

# LEADERS ARE PROVIDERS: THE ROLE OF LEADERSHIP AS AN ANTECEDENT TO PSYCHOLOGICAL SAFETY IN THE JOB DEMANDS–RESOURCES MODEL

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**ABSTRACT** Starting from the Job Demands –Resources framework, this study proposes that effective leadership is related to psychological safety, which is associated with higher work engagement, which in turn is associated with better work performance.

In a cross-sectional survey of 287 employees, participants rated their supervisors' leadership (transformational leadership and a situational judgment test of competency in motivating subordinates), as well as their own psychological safety, work engagement, task performance, and organizational citizenship behaviour (OCB). Across all models, leadership was indirectly associated with task performance and OCB in a serial mediation model via psychological safety as the first mediator and work engagement as the second mediator. Although the cross-sectional design limits causal inference, the findings contribute to both leadership theory and practice by identifying psychological safety as a job resource, and more importantly, by clarifying leadership's role as an antecedent that helps create the conditions for engagement rather than merely functioning as another resource within the model.

**KEYWORDS:** *Leadership, Psychological safety, Work engagement, Job Demands–Resources (JD-R) model*

## 1. INTRODUCTION

The Job Demands –Resources (JD-R) model proposes that job resources, such as constructive feedback and autonomy, promote work engagement and, through it, enhance performance and well-being (Demerouti et al., 2001). Despite growing awareness of the importance of employee engagement, global data show that only 21% of employees worldwide are engaged in their work (Gallup, 2025). This low engagement rate suggests that organizations still struggle to create job resources

that sustain motivation and performance. Leadership may be particularly important in this process. While leadership in the JD-R model has often been treated as just another resource, leaders may play a more fundamental role in shaping the conditions under which job resources emerge. Understanding this role has important implications for leadership development and HR practices.

Job resources include conditions such as constructive feedback, autonomy, and social support. When available, job resources are associated with

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higher levels of work engagement, which in turn are linked to positive organizational and personal outcomes, such as higher work performance and employee well-being (Demerouti et al., 2001). Work engagement represents a motivational state characterized by dedication, enthusiasm, and high energy at work, typically resulting in greater commitment, creativity, and productivity (Thanacoody et al., 2014; Bakker et al., 2020; Neuber et al., 2022). Therefore, it is important to ensure that employees have access to sufficient resources that enhance work engagement, leading to higher performance and well-being. Many types of job resources have been identified and studied within the JD-R framework. For example, a meta-analysis by Mazzetti et al. (2021) grouped job resources into social resources (e.g., coworker support), work resources (e.g., job control), development resources (e.g., learning opportunities), leadership, and personal resources (e.g., optimism).

One especially valuable resource is psychological safety - a belief that it is safe to take interpersonal risks in the workplace (Edmondson, 1999). In psychologically safe environments, employees feel it is safe to speak up when they have different ideas or concerns, without fear of embarrassment. Over the past 25 years, psychological safety has emerged as a central construct in team learning, organizational learning, and trust (Edmondson & Lei, 2014). Psychological safety fosters cognitive and emotional availability at work by reducing fear-based withdrawal and enabling proactive behaviours (Kahn, 1990; Edmondson & Lei, 2014). This allows employees to fully invest in their roles, thereby facilitating work engagement. Despite its importance, psychological safety has rarely been included as a job resource within the JD-R framework.

Even though identifying relevant resources is important, the JD-R literature has not yet clearly resolved whether leadership should be understood as a resource, a moderator, or an antecedent of resources. Many prior studies have treated leadership as a type of job resource (as is the case in the previously mentioned meta-analysis by Mazzetti et al. (2021)). However, Schaufeli (2015) argued that leadership is a construct distinct from job resources, "going beyond a mere resource" (pp. 447). Furthermore, in their review of leadership in the JD-R model, Tummers and Bakker (2021) concluded that leadership should be conceptualized either as an antecedent to job resources or a moderator between resources and work engagement. In other words, effective leadership may enhance the impact of existing resources on engagement (moderation) or create resources in the first place (antecedent). Both models can be valid in different settings and depending on the research question (Tummers & Bakker, 2021). However, if leadership is conceptualized only as

a job resource or only as a moderator of existing resources, researchers and practitioners may overlook the pathways through which leaders actually affect employee outcomes.

In the specific context of psychological safety, leadership is likely to function as an antecedent of this resource because leaders are largely responsible for setting the tone of the work environment and establishing a climate where employees feel safe voicing issues or taking risks. For instance, inclusive and supportive leadership styles build interpersonal trust, which in turn fosters psychological safety among team members (Edmondson & Lei, 2014). Within the JD-R framework, then, psychological safety can be seen as a social resource enabled by effective leadership, and this resource should in turn, increase work engagement, which ultimately improves performance.

This study investigates whether leadership is indirectly related to job performance through psychological safety and work engagement. In doing so, we address two conceptual gaps: (a) the lack of integration of psychological safety as a job resource in the JD-R model, and (b) the inconsistent placement of leadership as either a resource, moderator, or antecedent to resources. By positioning leadership as an antecedent to psychological safety, this study highlights that leadership is more than merely another resource within the JD-R model. Rather, through their actions, leaders help create a psychologically safe environment that serves as a mechanism for engagement and, in turn, performance. This perspective also has important practical implications, as it may help organizations implement more effective interventions in leadership development.

## 2. LITERATURE REVIEW

### 2.1. Psychological safety as a job resource

The JD-R model has received strong empirical support across numerous meta-analyses and longitudinal studies (e.g., Christian et al., 2011; Taris & Schaufeli, 2015; Lesener et al., 2019). In particular, meta-analytical evidence from longitudinal research shows that job resources measured at an earlier time point predict higher levels of work engagement over time (Lesener et al., 2019). Across studies, a broad set of resources, including autonomy, coworker and supervisory support, task significance, performance feedback, role clarity, and opportunities for learning and development, has been linked to higher work engagement (Christian et al., 2011; Halbesleben, 2010; Lesener et al., 2020; Galanakis & Tsitouri, 2022).

The JD-R model proposes that all job charac-

teristics can be categorized as either a resource or a demand (Galanakis & Tsitouri, 2022). One such resource that can be incorporated into the JD-R model is psychological safety – employees' belief that the work environment is safe for interpersonal risk-taking (Edmondson & Lei, 2014). Despite its importance in team learning and organizational behaviour research, psychological safety has received relatively little attention within the JD-R framework. Psychological safety aligns with the definition of a job resource, as it facilitates goal achievement and personal growth (Bakker & Demerouti, 2007), particularly by enabling voice, learning, and innovation. Treating psychological safety as a job resource can more clearly demonstrate its association with work engagement. Kahn (1990) notes that psychological safety is a necessary condition for developing engagement at work because employees in psychologically safe environments feel free to try new approaches and voice their opinions. Meta-analytical data support this, as psychological safety has shown a moderately strong positive correlation with work engagement (Frazier et al., 2017).

## 2.2. Leadership in the JD-R model

Leaders are important for subordinates' performance, motivation, and well-being. Classical meta-analyses in the field showed that the most prevalent leadership styles – initiating structure, consideration, and transformational leadership – have strong positive relationships with a broad range of criteria, such as job satisfaction, motivation, and group or organizational performance (Judge et al., 2004; Judge & Piccolo, 2004; DeRue et al., 2011). Beyond performance, effective leadership is associated with fewer sickness absences and even lower cardiovascular risk over time (Kuoppala et al., 2008; Nyberg et al., 2009).

Furthermore, leaders play an especially important role in creating psychologically safe environments. A recent review found that inclusive and transformational leadership styles are important factors for promoting psychological safety in healthcare and public safety professions (Ip et al., 2025). Meta-analytical data show that high-quality leader–member relationships tend to have stronger associations with psychological safety than individual dispositions and only slightly weaker associations than work design characteristics (Frazier et al., 2017).

Given its positive impact on both employee performance and well-being, it is not surprising that many studies have incorporated leadership as a part of the JD-R model, although it has been conceptualized in multiple ways. Many studies treat leadership as a job resource, e.g. supervisory support is consistently associated with higher engagement and lower burnout

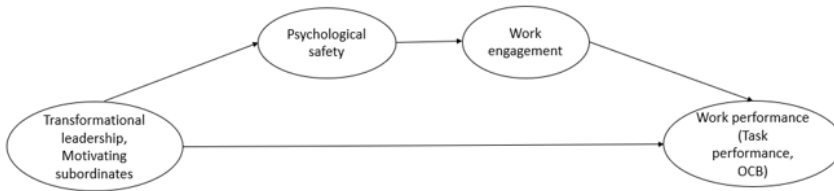
(Mazzetti et al., 2021). In other cases, leadership has been conceptualized as a moderator that enhances the effect of existing resources. For example, Caniëls et al. (2018) found that transformational leadership enhanced the relationship between proactive personality and work engagement for employees who had a growth mindset. Another line of research positions leadership as an antecedent – a factor that shapes or generates job resources and demands. For example, Schaufeli (2015) found that engaging leadership was associated with positive work outcomes via different job resources and work engagement.

In their review on leadership within the JD-R model, Tummers and Bakker (2021) agree that leadership should be seen as separate from work resources and suggest that, depending on the situation, leadership can directly impact job resources/demands, or moderate the relationship between resources/demands and work engagement/burnout.

In the case of psychological safety, we propose that leadership is best conceptualized as an antecedent to this resource. Psychological safety is grounded in interpersonal cues about what is considered safe or risky to say and do in a given work context (Edmondson & Lei, 2014). Leaders are often the primary source of such cues, as they set the tone for interpersonal norms when they assign tasks, encourage participation, and model respectful interaction. These behaviours create a psychologically safe environment in which employees feel free to speak up, share ideas, take risks, and make mistakes without fear of negative consequences. A recent review by Edmondson and Bransby (2023) supports this placement, showing that most empirical studies model psychological safety as a mediator between leadership behaviours and various work outcomes. Once present, psychological safety enables deeper engagement at work. Work engagement, in turn, provides the proximal motivational mechanism through which job resources translate into both task performance and organizational citizenship behaviour (Christian et al., 2011; Aboramadan and Dahleez, 2020).

Therefore, we propose the following hypothesis (summarized in Figure 1):

*Leadership (transformational leadership and competency in motivating subordinates) is indirectly associated with job performance (task performance and organizational citizenship behaviour) via psychological safety and work engagement.*



**FIGURE 1.** Conceptual diagram of the hypothesized model

### 3. METHODS

#### 3.1. Leadership operationalization

A review by Tummers and Bakker (2021) found that most of the JD-R studies a) conceptualized leadership styles either as transformational leadership or leader-member exchange; b) measured these leadership styles with self-report questionnaires. On the one hand, given that these conceptualizations and measures are the most prevalent in the literature, the present research will adopt the concept of transformational leadership. Transformational leaders positively impact the performance and well-being of their subordinates by exerting idealized influence on their subordinates, inspiring them, intellectually stimulating them, and showing concern for their needs (Bass & Avolio, 1994; DeRue et al., 2011).

On the other hand, Tummers and Bakker (2021) advocate for alternative approaches to conceptualizing and measuring leadership, given the criticisms of the theoretical concept and the challenges associated with measuring transformational leadership through questionnaires (Van Knippenberg and Sitkin, 2013). One example of a different conceptualization of leadership can be found in Schaufeli's (2015) paper, which used self-determination theory (SDT) as a theoretical framework to measure the concept of engaging leadership. Engaging leaders attend to the three universal psychological needs of their subordinates – autonomy, competence, and relatedness. This concept is similar to transformational leadership, but is more theoretically "pure", since it has firm roots in the SDT, which is a robust and universal theory of human motivation. However, the drawback is that engaging leadership is primarily measured via a questionnaire, and as such, it does not consider the work context or situations.

To combat this issue, this study will, in addition to assessing transformational leadership, evaluate leadership behaviour using a situational judgment test (SJT). Unlike classical leadership questionnaires, SJTs are low-fidelity work simulations designed to capture

the procedural knowledge of various work domains (Lievens & Motowidlo, 2016). SJTs present leaders with different job scenarios and ask them to choose the best solution from several alternatives (Table 1). Measuring leadership behaviour with the SJTs considers the situation in which leadership occurs, thereby overcoming some of the problems associated with Likert-type questionnaires. Specifically, this study will focus on the leadership competency of motivating subordinates, using the SJT by Palanović et al. (2023). Leaders with high scores on the SJT a) effectively communicate an attractive vision of the organization that includes an explanation of the meaning and purpose of work tasks; b) set challenging goals that encourage subordinates to invest effort and solve business problems in a dedicated and creative way.

#### 3.2. Participants and procedure

As part of their introductory course to organizational psychology, undergraduate psychology students recruited a convenience sample of 287 employees (56.8% female) with an average work experience of 15.97 years ( $SD = 12.34$ ). Of the other participants, 29.3% held a high school diploma; 13.2% had a bachelor's degree; 46.7% had a graduate degree; and 9.8% had completed postgraduate studies. Regarding employment sector, 51.6% of participants work in the private sector; 6.6% work in a company that is partly in private ownership and partly in state ownership; 20.9% work in a state-owned company; and 18.5% work in the public sector. The data was collected in an online survey. Participants first rated their immediate supervisor on 3 SJT tasks intended to measure the competency of motivating subordinates. Next, they rated their supervisor's transformational leadership and reported their own levels of psychological safety, work engagement, task performance, and organizational citizenship behaviour.

**TABLE 1** A sample item from the SJT for motivating subordinates

You lead a department in a mobile services company and your task is to expand the number of customers. Therefore, you have designed a project in which your employees will have to invest extra effort in order to attract as many users as possible. However, you have noticed that the employees are not happy with that decision and are not working hard on their new tasks. What should you do?

- a) Tell the employees that this is a strategic organizational project. Emphasize to them that a successfully completed project will most likely result in financial rewards and paid overtime.
- b) You will divide the project into smaller parts and set clear goals. At the end of each day, together with the employees, you will review the progress and see how far you are from the final goal.
- c) You will encourage the employees and explain to them how important their work on this project is for the success of the entire company. You will make sure that they develop new skills by working on the project and make an extra effort so that they see that you care about the success of the project.

**NOTE:** Leaders choose between three options, which reflect different levels of their procedural knowledge in this competency. Leaders who score low show that they only conceptualize motivation as giving subordinates extrinsic rewards, while leaders who score high show that they understand the importance of clear goals, autonomy, and engagement in motivating subordinates.

## 4. INSTRUMENTS

**Transformational leadership reports.** Subordinates reported their immediate supervisor's transformational leadership on the Global Transformational Leadership Scale (GTL) (Carless et al. 2000) on a scale from 1 (*rarely or never*) to 5 (*very frequently if not always*). GTL consists of seven items, e.g., "My supervisor communicates a clear and positive vision of the future", "My supervisor gives encouragement and recognition to staff".

### 4.1. SJT for the competency of motivating subordinates.

We used three tasks from the SJT developed by Author et al. (2023). Each task presented the participants with a description of a situation and had three response alternatives (Table 1). Each of the three responses presented three behavioural options reflecting lower to higher competency in motivating subordinates (1 being the lowest score, 3 being the highest score). SJTs can be adapted to serve as subordinate ratings of leadership behaviour. In this case, the subordinates read the description of a work situation and answer what their supervisor would most likely do in that situation. For instance, Peus et al. (2013) successfully used this approach in validating the Full Range Leadership SJT. In this research, participants were instructed to choose the behaviour/response alternative that best described the action their immediate supervisor would most likely take. Subordinates select one option per

scenario—the response that best reflects how their immediate supervisor would behave.

**Psychological safety.** Subordinates completed seven items from the Psychological Safety at Work Scale (Edmondson, 1999). An example item is "It is safe to take a risk on this team". Participants responded on a scale from 1 (completely false) to 7 (completely accurate).

**Work engagement.** We used three items from the Job Engagement Scale (short form) (Houle et al., 2022). An example item is "I try my hardest to perform well on my job". Participants answered on a scale from 1 (completely disagree) to 5 (completely agree).

**Task performance.** We used a seven-item scale developed by Williams and Anderson (1991). An example item is "I fulfilled responsibilities specified in my job description". The participants reported how often they engaged in the described behaviours during the last 6 months on a scale from 1 (completely false) to 5 (completely accurate).

**Organizational citizenship behaviour.** We used a ten-item scale by Spector et al. (2010). Example items include "I listened to a colleague when he had a problem at work" and "I volunteered for additional work assignments." The participants reported how often they engaged in the described behaviours during the last 6 months on a scale from 1 (never) to 7 (once a day).

Internal consistencies for all instruments are presented in Table 2.

**TABLE 2** Descriptive statistics and correlations between variables

	M (SD)	1.	2.	3.	4.	5.	6.
1. Motivating subordinates	2.05 (0.55)	(0.38)					
2. Transformational leadership	3.33 (0.83)	0.24**	(0.91)				
3. Psychological safety	4.95 (1.05)	0.17**	0.51**	(0.80)			
4. Work engagement	4.29 (0.68)	0.04	0.20**	0.29**	(0.74)		
5. Task performance	4.48 (0.45)	-0.01	0.09	0.28**	0.51**	(0.77)	
6. Organizational citizenship behaviour	4.30 (1.04)	-0.06	0.08	0.15**	0.32**	0.15**	(0.85)

NOTE: Cronbach’s alpha coefficients are on the diagonal; †p < 0.10, \*p < 0.05, \*\* p < 0.01.

**5. RESULTS**

**5.1. Descriptive statistics**

Table 2 shows several interesting results. First, we can see that subordinates generally do not perceive their supervisors as frequently engaging in behaviours associated with transformational leadership (M = 3.33 on a five-point scale). Similarly, most of the supervisors are rated as average when it comes to motivating subordinates (M = 2.05 on a three-point scale). Second, the results were similar when it came to the subordinates’ self-reports on feelings of psychological safety, work engagement, and OCB. The exception was their own task performance, which they rated relatively high (M = 4.48 on a five-point scale). Third, correlations between variables reveal several interesting patterns. Unexpectedly, neither ratings of transformational leadership nor ratings of motivating subordinates showed significant correlations with task performance and OCB; however, both leadership ratings were significantly correlated with psychological safety. It is also interesting to note a significant, albeit low, correlation between OCB and task performance (r = 0.15).

**5.2. Measurement model**

Before testing the hypothesized structural model, we evaluated the measurement model using a six-factor CFA (motivating subordinates, transformational leadership, psychological safety, work engagement, task performance, and organizational citizenship behaviour). The model showed acceptable fit,  $\chi^2(610)=1152.13$ ,  $p<0.001$ ; CFI=0.920; TLI=0.912; RMSEA=0.053 (90% CI [0.048, 0.057]). We assessed potential common

method bias via Harman’s single-factor test (Podsakoff et al., 2003). The single-factor CFA fit the data poorly,  $\chi^2(624)=2776.63$ ,  $p<0.001$ ; CFI=0.680; TLI=0.659; RMSEA=0.104 (90% CI [0.100, 0.108]), suggesting that common method variance is unlikely to be the primary source of covariance among indicators.

Reliability and convergent validity were assessed using composite reliability (CR) and average variance extracted (AVE). CR values were satisfactory (CR range = 0.719 to 0.950), exceeding the typical 0.70 criterion for acceptable reliability (Nunnally & Bernstein, 1994). AVE met the recommended .50 threshold for all constructs except SJT (AVE=0.462). However, the SJT still showed acceptable CR (0.719) and moderate standardized loadings (0.595 to 0.748). Discriminant validity was evaluated using the heterotrait–monotrait ratio of correlations (HTMT). Table 3 shows that all HTMT values were below the 0.85 threshold (range = 0.524–0.778), supporting discriminant validity (Henseler et al., 2015).

**5.3. Hypothesis testing**

We tested the hypothesis that leadership style is related to work performance via psychological safety as the first mediator and work engagement as the second mediator. We conducted our analyses using latent structural equation modelling, and we calculated the credibility intervals for indirect effects using the Bayesian estimator in Mplus 8.7. (Muthén & Muthén, 2017). We considered the indirect effect significant if the credibility intervals did not include zero.

Figure 2 shows the serial mediation model, while Table 4 contains the detailed results. First, we see that

Construct	1.	2.	3.	4.	5.	6.
1. Motivating subordinates	-					
2. Transformational leadership	0.747	-				
3. Psychological safety	0.682	0.778	-			
4. Work engagement	0.613	0.602	0.636	-		
5. Task performance	0.581	0.524	0.673	0.776	-	
6. Organizational citizenship behaviour	0.592	0.561	0.633	0.648	0.621	-

TABLE 3 Heterotrait–Monotrait Ratio (HTMT) Matrix

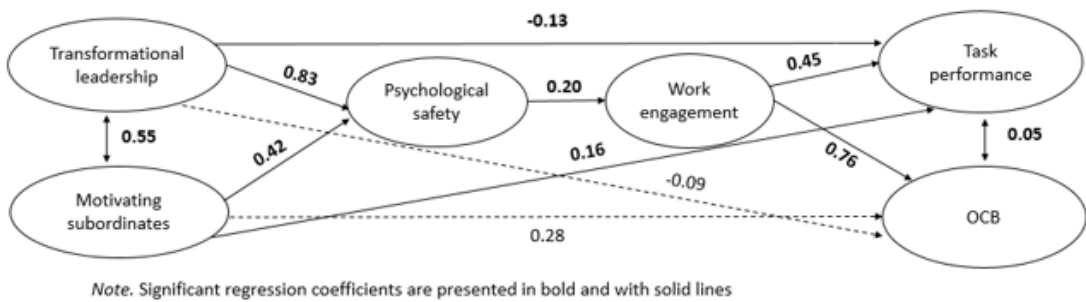


FIGURE 2. Serial mediation model for competency motivating subordinates and organizational citizenship behaviour

transformational leadership did not have a significant direct effect on OCB, but it had a negative direct effect on task performance. Second, transformational leadership was positively associated with task performance indirectly only through psychological safety and only through work engagement. At the same time, it was positively associated with OCB indirectly only through psychological safety, but not through work engagement. However, the indirect effect that was of primary interest in our hypotheses was that of serial mediation. The indirect effects for both criteria were positive and statistically significant (for task performance: 0.072 (95% CI [0.03,0.13]); for OCB:0.12 (95% CI [0.05,0.23]). In other words, the model shows that transformational leadership is associated with subordinates’ psychological safety, which in turn is related to their work engagement, and finally work engagement is related to their task performance and OCB.

Next, we see that the competency of motivating subordinates had a significant direct effect on both task performance and OCB. Second, the competency of motivating subordinates predicted both criteria (task performance and OCB) indirectly only through psychological safety and only through work engagement. Third, the tests for H3 and H4 showed that the

indirect effects for the serial mediations were positive and statistically significant (for task performance:0.04 (95% CI [0.01,0.08]); for OCB:0.06 (95% CI [0.02, 0.15]). In other words, the competency of motivating subordinates was associated with subordinates’ psychological safety, which in turn was related to their work engagement, and finally work engagement was related to their task performance and OCB.

6. DISCUSSION

The present study examined how leaders contribute to employee performance by fostering psychological safety, which in turn supports work engagement. Drawing on the Job Demands-Resources (JD-R) model as a theoretical lens, we proposed that leadership is associated with employee performance indirectly by shaping psychological safety and, through it, work engagement. Importantly, our model distinguishes leadership from job resources by positioning it as an antecedent that enables psychological safety to arise, rather than as merely another resource within the JD-R framework. Specifically, we examined whether transformational leadership and the competency of moti-

**TABLE 3.** Regression estimates and indirect effects of the structural model

Criteria	Predictor	b	PSD	Lower 95% CrI	Upper 95% CrI
PSAFE	TL	<b>0.830</b>	0.135	0.583	1.120
PSAFE	MS	<b>0.452</b>	0.188	0.126	0.866
WE	PSAFE	<b>0.195</b>	0.054	0.094	0.307
WE	TL	0.035	0.076	0.114	0.175
WE	MS	<b>0.284</b>	0.115	0.083	0.539
TP	WE	<b>0.449</b>	0.068	0.319	0.585
TP	PSAFE	<b>0.146</b>	0.041	0.069	0.229
OCB	WE	<b>0.760</b>	0.172	0.445	1.125
OCB	PSAFE	<b>0.362</b>	0.103	0.172	0.582
<i>Direct effects</i>					
TP	TL	<b>-0.129</b>	0.055	0.236	0.024
TP	MS	<b>0.158</b>	0.085	0.007	0.335
OCB	TL	-0.091	0.141	0.368	0.182
OCB	MS	0.276	0.219	0.135	0.723
<i>Indirect effects for WE and TP</i>					
MS → PSAFE → WE		<b>0.085</b>	0.039	0.022	0.173
TL → PSAFE → WE		<b>0.162</b>	0.050	0.071	0.269
MS → PSAFE → TP		<b>0.064</b>	0.031	0.016	0.140
TL → PSAFE → TP		<b>0.121</b>	0.038	0.053	0.202
MS → WE → TP		<b>0.127</b>	0.053	0.037	0.247
TL → WE → TP		0.016	0.034	0.048	0.083
<b>MS → PSAFE → WE → TP</b>		<b>0.038</b>	0.019	0.010	0.081
<b>TL → PSAFE → WE → TP</b>		<b>0.072</b>	0.025	0.030	0.128
<i>Indirect effects for OCB</i>					
MS → PSAFE → OCB		<b>0.155</b>	0.077	0.042	0.339
TL → PSAFE → OCB		<b>0.298</b>	0.098	0.129	0.512
MS → WE → OCB		<b>0.214</b>	0.097	0.061	0.436
TL → WE → OCB		0.026	0.060	0.088	0.147
<b>MS → PSAFE → WE → OCB</b>		<b>0.063</b>	0.033	0.015	0.146
<b>TL → PSAFE → WE → OCB</b>		<b>0.121</b>	0.046	0.049	0.227
<i>Total effects</i>					
MS on TP		<b>0.392</b>	0.108	0.212	0.626
TL on TP		0.088	0.064	0.044	0.202
MS on OCB		<b>0.727</b>	0.238	0.293	1.230
TL on OCB		<b>0.368</b>	0.151	0.049	0.654

Note: 95% credibility intervals (CrI) were calculated using the Bayes estimator. TL = transformational leadership; MS = motivating subordinates; PSAFE = psychological safety; WE = work engagement; OCB = organizational citizenship behaviour. Significant regression coefficients are in bold. Two hypothesized serial mediation paths are in bold.

vating subordinates contribute to subordinates' task performance and organizational citizenship behaviour (OCB) through the serial mediating roles of psychological safety and work engagement. Using latent structural equation modelling, our findings support the central hypothesis, showing that transformational leadership and the competency of motivating subordinates are indirectly associated with task performance and OCB via psychological safety and work engagement.

The results indicate that transformational leadership is positively associated with psychological safety among subordinates. This aligns with previous research emphasizing the critical role of transformational leaders in creating a supportive and safe workplace environment (Edmondson & Lei, 2014). Similarly, the study found that leaders' competency in motivating subordinates (measured with an SJT) also positively relates to psychological safety. This replicates the earlier findings by Palanović et al. (2023) that SJT for motivating subordinates is particularly successful in predicting psychological safety. By establishing psychological safety, leaders provide subordinates with a sense of security that encourages open communication and risk-taking, essential components for a high-functioning, innovative workplace. This is then associated with increased work engagement, which in turn is related to employees' higher commitment in performing their core work tasks, as well as in going beyond their formal job responsibilities and exercising their organizational citizenship behaviour.

The serial mediation model showed that psychological safety and work engagement mediate the relationship between leadership and work performance. The absence of a significant direct effect of transformational leadership or the competency of motivating subordinates on OCB suggests that leadership may not be associated with citizenship behaviour in isolation, but rather through psychological mechanisms such as psychological safety and work engagement. In other words, leadership appears to contribute to OCB primarily by creating the conditions that enable employees to feel safe, engaged, and willing to go beyond their formal job responsibilities.

Both leadership predictors showed significant direct effects on task performance within the latent structural model, even though their bivariate correlations with task performance were not significant. The reason for this is most probably that zero-order correlations reflect only unadjusted bivariate associations, whereas direct effects in the structural model estimate the unique relationship between variables while accounting for measurement error and shared variance with other constructs in the model. The negative direct effect of transformational leadership on task perfor-

mance should be interpreted with caution, as it may reflect a suppression effect within the structural model. After accounting for the shared variance between transformational leadership, motivating subordinates, psychological safety, and work engagement, the remaining unique variance in transformational leadership was negatively related to task performance. This suggests not that transformational leadership is harmful to performance, but that its positive association with task performance may operate primarily through indirect pathways.

Taken together, these findings strengthen the conceptualization of leadership as an antecedent to job resources rather than as a direct job resource. More specifically, they suggest that leadership contributes to performance not primarily through direct effects, but by shaping the social and psychological conditions – most notably psychological safety – that foster work engagement and, ultimately, employee performance.

This study offers three main contributions to research on leadership within the JD-R framework. First, the study clarifies the role of leadership in the JD-R model. In line with Tummers and Bakker (2021), our findings support the view that leadership should not be understood merely as a job resource. Conceptualizing leadership merely as another job resource or a moderator within the JD-R model may obscure its broader and more fundamental role in shaping the work environment. Such an approach risks reducing leadership to a static resource, rather than recognizing that leaders actively influence whether important resources, such as psychological safety, emerge in the first place. In addition, this mispositioning may also limit the practical value of the model, as organizations may focus too narrowly on resource provision rather than on leadership development as a key intervention point.

Specifically, we adopted the theoretical framework of Schaufeli (2015), which positions leadership as an antecedent to job resources, at least in the case of psychological safety. Leaders set the tone for what is considered acceptable or risky in the workplace, thereby directly influencing whether employees feel safe speaking up, taking initiative, or admitting mistakes. Thus, treating leadership as an antecedent to psychological safety aligns both conceptually and empirically with the idea that effective leadership generates the social conditions necessary for psychological safety to emerge as a job resource.

Second, the results underscore the role of psychological safety as a job resource. While previous research has widely recognized the importance of psychological safety in team and organizational learning (Edmondson & Lei, 2014), it has rarely been directly integrated into the JD-R model. By positioning psycho-

logical safety as a mediator between leadership and engagement, this study provides empirical support for its function as a job resource that facilitates motivational processes.

Third, in line with recommendations by Tummers and Bakker (2021) to include different measures of leadership, we used a situational judgment test (SJT) to assess the competency of motivating subordinates, alongside transformational leadership, which is commonly studied in JD-R research. While transformational leadership encompasses a broad set of behaviours, the competency of motivating subordinates provides a more focused, contextualized view of how a specific leader acts in a given situation. Both leadership measures yielded comparable mediation patterns, supporting the generalizability of the proposed model. Notably, the use of the SJT offers a methodological contribution by addressing concerns about the limitations of traditional Likert-type leadership questionnaires (Van Knippenberg & Sitkin, 2013).

### 6.1. Practical implications

This paper offers three practical implications. First, psychological safety should have a more prominent role in leadership development programs. Our findings suggest that leadership contributes to performance by fostering psychological safety, which in turn supports work engagement, but psychological safety also showed a direct relationship with performance outcomes. This implies that leaders should be trained not only to provide resources in general, but also to recognize and avoid behaviours that may inadvertently undermine employees' sense of safety. Leadership development programs should therefore emphasize behaviours such as listening, transparency, and constructive feedback, as these are more likely to strengthen psychological safety within teams (Castro et al., 2018; Yi et al., 2017; Coutifaris & Grant, 2021). Organizations may also benefit from incorporating psychological safety indicators into leadership evaluations or employee surveys. When a team reports low psychological safety, this may signal a need for targeted leadership development or changes in leadership behaviour.

Second, subordinates' perceptions of their supervisor are directly linked to their psychological safety, engagement, and performance. Therefore, organizations should implement regular feedback mechanisms, such as employee surveys and 360-degree ratings, that allow subordinates to share their views on their supervisor. Furthermore, when hiring a new team leader, organizations might consider involving a team member in the interview process to provide insights into the candidate's potential fit with the team dynamics.

Third, any leadership assessment should consid-

er the situational context by using measures such as SJTs or situational interviews. Our results indicate a low correlation between the Transformational Leadership Questionnaire and the SJT; therefore, these two measures likely capture different aspects of leaders' behaviour. Both are valuable tools, but SJTs offer a few advantages: a) they are potentially better suited to evaluate how leaders respond to specific work-related scenarios; b) they should have higher face validity, making them more acceptable to candidates; c) they should be more resistant to faking.

### 6.2. Limitations and directions for future research

The cross-sectional design of our study restricts the ability to draw causal inferences. Although the serial mediation model we tested is theoretically grounded, longitudinal studies are needed to establish causal relationships between leadership, psychological safety, work engagement, and performance outcomes. Another notable limitation of our survey is that we collected data from only one source – the employees. This reliance on self-reported measures can inflate correlations between variables due to shared method variance. Future research should consider incorporating multi-source data, such as supervisor ratings, peer evaluations, or objective performance metrics, to provide a more comprehensive and unbiased perspective. For instance, it would be interesting to replicate these results in a study where supervisors answer the tasks on the SJT and rated the performance of the subordinates. Additionally, it would be ideal to collect leader ratings as well as self-reports from several subordinates within the same work team.

Future research should consider incorporating more nuanced operationalizations of leadership. We focused on general transformational leadership and the competency of motivating subordinates. However, the literature is ripe with different leadership competencies as well as validated situational interviews and SJTs to measure these competencies (e.g., Guenole et al., 2015; Heimann et al., 2020). It would be interesting to explore whether different leadership competencies serve to provide different resources to subordinates. For example, how do competencies such as political awareness, technical skill, and employee development differ in providing the necessary resources (Hogan Assessments, 2009)? Perhaps some of the leadership competencies act as antecedents to job resources, while others act as moderators by strengthening the relationship between job resources and work engagement. Finally, this research only looked at the positive aspects of leadership and job resources/work engagement. Given what we know from the management de-

railment literature (Pfeffer, 2015), there is a clear need to further investigate how destructive leadership affects job demands and burnout.

## 7. CONCLUSION

The present study conceptualized leadership as an antecedent to the job resource of psychological safety within the JD-R framework. Using latent structural equation modelling, leadership was found to be indi-

rectly associated with task performance and organizational citizenship behaviour (OCB) through psychological safety and work engagement. Although the cross-sectional design limits causal inference, the findings contribute to leadership research and practice by (1) positioning leadership as an antecedent to resources within the JD-R model, (2) identifying psychological safety as a job resource that may be enabled through leadership, and (3) illustrating the value of complementing questionnaire measures with a situational judgment test of leadership behaviour.

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## VOĐE STVARAJU RESURSE: ULOGA VOĐENJA KAO ANTECEDENTA PSIHOLOŠKOJ SIGURNOSTI U MODELU ZAHTIJEVA I RESURSA NA POSLU

### SAŽETAK

Polazeći od okvira zahtijeva i resursa na poslu, ova studija testira hipotezu da je uspješno vodstvo povezano sa psihološkom sigurnošću podređenih, koje je potom povezano s višom radnom angažiranošću, radna angažiranost je na kraju povezana s većom radnom uspješnosti.

U presječnom istraživanju provedenom na 287 zaposlenika, sudionici su procijenili stil vođenja svojih nadređenih (njihovo transformacijsko vodstvo i kompetenciju motiviranja podređenih), kao i vlastitu psihološku sigurnost, radnu angažiranost, uspješnost u radnim zadacima i odgovorno organizacijsko ponašanje (OOP). Rezultati pokazuju da je stil vođenja bio neizravno povezan s uspješnosti u radnom zadatku i OOP-om u modelu serijalne motivacije putem psihološke sigurnosti kao prvog i radne angažiranosti kao drugog medijatora. Iako presječni dizajn ograničava kauzalno zaključivanje, nalazi doprinose i teoriji i praksi vodstva identificirajući psihološku sigurnost kao resurs na poslu. Još važnije, rad ističe da vođenje nije samo još jedan resurs, nego ono ima ključnu ulogu u stvaranju resursa na poslu.

**KLJUČNE RIJEČI:** *vođenje, psihološka sigurnost, radna angažiranost, model zahtijeva i resursa na poslu*

