

## Uncovering Relational and Emotional Energies as the Intermediary Mechanisms Between the link of Transformation Leadership and Employee Job Engagement

**Dr. Faqir Sajjad Ul Hassan**

Assistant Professor, Department of Management Sciences, Khushal Khan Khattak University, Karak at-  
[faqirphd@yahoo.com](mailto:faqirphd@yahoo.com)

**Dr. Hassan Ahmed Shah**

Lecturer, Department of Management Sciences, Khushal Khan Khattak University, Karak at-  
[hassan.shah@kkkuk.edu.pk](mailto:hassan.shah@kkkuk.edu.pk)

**Sumrine Khan**

Lecturer, Abbottabad University of Science and Technology, Havellian Pakistan at-  
[sumreen\\_khan553@yahoo.com](mailto:sumreen_khan553@yahoo.com)

Sahibzada Anas Ahmad

Certified Teacher Government Middle School kotkay, Dir, Elementary and Secondary Education  
Department KP at- [anasahmad844@gmail.com](mailto:anasahmad844@gmail.com)

### Abstract

The primary purpose of this research was to explore the relationship between transformational leadership style and employee job engagement directly and indirectly via relational energy and emotional energy. Accordingly, drawing from conservation of resource theory, we developed a model and to test the model we took a survey of 438 employees on convenient sampling procedure working in non-profit organizations in the Khyber Pakhtunkhwa. A structural equation modeling technique was used to test the hypothesized relationships of the study. We found positive and significant direct relationships between each pair of the study variables. Separately, we found partial support of mediating effect of both relational energy and emotional energy between the relationship of transformational leadership and employee job engagement. Yet together in parallel form both mediators fully mediated the relationship. Such indirect effects with two novel mediators between the relationship of transformational leadership and employee job engagement make this research unique and significant in the existing literature.

**Keywords:** Transformational leadership, relational energy, emotional energy, job engagement, structural equation modeling

### Introduction

Keeping workers productive and healthy throughout the course of a lengthy career is becoming a major issue for human resource management in today's chaotic and demanding work environments (Vincent-Höper et al., 2012). Employee engagement at work is a sign of excellent mental health (Schaufeli et al., 2008). It is seen as the positive counterpart of burnout and emphasizes positive affective-cognitive components of well-being (Maslach et al., 2001; Schaufeli et al., 2006). Previous research supported that engaged workers are more likely to take initiative, remain focused, committed, and work hard to accomplish company objectives (Zahari & Kaliannan, 2023). Academic researchers have begun to recognize job engagement as a valid concept in recent times as its ability to predict positive employee outcomes which turn into superior financial performance and organizational success (Strom et al., 2014). As the concept of

job engagement gained popularity, a wide variety of definitions, measurements, and engagement theories emerged (Macey & Schneider 2008). However, the most often cited definitions of job engagement is provided by Schaufeli et al., (2006, p. 702), who define it as “a positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption”.

Remarkably, just 15% of workers globally exhibit employee engagement, despite its significance (Harter & Rubenstein, 2020) and in the developing world the situation is even more terrible. This necessitates further research to uncover the mechanisms by which job engagement can be fueled. Different factors can influence how people perceive their level of engagement at work. Past research indicates, for instance, that job resources and personal resources are positively correlated with job engagement (Xu et al., 2017). Among these, leadership becomes the primary factor in promoting an engaged workplace since proficient leaders have the ability to mold workers' attitudes and actions at work (Oh et al., 2018). Transformational leadership, in particular, has the potential to significantly impact subordinates' functions because of his/her charisma, attention to their subordinates needs and facilitation of opportunities for employees growth (Breevaart & Bakker, 2017). Thereby, scholarly interest has been piqued in the connection between transformative leadership and employee engagement at work. In this vein, empirical studies are evident of a positive relationship between transformational leadership and job engagement (Salanova et al., 2011).

However, transformational leaders do more than just use a one-size-fits-all approach to influencing their subordinates' attitudes and behaviors. Thus, it is not a simple process direct relationship between the transformational leadership and job engagement, but evidence suggests that transformational leadership affects subordinates through a variety of mediation mechanisms (Sivanathan et al., 2004). While a great deal of progress has been made in understanding the mechanisms by which transformational leadership affects followers' positive outcomes, further research is still required to identify the psychological connections that inspire followers to go above and beyond expectations (Aryee et al., 2012; Avolio et al., 2009). Responding to the call of the researchers, we suggest a novel set of variables to shed more light on the psychological mechanisms at play that successively mediates the relationship between transformational leadership and job engagement. We sought to make four significant contributions to the leadership and job engagement literature by testing our model, which is depicted in Figure 2. First, we test some new and replicate direct relationships of study variables in newer work settings. Second, we shed further light on two novel underlying psychological mechanisms of relational energy and emotional energy of subordinates that interplay between the transformational leaders and employees job engagement.

Third, including multiple mediators in a single model, we can control potential confounding effects among the mediators. This helps in isolating the unique contribution and relative significance of each mediator, which is rare in literature. Lastly, prior research on the link between transformational leadership and job engagement has mostly included workers from profit organizations and has been carried out in developed or highly industrialized nations. This

research makes a significant contribution to the non-profit sector by concentrating on a developing country context of Khyber Pakhtunkhwa, Pakistan.

### Literature review and hypotheses development

#### Transformational leader and job engagement

Transformational leaders inspire and encourage subordinates by modeling desired behavior and projecting and articulating appealing visions, shared objectives, and values (Bass & Avolio, 1990; Bass & Riggio, 2006). Bass (1998) proposed four behavioral dimensions of transformational leader including *idealized influence* i.e., serving as a role model, building trust, and inspiring followers. *inspirational motivation* i.e., communicating a compelling vision, arousing enthusiasm, and fostering commitment. *intellectual stimulation* i.e., challenging the status quo, encouraging creativity, and stimulating innovation. *individualized consideration* i.e., providing personalized support and attention, understanding and addressing employees' individual needs and fostering their personal development. Theoretically based on social exchange mechanisms, all behavioral dimensions of transformational leaders are proposed relating to all three components of job engagement i.e., vigor (high levels of energy and mental resilience at work), dedication (feeling enthusiastic and committed to one's work.), and absorption (being fully immersed in one's work, experiencing a sense of flow) as a response to special attention from the leader side.

Empirically, a number of studies have demonstrated the positive link of transformational leadership style and job engagement of the subordinates in different works settings and national cultures. For example, Tims et al., (2011) established a positive association between the transformational leaders and job engagement in an industrial consultancy agency in Netherlands. An Australian study of Ghadi et al., (2013) of multiple organizational sectors also confirmed positive relationship between the two variables. Similarly, the link between the transformational leaders and job engagement also supported in Italian nonprofit organizations (Aboramadan & Dahleez, 2020). In light of the findings of these studies, we proposed the following direct relationship hypothesis:

H1: Transformational leadership style may positively influence employees' job engagement.

#### Relational energy and emotional energy as mediators

##### Relational energy

The pioneer authors that thoroughly discussed the concept of relational energy Owens et al., (2016, p. 10) defines it as "a heightened level of psychological resourcefulness generated from interpersonal interactions that enhances one's capacity to do work". According to them relational energy comes from the interaction with another person. They break up psychological resourcefulness to convey the vigor, vitality, drive, and endurance that arise from a sequence of interpersonal interactions. We can argue the mediation role of relational energy based on the conservation of resource theory (COR: Hobfoll, 1989) which posits that individuals strive to obtain, retain, and protect their resources. Thus, employees invest resources to prevent loss and build new ones in the organizational setting. Previous research shown that favorable interactions with leaders boost employees' energy levels (Atwater & Carmeli, 2009) and that employees frequently seek out energetic resources from leaders who control important resources in the

workplace (Qu et al., 2023). A transformational leader when exhibits four components of behaviors as stated above not only helps the follower understand the significance and value of their relationship, but also successfully cultivates an appealing and desired relationship (Qu et al., 2015). Moreover, the constructive and positive feedback from the transformational leaders are considered favorable to employees relational energy (Qu et al., 2023). Consequently, in line with COR theory, we believe that employees maintain high quality relationship between with the transformational leader being a resource itself and caravan of other resources in work setting which positively cause relational energy of the employees as well.

COR theory states that individuals with greater resources have a higher chance of gaining resources by investing positive behaviors (Hobfoll et al., 2018). Relational energy from a transformational leader's behaviors can encourage and inspire staff members to take on resource investment behaviors in order to obtain additional resources and thus they are deeply involved in job engagement. Sumpter and Gibson (2022) similarly argue that employees who possess strong relational energy typically put out more effort in their endeavors and have a better chance of realizing their goals. Empirically, leadership studies support positive relationship between favorable leadership styles to employees relational energy (Qu et al., 2023). Whereas, relational energy is positively related to employee job engagement (Owens et al., 2016). Thus, the theoretical arguments and empirical relationships hint us the following direct and indirect relationships hypotheses:

H2a: Transformational leadership is positively related to employees' relational energy.

H2b: Relational energy positively predicts employees' job engagement.

H3: Relational energy acts as a mediator between the direct relationship of transformational leadership and employee job engagement.

### **Emotional energy**

Collins (2004, p. 49) defines emotional energy "a feeling of confidence, elation, strength, enthusiasm, and initiative in taking action". To put it another way, a worker who is emotionally energetic generates energy via enthusiasm for their profession because they are thrilled about what they do (Baker, 2019). Here again we use the lens of COR theory in establishing direct and indirect relationships transformational leadership, emotional energy and employee job engagement. According to COR theory, individuals with more resources may acquire them more easily and are less vulnerable to harm to their resources (Okros & Virga, 2022). Because different components of transformational leaders, especially inspirational motivation and individualized consideration, enable them to intrinsically motivate their subordinates.

Working with transformational leaders help employees to become more motivated by an attainable vision that offers them new chances and able them feel alive and invigorated (Lin et al., 2020). In this way, transformational leaders produce emotional energy in their subordinates which turn them into job engagement. Recent empirical studies support this perspective and found that transformational and servant leadership styles can elevate emotional energy of subordinates and produces positive energy and intention to learn new skills (Rabiul et al., 2023; Usman et al., 2021). Further, the study of Sepahvand and Khodashahri (2021) supported the

positive relationship between emotional energy and employee job engagement. These empirical findings and theoretical relational guide us to formulate the following set of propositions:

H4a: Transformational leadership is positively related to employees' emotional energy.

H4b: Emotional energy positively predicts employees' job engagement.

H5: Emotional energy acts as a mediator between the direct relationship of transformational leadership and employee job engagement.

Putting together based on the above arguments, we proposed both relational energy and emotional energy as mediators, and assume that:

H6: Both relational energy and emotional energy of employees parallelly mediates the relationship of transformational leadership and employee job engagement.

## Method

### Sample and procedure

The study was based on cross-sectional design, and we used convenience sampling procedure to collect data considering time and financial constraints. An on anonymous survey distributed to a total of 500 employees in four different types of non-profit and non-governmental organization (NGO) operating in Khyber Pakhtunkwa, Pakistan. The study inclusion criterion was on voluntary basis and the only respondents who were working under an immediate manager was allowed to participate in the study, so that they can record their response regarding the transformational style of their bosses. Consequently, we received 447 filled questionnaires representing a response rate of 89.4. However, we discarded 09 invalid/ incomplete questionnaires due to majority in missing responses or straight lining. Resultantly, we made analyses on a total of 438 valid questionnaires responses. The summary of the demographic profile is given in Table I.

### Measurement

To measure the transformational leadership style, instead of multifactor leadership questionnaire (MLQ), we adopted shorter version of seven items global transformational leadership (GTL) scale of (Carless et al., 2000) which is take into account of all four dimensions of transformational leadership. The dependent variable of the study i.e., employee job performance was measured using an adopted shorter version of Utrecht Job engagement scale (UWES-9; Schaufeli et al., 2006). It has a total of nine items, three items were devoted to measure each component of the construct of job engagement. Relational energy of employees was tapped using a shorter version of 5-item scale developed by Owens et al., (2016). An 8-item scale of Atwater and Carmeli (2009) was adopted in measuring the construct of emotional energy. Prior research found that both these scales have sound psychometric properties. On a 7-point Likert scale, with 1 denoting "strongly disagree" and 7 representing "strongly agree," the participants were asked to indicate how much they agreed or disagreed with each item of the questionnaire.

### Analyses and results

The second-generation statistical analysis in the form of partial least square structural equation modeling (PLS-SEM) was used to test the study model and hypotheses. The complex nature of the study model having inter-relationships between observed and latent variables and mediation

mechanisms makes the PLS-SEM a suitable statistical approach (Hair et al., 2021). We used SmartPLS version 3 for main analyses while SPSS version 24 was used for initial screening data and for the purpose of descriptive statistics. In using PLS-SEM, usually measurement model is evaluated to check the quality of scales used in a given study followed by structural model assessment for the purpose of hypotheses testing and predictive power of a model.

Table I. Respondent profile

Demographics		Frequency	Percent
Gender	Male	329	75.1
	Female	109	24.9
Education	Bachelor	113	25.8
	Master	277	63.2
	MS/MPhil	41	9.4
	PhD	5	1.1
Experience	0-5 years	211	48.2
	6-10	142	32.4
	11-15	39	8.9
	16-20	20	4.6
	Above 20	26	5.9
Age	55 and above	7	1.6
	20-30 years	90	25.4
	31-40	178	50.3
	41-50	72	20.3
	51-60	14	4.0

n=438

### Assessment of measurement model

Assessment of measurement model includes reliability and validity of study scales. Using PLS-SEM, different criteria are utilized for internal consistency reliability which comprise Cronbach alpha and composite reliability. The cutoff value for appropriate internal consistency reliability for both criteria is recommended above 0.70 (Hair et al., 2021). Table II shows the values of Cronbach alpha and composite reliability of each variable of the study. Their values above 0.70 are evident of appropriate internal consistency reliability. Construct validity including convergent and discriminate validity were evaluated next. Convergent validity is determined with factor loadings and average variance extracted (AVE). The factor loading of each item in a scale should be over 0.70 and AVE greater than 0.50 of a construct is considered satisfactory. These statistics are presented in Table II, we have only two items that have lower factor loadings of item of emotional energy than the threshold. Since the reflective form of scaling was used to measure the construct and items in reflective scales are interchangeable. Thus, both of lower factor loadings' items were deleted (Hair et al., 2021). Moreover, all the other factor loadings and AVE are above the yardstick of 0.70 and 0.50 reflectively.

In order to estimate the discriminate validity, three different methods are available. However, the procedure of cross loadings and Fornell-Larcker criterion have statistical limitations.

Therefore, we used a robust procedure of heterotrait-monotrait ratio of correlations (HTMT), and results of HTMT ratio are shown in Table III. The HTMT ratio should be less than 0.85 to determine discriminate validity between the constructs Henseler et al. (2015). Our results are below the cutoff criteria which confirm the discrimination validity between the constructs of our study.

Table II. Results of measurement model

Reflective Measures	Factor Loadings Min.-Max.	Composite Reliability	AVE	Cronbach's Alpha	Mean	SD
TL	0.745-0.828	0.922	0.628	0.901	4.54	1.091
RE	0.710-0.872	0.893	0.627	0.885	4.21	1.065
EE	0.738-0.830	0.906	0.618	0.876	3.98	1.001
JE	0.748-0.932*	0.848	0.502	0.780	4.39	0.980
Vigor	0.808-0.890	0.748	0.730	0.748	4.72	1.230
Absorption	0.814-0.866	0.802	0.702	0.802	4.47	1.320
Dedication	0.831-0.865	0.932	0.709	0.932	3.98	1.120

\*Item No. 1 and 8 of EE were deleted due to low factor loadings; TL: transformational leadership; RE: relational energy; EE: emotional energy; JE: job engagement; SD: standard deviation

### Assessment of structure model

After satisfactory results of measurement model, we move to structure model results that is evaluated through five different criteria which including 1). collinearity assessment 2). size and significance of structural path coefficients 3). coefficient of determinations 4). effect size and 5). predictive relevance of model (Hair et al., 2021). We discuss each of these criterion step by step:

First, the procedure of Variance inflation factor (VIF) is used to check the multicollinearity between the study constructs. The value of VIF below five shows no issue of multicollinearity (Hair et al., 2021). The VIF values are given in Table III, here we can see all VIF values between a pair of constructs are well below the threshold value of 5 showing no issue of multicollinearity.

Second, the significance of path coefficients that answer the direct relationship hypotheses. The bootstrap procedure with 5000 subsamples was run to check the significance of path or beta coefficients. The results are shown in Table III, we see here the positive and statistically significant relationships as predicted in the hypotheses of the study. For example, we found the higher positive and significant relationship between transformational leadership and emotional energy ( $\beta=0.630, p<0.01$ ) followed by transformational leadership and relational energy ( $\beta=0.568, p<0.01$ ) whereas the relationship between relational energy and employee job engagement was little higher ( $\beta=0.386, p<0.01$ ) than emotional energy ( $\beta=0.342, p<0.01$ ). Thus, based on the beta coefficients our direct relationships' hypotheses i.e., H2a, H2b, H4a and H4b are all substantiated.

Third, coefficient of determination is determined using  $R^2$ , which assesses the goodness of fit of a regression model. It indicates the proportion of the variance in the dependent variable that is predictable from the independent variables. The value of  $R^2$  shows the predictive power or accuracy of a model and its value of up to 0.25 is labeled as weak, 0.50 is considered moderate and 0.75 or above is suggested substantial (Hair et al., 2021). Overall, in our case the value of  $R^2$  dependent variable of the study is 0.55 which suggests moderate level of predictive power of the

model which means that a total of 55 percent of variance were explained in the dependent variable i.e., employee job engagement by the exogenous variables of the study.

Fourth, the effect size which is calculated by the statistics of  $f^2$  and represents the relative significance of an exogenous variable when omitted in the model. Hair et al., (2021) proposed that values of  $f^2$  up to 0.02 is labeled as weak, 0.15 is considered moderate and 0.35 or above is suggested substantial. Our results as shown in Table III show moderate to high levels of  $f^2$  values of our exogenous variables.

Finally, the  $Q^2$  statistics were estimated with a blindfolding procedure. It shows the predictive relevance or out of sample predictive power of a model. The positive value means  $Q^2$  greater than 0 is considered as a good indicator of predictive relevance. Table III shows that all  $Q^2$  values of our model are much higher than zero which show excellent predictive relevancy of our model.

Table III. Results of structural model

Relationships	Path Coefficient	t value	VIF	HTMT Ratio	$f^2$
TL → JE	0.018 <sup>ns</sup>	0.380	1.87	0.606	0.001
TL → RE	0.568**	13.86	1.00	0.643	0.477
TL → EE	0.630**	16.75	1.00	0.702	0.659
RE → JE	0.386**	7.997	1.63	0.752	0.204
EE → JE	0.342**	8.264	1.83	0.787	0.238
Endogenous Constructs	$R^2$	$Q^2$			
JE	0.553	0.260			
RE	0.323	0.317			
EE	0.397	0.392			

\*\* $p < .01$ ; <sup>ns</sup>=Non significant; TL: transformational leadership; RE: relational energy; EE: emotional energy; JE: job engagement; SD: standard deviation

**Mediation analysis**

We adopted a two-step approach of mediation analysis (Hayes, 2014). First, we run a model of simple regression of independent and dependent variables excluding all other variables as shown in Figure1. Second, we run an overall model putting all variables into it as shown in Figure 2 and checked the size and significance of specific indirect effects and total indirect effect due to influence of both mediators. Results of model 1 shows that there positive and significant relationship between transformational leadership style and employee job engagement ( $\beta=0.518$ ,  $p<0.01$ ).

Table IV. Mediation analyses

Path	Direct effect	Indirect effect	Total effect	t value	p value	VAF	Mediation?
<b>Model 1:</b>							
<b>Excluding mediators</b>							
TL→JE	518	-	-	12.350	0.000	-	-
<b>Model 2:</b>							
<b>Including all variables</b>							
TL→JE	0.018	-	0.516	0.380	0.704	-	-
TL → RE → JE	-	0.219	-	6.798	0.000	42%	Partial
TL → EE → JE	-	0.279	-	7.072	0.000	54%	Partial
Total indirect effect of both mediators	-	0.498	-	12.919	0.000	96%	Full



TL: transformational leadership; RE: relational energy; EE: emotional energy; JE: job engagement; SD: standard deviation

However, when both relational and emotional energy constructs were added in the model 2, we see the direct relationship between transformational leadership style and employee job engagement vanished and became non-significant. This is evident of full mediation via parallel joint mediators in the model (Hair et al., 2021; Hayes, 2014). Moreover, each indirect path as shown in Table IV are statistically significant at  $p < 0.01$  and separately both relational energy and emotional energy partially mediates the relationship as variance inflation factor (VAF) are less than 80% (see e.g., Hair et al., 2014). In addition, the VAF of 96% shows that both mediators jointly fully mediate the relationship of transformational leadership and employee job engagement (see e.g., Hair et al., 2014). Thus, we conclude that our H3 and H5 are partially supported while the H6 was fully substantiated.

Figure 1. Model 1 (simple regression)

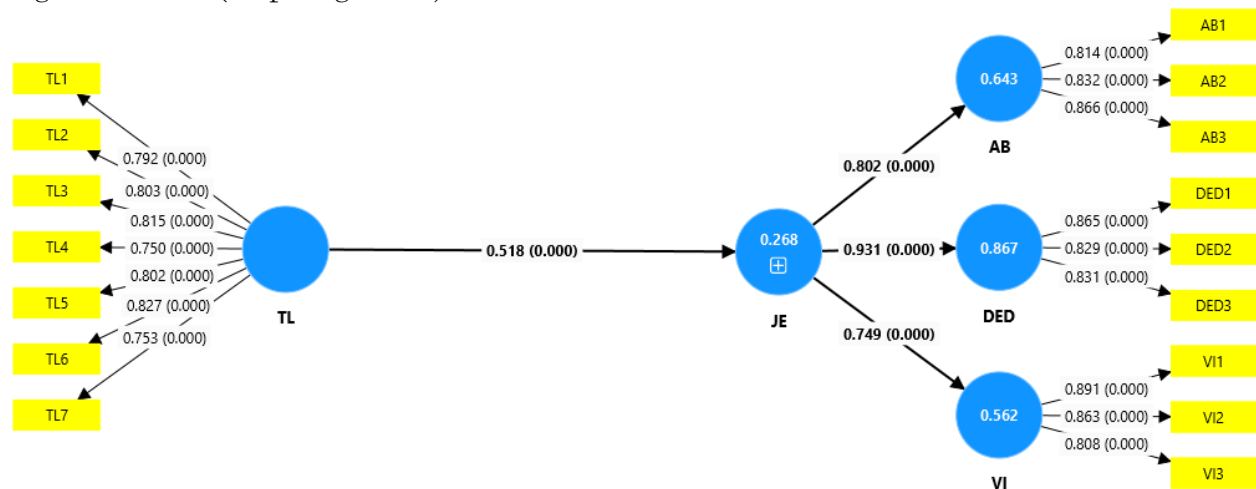
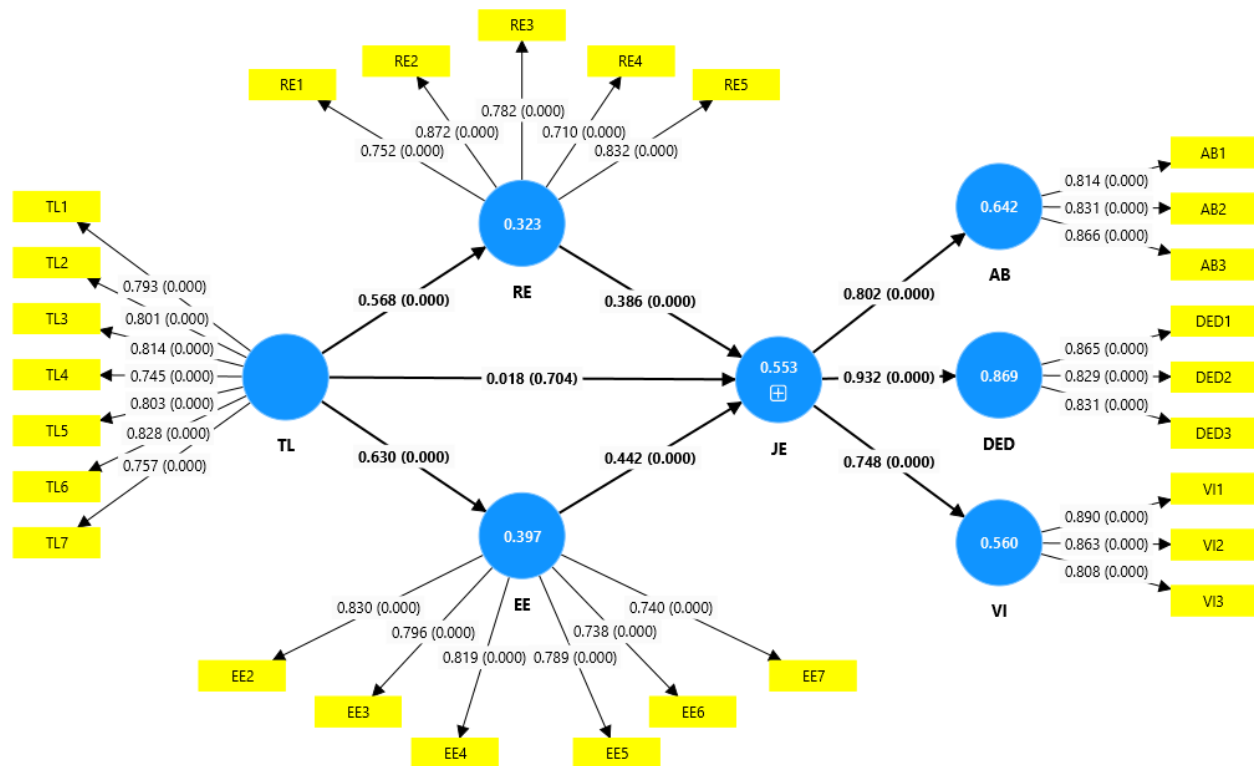


Figure 2: Model 2 (including both mediators)



TL: transformational leadership; RE: relational energy; EE: emotional energy; JE: job engagement; AB: absorption; VI: vigor; DED: dedication; item no. EE1 and EE8 were deleted due to lower than 0.70 factor loadings.

### Discussion and implications

In Watson's (2014) global workforce study, for example, it is reported that just 40% of workers worldwide exhibited high levels of engagement at work, with the other 60% either disengaged or feeling alone and unsupported. More recently, according to 2017 Gallup research, 85% of workers are either actively or passively disengaged from their jobs. Thereby, administration of any organization is usually concerned and wants engaged workers since they are a key component of an effective organization. Research has shown a correlation between employee job engagement and performance at the individual, unit, and organizational levels (Agarwal, 2014). The goal of the current study was to use the tenets of COR theory to examine the antecedents of this important concept of employee job engagement. In this way, our study contributes to the extant literature in the following ways.

From a theoretical standpoint, first our study makes a significant contribution to the two distinct bodies of knowledge including transformational leadership and job engagement. In this vein, the study adds to the limited but expanding corpus of research on job engagement and through an analysis of the impact of transformational leadership, relational and emotional energies, this study adds a great deal to our understanding of the organizational resources that might encourage workers to commit their full attention and skills to their job tasks. Second, our study replicated some direct relationships in a new organizational context and explored some

fresh direct relationship that to the knowledge of authors absent in the relevant literature. For example, we found positive relationship between transformational leadership and employee job engagement similar to previous studies (Aboramadan & Dahleez, 2020; Ghadi et al., 2013; Hayati et al., 2014; Tims et al., 2011). Our findings suggest that transformational leadership style is positively associated with relational energy of employees, such link is missing in the literature, yet it is in line with previous leadership study of Qu et al., (2023), while our study replicated the positive connection between relational energy and employee job engagement (Owens et al., 2016). Further, our study also confirmed relationship of transformational leadership style and emotional energy which is again a new contribution of the study, while relationship of emotional energy and employee job engagement was replicated in line with the previous research (Sepahvand & Khodashahri, 2021).

Apart from direct relationships, our study introduced two new underlying mechanisms that influence indirectly the link of transformational leadership and employee job engagement. Both the relational energy and emotional energy were relevant yet newer empirically tested previously. As expected, our results showed that both energies are at least partially mediated direct link of transformational leadership and employee job engagement and jointly in parallel fashion fully mediates the relationship. Testing the relationship with new underlying intermediaries, our study provided a deeper understanding that how transformational leadership becomes effective in engaging employees into job tasks and responded to call of different researchers ((Aryee et al., 2012) . Thus, we learned through the findings of this research that transformational leadership style is not just directly linked to employee job engagement but actually there are relational and emotional energies of employees that are developed through such leadership style which engage employees more into their job. Finally, the newer organizational and country contexts also make this study significant given that the majority of previous research is conducted in western and developed countries in profit organizations.

From a managerial or practical standpoint, our findings suggest that transformation leadership behavior improve the relational as well as emotional energy of the employees which further turn employees in to job engagement. Based on this, we suggest practicing managers to involve more and more in the transformational leadership behaviors in their organizations in order to engage their workforce into job engagement. We suggest that training programs should be initiated for practicing managers of NGOs of Khyber Pakhtunkhwa that properly improve their learning and skills regarding transformational leadership. It is also recommended that during the selection process of managers, some skills, abilities and behaviors relevant to transformational leadership should also be checked and candidates with higher scores in these aspects should be selected. We anticipate that by following the recommendations of this study the practicing managers can improve the job engagement of their employees and consequently avoid them from job burnout.

#### **Limitations and future research**

Though the study significantly contributed to extant literature, yet it has some limitations. First, the readers should be cautious in terms of generalization of the findings that are limited to NGO

sector of Khyber Pakhunkhwa. Second, our study's capacity to infer causality is hampered by the cross-sectional design; so, longitudinal and time lagged designs could be the better choice for future research for causal effects. Third, we uncovered only two mediators in parallel form between the relationship of transformational leadership and employee job engagement. Fourth, we used self-reported survey, which may be prone to common method bias. Next, there is possibility of some sequential indirect effects because Baker, (2019) asserts the emotional energy can cause relational energy of the employees. We encourage further researchers to replicate results of this study framework in different work and countries' context, as well as explore more new underlying mediating mechanisms. In addition, our study was limited to mediating effects, however, for more deeper understanding of the complex relationship between transformational leadership and employee job engagement boundary conditions may also be identified in future research that may have some buffering effects on the direct and/or indirect paths of this study' framework.

### References

- Aboramadan, M., & Dahleez, K. A. (2020). Leadership styles and employees' work outcomes in nonprofit organizations: the role of work engagement. *Journal of Management Development*, 39(7–8), 869–893. <https://doi.org/10.1108/JMD-12-2019-0499>
- Agarwal, U. A. (2014). Linking justice, trust and innovative work behaviour to work engagement. *Personnel Review*, 43(1), 41–73. <https://doi.org/10.1108/PR-02-2012-0019>
- Atwater, L., & Carmeli, A. (2009). Leader-member exchange, feelings of energy, and involvement in creative work. *The Leadership Quarterly*, 20, 264–275.
- Aryee, S., Walumbwa, F. O., Zhou, Q., & Hartnell, C. A. (2012). Transformational Leadership, Innovative Behavior, and Task Performance: Test of Mediation and Moderation Processes. *Human Performance*, 25(1), 1–25. <https://doi.org/10.1080/08959285.2011.631648>
- Baker, W. E. (2019). Emotional energy, relational energy, and organizational energy: Toward a multilevel model. *Annual Review of Organizational Psychology and Organizational Behavior*, 6, 373–395. <https://doi.org/10.1146/annurev-orgpsych-012218-015047>
- Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact*. Lawrence Erlbaum Associates.
- Bass, B. M., & Avolio, B. J. (1990). The implications of transactional and transformational leadership for individual, team, and organizational development. In R. W. Woodman & W. A. Pasmore (Eds.), *Research in organizational change and development* (pp. 231–272). JAI Press.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates.
- Carless, S. A., Wearing, A. J., & Mann, L. (2000). A short measure of transformational leadership. *Journal of Business and Psychology*, 14(3), 389–405. <https://doi.org/10.1023/A:1022991115523>
- Collins, R. (2004). *Interaction ritual chains*. Princeton University Press.
- Ghadi, M. Y., Fernando, M., & Caputi, P. (2013). Transformational leadership and work engagement: The mediating effect of meaning in work. *Leadership and Organization Development Journal*, 34(6), 532–550. <https://doi.org/10.1108/LODJ-10-2011-0110>

- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3<sup>rd</sup> ed.). Sage Publications.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)* (1<sup>st</sup> ed.). Sage Publications.
- Harter, J. and Rubenstein, K. (2020). "The 38 most engaged workplaces in the world put people first", available at: <https://www.gallup.com/workplace/290573/engaged-workplaces-world-put-people-first.aspx>.
- Hayati, D., Charkhabi, M., & Naami, A. Z. (2014). The relationship between transformational leadership and work engagement in governmental hospitals nurses: A survey study. *SpringerPlus*, 3(1), 1–7. <https://doi.org/10.1186/2193-1801-3-25>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524.
- Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 103–128.
- Hayes, A. F. (2014). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Breevaart, K. & Bakker, A. B. (2017). Daily Job Demands and Employee Work Engagement : The Role of Daily Transformational Leadership Behavior. *Journal of Occupational Health Psychology*, 23(3), 338–349.
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, 1(1), 3–30.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. In S. T. Fiske, D. L. Schacter, & C. Zahn-Waxler (Eds.), *Annual Review of Psychology*, 52, 397–422.
- Oh, J., Cho, D., & Lim, D. H. (2018). Authentic leadership and work engagement: the mediating effect of practicing core values. *Leadership and Organization Development Journal*, 39(2), 276–290. <https://doi.org/10.1108/LODJ-02-2016-0030>
- Okros, N., & Virga, D. (2022). Impact of workplace safety on well-being: The mediating role of thriving at work. *Personnel Review*. <https://doi.org/10.1108/pr-10-2021-0709>
- Owens, B. P., Baker, W. E., Sumpter, D. M. D., & Cameron, K. S. (2016). Relational energy at work: Implications for job engagement and job performance. *Journal of Applied Psychology*, 101(1), 35–49. <https://doi.org/10.1037/apl0000032>
- Qu, J., Khapova, S. N., Xu, S., Cai, W., Zhang, Y., Zhang, L., & Jiang, X. (2023). Does Leader Humility Foster Employee Bootlegging? Examining the Mediating Role of Relational Energy and the Moderating Role of Work Unit Structure. *Journal of Business and Psychology*, 38(6), 1287–1305.

<https://doi.org/10.1007/s10869-023-09884-w>

Qu, R., Janssen, O., & Shi, K. (2015). Transformational leadership and follower creativity: The mediating role of follower relational identification and the moderating role of leader creativity expectations. *Leadership Quarterly*, 26(2), 286–299. <https://doi.org/10.1016/j.leaqua.2014.12.004>

Rabiul, M. K., Mansur Ahmed, S. U., & Rashid, H. or. (2023). Connecting transformational leadership and emotional energy to job performance: the boundary role of meaningful work. *Journal of Hospitality Marketing and Management*, 32(8), 1126–1145. <https://doi.org/10.1080/19368623.2023.2225506>

Salanova, M., Lorente, L., Chambel, M. J., & Martínez, I. M. (2011). Linking transformational leadership to nurses' extra-role performance: the mediating role of self-efficacy and work engagement. *Journal of Advanced Nursing*, 67(10), 2256–2266.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716.

Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. (2008). Workaholism, burnout, and engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, 57(1), 173–203.

Sepahvand, R., & Bagherzadeh Khodashahri, R. (2021). The impact of humorous behavior on employee work engagement with the mediating role of emotional energy. *Organizational Behavior Studies Quarterly Journal*. <https://doi.org/20.1001.1.23221518.1400.10.1.6.1>

Sivanathan, N., Arnold, K. A., Turner, N., & Barling, J. (2004). Leading well: Transformational leadership and well-being. In P. A. Linley & S. Joseph (Eds.), *Positive psychology at work* (pp. 241–255).

Strom, D. L., Sears, K. L., & Kelly, K. M. (2014). Work engagement: The roles of organizational justice and leadership style in predicting engagement among employees. *Journal of Leadership and Organizational Studies*, 21(1), 71–82. <https://doi.org/10.1177/1548051813485437>

Sumpter, D. M., & Gibson, C. B. (2022). Riding the wave to recovery: Relational energy as an HR managerial resource for employees during crisis recovery. *Human Resource Management*, 61(1), 1–33. <https://doi.org/10.1002/hrm.2211>

Tims, M., Bakker, A. B., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement? *Leadership Quarterly*, 22(1), 121–131. <https://doi.org/10.1016/j.leaqua.2010.12.011>

Vincent-Höper, S., Muser, C., & Janneck, M. (2012). Transformational leadership, work engagement, and occupational success. *Career Development International*, 17(7), 663–682. <https://doi.org/10.1108/13620431211283805>

Xu, J., Liu, Y., & Chung, B. (2017). Leader psychological capital and employee work engagement: The roles of employee psychological capital and team collectivism. *Leadership and Organization Development Journal*, 38(7), 969–985. <https://doi.org/10.1108/LODJ-05-2016-0126>

Zahari, N., & Kaliannan, M. (2023). Antecedents of Work Engagement in the Public Sector: A

Systematic Literature Review. *Review of Public Personnel Administration*, 43(3), 557–582.  
<https://doi.org/10.1177/0734371X221106792>