope within the PC framework create a conducive atmosphere for motivated behaviour. Employees with a strong belief in their abilities (self-efficacy) approach tasks confidently, while optimism cultivates a positive outlook, instigating a proactive and motivated approach to challenges. Resilience is a
buffer against demotivation, enabling individuals to rebound from setbacks and maintain consistent motivation. Moreover, the forward-looking attitude of hope and the positive psychological well-being fostered by PC contribute to an environment where employees feel content and supported, enhancing their overall motivation. The bidirectional relationship between PC and EM suggests a reinforcing cycle, emphasizing the critical role of leadership practices and organizational support in cultivating and sustaining these positive psychological resources. In essence, the positive effect of PC on EM speaks to the importance of fostering a resilient, optimistic, and purpose-driven mindset to promote sustained engagement and performance in the workplace.

Finally, the factors such as PC and EE play their mediating role in developing a relationship between TLS and EM. These results are also accorded several scholars like Ngwenya and Pelser (2020), Paek et al. (2015), Nguyen (2020), Susanto et al. (2023), Siswanto et al. (2021) and Nawardi and Berliyanti (2023) who confirmed the same results in diverse contexts. The outcomes of the study reflect that through inspirational communication and visionary guidance, transformational leaders instil hope, optimism, and a sense of purpose among employees, contributing to the development of PC. This positive psychological state is a precursor to increased motivation. Moreover, transformational leadership's creation of a positive work environment, characterized by trust and collaboration, enhances psychological well-being, fostering motivation. The alignment of values and goals emphasized by transformational leaders strengthens employees' commitment, positively influencing PC and EM. EE, driven by transformational leadership's charismatic and supportive qualities, serves as a dynamic pathway through which the positive effects of leadership practices are channeled towards heightened motivation. Moreover, the resilience instilled by transformational leaders contributes to PC, enabling employees to maintain motivation in challenging situations. Overall, these mediating roles highlight the intricate and interactive nature of the relationships, emphasizing the transformative influence of leadership on psychological resources, engagement, and, ultimately, motivation in the workplace.

In conclusion, the results revealed a favourable influence of TLS on PC and EM. Conversely, the effect of TLS on EE was negative. Furthermore, both PC and EE emerged as positive predictors of EM. Regarding the mediation analysis, the study established a positive role of PC and EE in shaping the connection between TLS and EM, underscoring their mediating impact on the relationship dynamics within the organizational context.
7 IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

The theoretical implications of the study's findings, affirming the positive impact of TLS on PC and EM, along with the negative influence on EE, contribute to the evolution of leadership theories. The study refines the understanding of leadership-EE dynamics, challenging conventional assumptions and emphasizing the nuanced effects of TLS on different facets of employee experience. Furthermore, identifying PC and EE as positive mediators in the TLS-EM relationship validates theoretical propositions regarding the underlying mechanisms through which leadership styles shape employee outcomes. Organizations can leverage these insights for leadership training, strategic communication, and employee well-being initiatives. Leaders can refine their approaches, emphasizing the positive aspects of TLS that foster PC and EM while addressing potential EE-related challenges. This holistic understanding guides organizations in fostering an environment that optimally engages and motivates employees, enhancing overall organizational performance.

While the study provides valuable insights into the relationships among TLS, PC, EE, and EM, it is essential to acknowledge certain limitations inherent in the research design. The study relies on cross-sectional data gathered through a survey questionnaire, limiting the ability to establish causal relationships or capture changes over time. Besides, the focus on a select set of variables, namely TLS, PC, EE, and EM, offers a specific lens into leadership dynamics but may overlook other potentially influential factors. The quantitative nature of the study, while providing statistical rigor, may not fully capture the depth and nuances of the participants' experiences. Moreover, the study's scope is constrained to 242 samples, which, while providing valuable insights, may limit the generalizability of the findings to broader populations. Acknowledging these limitations underscores the need for future research to employ diverse methodologies, consider a broader spectrum of variables, and expand sample sizes for a more comprehensive understanding of the complex interplay between leadership styles and employee outcomes.

Future research should consider adopting longitudinal research designs to unravel the temporal dynamics of relationships among TLS, PC, EE, and EM. Combining quantitative methodologies with qualitative approaches, such as interviews or focus groups, would provide a more nuanced exploration of employees' perceptions and experiences. Expanding the set of variables under investigation, such as organizational
culture and individual differences, can enhance the comprehensiveness of future studies. Contextual analyses across diverse organizational settings and industries can shed light on the generalizability of findings. At the same time, a deeper examination of the specific mechanisms through which PC and EE mediate the TLS-EM relationship would offer valuable insights. Employee segmentation based on individual differences and conducting intervention studies to assess the practical impact of leadership development programs are also promising directions for future research.

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