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How Transformational Leadership Relates to Psychological Safety and Work Engagement Through Decent Work: Evidence from District Headquarters Hospitals in Punjab, Pakistan

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ABSTRACT

Public hospitals in Punjab face high patient volumes, resource constraints, and administrative hierarchies that may influence employee behavior. This study examines the effects of transformational leadership on psychological safety and work engagement, considering perceived decent work as a partial mediator. Data were collected through a structured five-point Likert-scale questionnaire from 250 employees across five District Headquarters (DHQ) hospitals in Pakpattan, Rawalpindi, Bahawalpur, Sahiwal, and Murree. Data were analyzed using SmartPLS for partial least squares structural equation modeling (PLS-SEM), with 5,000 bootstrap resamples, and SPSS for descriptive statistics, reliability, correlation, regression, and mediation analysis. Composite reliability ranged from .878 to .887, while average variance extracted ranged from .509 to .567. Discriminant validity was supported by HTMT and Fornell–Larcker criteria. Transformational leadership significantly predicted decent work ($\beta = .402$, $p < .001$), psychological safety ($\beta = .363$, $p < .001$), and work engagement ($\beta = .386$, $p < .001$). Decent work significantly predicted psychological safety ($\beta = .363$, $p < .001$) and work engagement ($\beta = .331$, $p < .001$). It partially mediated both relationships, with indirect effects of .146 and .133 (both $p < .001$), accounting for approximately 29% and 26% of the total effects, respectively.



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1. Introduction

For many people in Punjab, the district headquarters hospital is the only place where serious illness can be treated near home. These hospitals stand at the top of the district health system. They take referrals from basic health units and rural health centers, run emergency services day and night, and do so with budgets and staffing that seldom match demand. That is the pressure that everyone within them experiences on a daily basis, including clinicians, administrators, and finance officers. The ability to raise concerns and issues, participation and commitment to work, and the perception of fair and dignified working practices are not just about the workforce itself, but are central to patient safety and quality of service.

Leadership is one of the few organizational conditions which managers can change without waiting for the arrival of big new budget. Transformational leadership is as defined by Bass (1985): Leaders who convey an attractive vision, demonstrate behaviors they expect others to follow, challenge people to think differently, and consider individual followers. It is related to superior performance, higher satisfaction and higher commitment (Judge & Piccolo, 2004; Wang et al., 2011). However, much of this evidence is from the corporate environment of the western or east Asian economy. Not much is known about how the style operates within public sector hospitals in South Asian countries where the authority is hierarchical, resources are limited, and staff is not inclined to question authority figures.

Two factors of an employee's performance seem to be particularly relevant in such an environment. The first is the feeling of safety; a feeling shared by everyone to not be punished or humiliated for raising ideas, questions, concerns, and mistakes (Edmondson, 1999). People who are afraid of being blamed for a near miss may say nothing, and, that's precisely how avoidable harm goes on (Nembhard & Edmondson, 2006). The second, and a more positive and productive attitude is work involvement defined as being full of vigour, characterized by dedication, and absorbed in the work (Schaufeli et al., 2002). Engaged people bring energy and attention to their work, and engagement is related to better task and contextual

performance (Christian et al., 2011).

Less has been written about how these outcomes are created through leadership. One potential explanation is decent work. The concept of productive work done under conditions of freedom, equity, security and human dignity was coined by the International Labour Organization (1999). Since then, psychologists have rephrased it as something that workers experience: safe working environment, sufficient rest, and organizational values congruent with their own, fair compensation, and access to healthcare and other protections (Duffy et al., 2016, 2017). Decent work may be a pathway to leaders' well-being and behavior if a leader helps to transform such conditions for employees. While public hospital salary scales cannot be rewritten, supervisors are in control of rosters, recognition, workload distribution and tone of everyday interaction, and these are all factors that impact the sense of decent work.

Despite its appeal, the mediating role of decent work between leadership and employee outcomes has seldom been tested, and almost never among Pakistani healthcare employees. This study tries to close that gap with survey data from five DHQ hospitals in Punjab. It addresses three research questions:

1. Does transformational leadership predict employees' perceptions of decent work, psychological safety and work engagement?
2. Does decent work predict psychological safety and work engagement?
3. Does decent work mediate the relationship between transformational leadership and each of the two outcomes?

The study makes three contributions. It carries transformational leadership research into a public-sector healthcare setting in Pakistan, where evidence is thin. It treats decent work as an explanatory mechanism, and not only as an outcome or a policy goal, which links leadership scholarship with the psychology-of-working literature. And it places psychological safety and work engagement in one model, so that the strength of the same mechanism can be compared for a relational outcome (safety to speak) and an energetic one (engagement).

2. Literature Review and Hypothesis Development

2.1 Theoretical background

Three theoretical ideas underpin the model. The first is social exchange theory (Blau, 1964). Leaders who demonstrate care, purposefulness in their work and nurturing of their followers will elicit the same from followers: trust, effort and openness. Transformational leaders begin just this sort of exchange, and followers should follow suit by being more willing to speak the truth and engage more fully in their job description.

The second is the job demands-resources model of Bakker & Demerouti (2007) which suggests that job resources like support, autonomy and development opportunities can contribute to engagement by satisfying fundamental motivators, as well as by mitigating the negative effect of job demands. A transformational leader can be viewed as a resource giver. Another bundle of resources is decent work, which emphasizes decent conditions, decent treatment and decent reward. These make leadership a condition to be upstream, and enable decent work as a resource to be downstream and actualized by employees.

The third is the conservation of resources theory (Hobfoll, 1989). It suggests that individuals strive to gain and defend a desired resource and become nervous and withdrawn when the resource is in danger. If they are feeling safe, and treated fairly, then they have time and resources left for advocacy, and for completing their work. People experiencing a sense of being exploited will hold back energy and not take risks on anything. The 3 perspectives are combined into this chain: leadership, perceived working conditions, psychological and motivational outcomes.

2.2 Transformational leadership

Transformational leadership is defined by four related behaviours: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration (Bass and Riggio, 2006). Leaders who embody these behaviours set a credible example; they communicate a purpose that people want to pursue, and encourage new thinking and listen to each member of the team as a person. Carless et al. (2000) demonstrated that the behaviors could be summarized in a comprehensive global scale

measure that has been widely implemented in applied applications. Indeed, meta-analyses reveal that follower performance correlates positively with the style, both when it comes to follower criteria and organizational-level criteria (Wang et al., 2011), and that the style is one of the strongest predictors of follower satisfaction and effectiveness (Judge & Piccolo, 2004).

The style has its critics. Kark et al. (2003) warned that it can breed dependency on the leader alongside empowerment. Even so, where employees are used to directive supervision, the supportive and developmental side of transformational behavior may be a noticeable change and therefore carry extra weight.

2.3 Decent work

The concept of decent work emerged from the ILO's agenda and was reworded as a psychological concept by Blustein et al. (2016) and Duffy et al. (2016). In the psychology of working theory it has five elements; safe working conditions physically and interpersonally safe, hours that allow for free time and rest, organizational values that are compatible with family and social values, compensation that is adequate, and adequate health care. Duffy et al. (2017) created a scale to measure these conditions as perceived by people and Ferraro et al. (2018) subsequently validated a knowledge worker version of a questionnaire. Decent work is not only a property of the job, it is also a perception and an assessment of the job by the worker, and these perceptions are influenced by the perception of others who supervise them.

Decent work has been associated with job satisfaction, meaning of work and well-being in empirical studies, thus establishing its psychological meaning. A bit less is known about its antecedents. Leaders make decisions about the rostering of shifts, the allocation of workload, the treatment of staff and the importance placed on safety issues. Therefore, we can anticipate that staff who have more transformational supervisors will report more decent work. Lysova et al (2019) made a similar point by stating that meaningful work is fostered by key agents, namely leaders.

2.4 Psychological safety

Edmondson (1999) introduced psychological safety as a team-level belief that the team is safe

for interpersonal risk taking. Later reviews have confirmed its value for learning, voice and performance (Edmondson & Lei, 2014; Newman et al., 2017), and a meta-analysis tied it to attitudes, performance and learning behaviors (Frazier et al., 2017). In healthcare the stakes are unusually high. Nembhard and Edmondson (2006) discovered that team members in hospitals felt safe enough to participate in improvements when leaders were inclusive, even when there was significant status difference between team members, and Detert and Burris (2007) demonstrated that members of teams feel more empowered to speak up when their leaders are open.

The perception of safety cues is most clearly linked to the actions of leaders. A person who deals with errors with a curious attitude rather than a blaming one, who listens, who values individual contributions – provides reasons for interpersonal risks. Individualized consideration and intellectual stimulation are two things that are very well suited for this. Carmeli et al. (2010) found that psychological safety is an enabler for engagement in creative activities, which is also true for transformational action.

2.5 Work engagement

When work is meaningful to them, when they feel safe to express themselves, and when they have the means to do so, people engage, (Kahn 1990). Schaufeli et al. (2002) defined engagement as vigor, dedication, and absorption, and Schaufeli and Bakker (2004) demonstrated that the job's main predictors of engagement are job resources. There is consensus on the link between engagement and better performance and well-being (Bakker & Albrecht, 2018; Christian et al., 2011).

Multiple research studies show a correlation between leadership and engagement. When leaders were more transformationally, those who were, reported higher levels of engagement, which was partly due to higher levels of optimism and self-efficacy, by Tims et al. (2011) and Breevaart et al. (2014) in similar day-level results. Breadth and depth of both these indicators indicate that the work environment has a significant influence on engagement, and it is this influence on the resources that workers see in their work that is where decent work comes in.

2.6 Hypotheses

Transformational leadership and decent work.

Transformational leaders elevate the purpose of work, are concerned with the person and influence the culture surrounding work. In their scope of influence, they can ensure that their staff are respected, have time off when they need it, and have a voice in the matter when it comes to scheduling. Therefore, such a type of leadership should make the work of employees safer, fairer and in accordance with their values.

H1: Transformational leadership has a positive effect on decent work.

Transformational leadership and employee outcomes. Drawing on social exchange reasoning and the evidence reviewed above, transformational leadership should foster both interpersonal safety and engagement.

H2: Transformational leadership has a positive effect on psychological safety.

H3: Transformational leadership has a positive effect on work engagement.

Decent work and employee outcomes.

Employees who see their work as decent have more resources to draw on and fewer reasons to fear exploitation. They should feel safer speaking up and more energized to invest themselves.

H4: Decent work has a positive effect on psychological safety.

H5: Decent work has a positive effect on work engagement.

Mediation. If leadership improves decent work and decent work improves outcomes, decent work should carry part of the leadership effect.

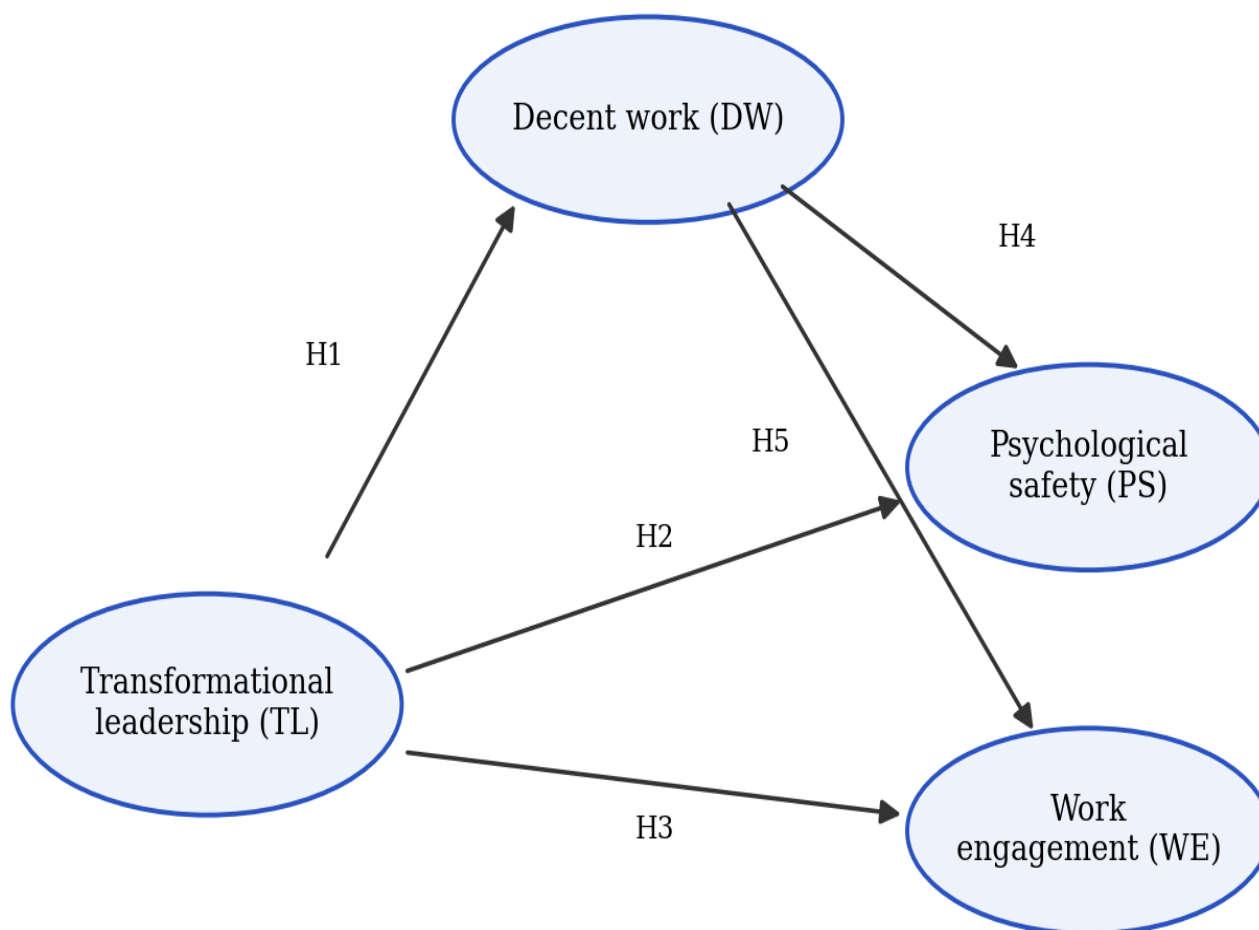
H6a: Decent work mediates the relationship between transformational leadership and psychological safety.

H6b: Transformational leadership is used to mediate the relationship between decent work and work engagement.

The conceptual model is as depicted in Figure 1. Decent work (mediator) predicts psychological safety (outcome 1) and work engagement (outcome 2); decent work is predicted by transformational leadership (exogenous construct); and both psychological safety and

work engagement are predicted by decent work.

Figure 1: Conceptual model and hypotheses



3. Methodology

3.1 Research design and approach

This was a quantitative, cross-sectional, explanatory study. Data were gathered once from employees by structured questionnaire, and the hypothesized relationships were tested with variance-based structural equation modeling. The work followed a positivist orientation, since the aim was to test hypotheses derived from theory against observable survey data and not to explore meanings inductively.

3.2 Population and sample

The target population was employees of District Headquarters hospitals in Punjab, Pakistan. The analytic sample comprises 250 respondents from five DHQ hospitals: Pakpattan (n = 60), Rawalpindi (n = 56), Bahawalpur (n = 55), Sahiwal (n = 54) and Murree (n = 25). No study

variable had missing values, so no imputation was needed.

The sample size is adequate for the model. Each endogenous construct has at most two predictors, and the commonly cited minimum for detecting moderate effects (R^2 of about .25) at 80% power and a 5% significance level is well below 250 (Hair et al., 2022).

3.3 Respondent profile

Table 1 describes the respondents. About two-thirds were men (66.4%) and 31.2% were women; six respondents (2.4%) chose not to state their gender. Most were young or in mid-career: 43.2% were aged 25 to 34, 22.8% were 35 to 44 and 19.2% were under 25. A little over half (52.8%) held a master's degree. Frontline staff formed the largest group (71.2%), followed by supervisors (18.0%) and managers (10.8%). The number of respondents in each functional area was fairly

evenly distributed from 18.4% (clinical/medical) to 23.2% (human resources) and 46.0% of respondents had 1-5 years of experience.

Table 1: *Demographic profile of respondents (N = 250)*

Characteristic	Category	f	%
Gender	Male	166	66.4
	Female	78	31.2
	Prefer not to say	6	2.4
Age (years)	Below 25	48	19.2
	25–34	108	43.2
	35–44	57	22.8
	45–54	32	12.8
	55 and above	5	2.0
Education	Intermediate	20	8.0
	Bachelor	71	28.4
	Master	132	52.8
	M.Phil	27	10.8
Job position	Frontline staff	178	71.2
	Supervisor	45	18.0
	Manager	27	10.8
Department	Human resources	58	23.2
	Finance	50	20.0
	Operations	49	19.6
	Administration	47	18.8
	Clinical/medical	46	18.4
Experience	Less than 1 year	20	8.0
	1–5 years	115	46.0
	6–10 years	68	27.2
	Above 10 years	47	18.8
Hospital	DHQ Pakpattan	60	24.0

Characteristic	Category	f	%
	DHQ Rawalpindi	56	22.4
	DHQ Bahawalpur	55	22.0
	DHQ Sahiwal	54	21.6
	DHQ Murree	25	10.0

3.4 Measures

All constructs were assessed on a multi-item Likert scale (1 = strongly disagree; 5 = strongly agree) and higher scores indicate greater agreement or more of the attribute with the scale. The scales were adapted from published scales; the source and number of items for each construct are included in Table 2. Transformational leadership (TL) was measured using seven items (TL1–TL7) taken from Dönmez and Toker (2017). Decent work (DW) was measured with seven items (DW1–DW7) from the Decent Work Questionnaire of Ferraro et al. (2018), which rests on the psychology of working framework (Duffy et al., 2016). Psychological safety (PS) was captured with six items (PS1–PS6) adapted from

Plouffe et al. (2023) and grounded in Edmondson's (1999) idea of safety for interpersonal risk taking. Work engagement (WE) was measured with six items (WE1–WE6) based on the Utrecht Work Engagement Scale as validated by Panthee et al. (2014), which covers vigor, dedication and absorption (Schaufeli et al., 2002).

The questionnaire also collected demographic information (gender, age, education, job position, department, experience and hospital). Participation was voluntary, responses were anonymous and respondents were told that their answers would be used for academic purposes only.

Table 2: *Measurement scales and sources*

Sr. No.	Construct	Item codes	No. of items	Scale adapted from	Response scale
1	Transformational leadership (TL)	TL1–TL7	7	Dönmez & Toker (2017)	Five-point Likert
2	Psychological safety (PS)	PS1–PS6	6	Plouffe et al. (2023)	Five-point Likert
3	Work engagement (WE)	WE1–WE6	6	Panthee et al. (2014)	Five-point Likert
4	Decent work (DW)	DW1–DW7	7	Ferraro et al. (2018)	Five-point Likert
	Total	26 indicators	26	Four constructs	1 = Strongly disagree; 5 = Strongly agree

3.5 Analytical strategy and software

Two software packages were used. IBM SPSS Statistics (IBM Corp., 2023) handled data screening, frequencies, descriptive statistics, normality checks, Cronbach's alpha, the Kaiser-Meyer-Olkin (KMO) and Bartlett tests, Harman's single-factor test, Pearson correlations, group

comparisons, multiple regression and a bootstrapped check of the mediation effects. SmartPLS (Ringle et al., 2022) was used for the main hypothesis tests through partial least squares structural equation modeling (PLS-SEM).

PLS-SEM was chosen for several reasons. It suits predictive, theory-extending models that contain several constructs and a mediator. It does not

require multivariate normality, which matters here because three of the four composite scores departed modestly from normality in the Shapiro-Wilk test. And it works well with moderate sample sizes (Hair et al., 2019; Hair et al., 2022). The path-weighting scheme was used with a maximum of 300 iterations and a stop criterion of 10^{-7} . The significance of paths, loadings and indirect effects was evaluated by non-parametric bootstrapping with 5,000 resamples and percentile 95% confidence intervals.

The analysis followed the two-step procedure recommended by Hair et al. (2019). In the first step, the reflective measurement model was judged by indicator loadings ($\geq .70$ preferred, .40 to .70 acceptable when other criteria are met), internal consistency (Cronbach's alpha, rho_A and composite reliability $\geq .70$), convergent validity (average variance extracted, AVE $\geq .50$) and discriminant validity (the Fornell-Larcker criterion, cross-loadings and the heterotrait-monotrait ratio, HTMT, with a threshold of .85). In the second step, the structural model was evaluated through collinearity ($VIF < 3$), path coefficients and their significance, the coefficient of determination (R^2), effect size (f^2 ; .02, .15 and .35 for small, medium and large; Cohen, 1988), predictive relevance (Q^2 from blindfolding) and the standardized root mean square residual (SRMR $< .08$). Mediation was assessed with the bootstrapped indirect effect, following Zhao et al. (2010) and Preacher and Hayes (2008), and the variance accounted for (VAF) was used to show how much of the total effect was transmitted.

3.6 Common method bias

Because every construct was self-reported by the same respondents at a single point in time, common method variance was a possible concern (Podsakoff et al., 2003, 2012). Two checks were made. In Harman's single-factor test on all 26 items, the first unrotated factor explained 32.0% of the variance, well below the 50% at which one

factor would be considered dominant. In addition, full collinearity (Kock, 2015) was approached through the inner VIF values reported below, all of which were far under the 3.3 threshold.

3.7 Ethical considerations

Participation was voluntary, no names or identifying details were collected and respondents could stop at any time. Results are reported only in aggregate, and no individual or hospital-level performance is identified.

4. Data Analysis and Results

4.1 Descriptive statistics, normality and reliability (SPSS)

Descriptive statistics for the four composite scores are presented in Table 3, which are each the mean of its items on the five-point scale. The mean was also in the middle for each of the means, ranging from 2.92 (work engagement) to 2.96 (transformational leadership), meaning that staff members in these hospitals were not overwhelmingly positive or negative. Within the range of 0.83 to 0.91, the standard deviation indicates a healthy range of opinion. Skewness ranged from 0.02 to 0.20 and kurtosis from -0.37 to -0.70 which were within the ± 2 limits typically considered to be compatible with approximate normality. Transformational leadership did not fail the Shapiro-Wilk test for normality ($p = .102$), however decent work ($p = .005$), psychological safety ($p = .019$) and work engagement ($p = .013$) did. This test is very sensitive with 250 cases, and the negative kurtosis is not an extreme deviation, but rather a flat distribution. These departures were not a hindrance for PLS-SEM, since it is a distribution-free method that uses bootstrapping.

Cronbach's alpha was greater than .70 for all constructs which is within the .70 to .80 range required for internal consistency (Nunnally & Bernstein, 1994), from .832 for work engagement to .850 for decent work, showing the items on each scale to be consistent.

Table 3: Descriptive statistics, normality and reliability ($N = 250$)

Construct	Items	M	SD	Skewness	Kurtosis	Shapiro-Wilk p	Cronbach's α
Transformational leadership	7	2.96	0.83	0.08	-0.37	.102	.839
Decent work	7	2.93	0.84	0.20	-0.46	.005	.850
Psychological safety	6	2.95	0.91	0.02	-0.65	.019	.847
Work engagement	6	2.92	0.87	0.05	-0.70	.013	.832

Before the factor structure was examined, sampling adequacy was tested for all 26 items. The KMO value of .916 is described as superb in Kaiser's guidelines, and Bartlett's test of sphericity was significant, $\chi^2(325) = 2,523.73$, $p < .001$, so the correlation matrix was suitable for factor analysis. Four eigenvalues exceeded 1.0 (8.33, 2.25, 2.15 and 1.36), matching the four intended constructs and together explaining 54.2% of the variance.

4.2 Correlation analysis

Table 4 presents the Pearson correlations among the composite scores. All were positive and significant at the .001 level. Transformational leadership correlated moderately with decent work ($r = .40$), psychological safety ($r = .50$) and work engagement ($r = .52$). Decent work was related to psychological safety ($r = .51$) and to work engagement ($r = .48$). The weakest association, between psychological safety and work engagement ($r = .36$), is still moderate in size. No coefficient came near .80, which supports the view that the constructs are related but distinct.

Table 4: Pearson correlations among study variables ($N = 250$)

Variable	1	2	3	4
1. Transformational leadership	—			
2. Decent work	.400***	—		
3. Psychological safety	.503***	.508***	—	
4. Work engagement	.515***	.484***	.360***	—

Note. *** $p < .001$ (two-tailed).

4.3 Measurement model assessment (SmartPLS)

The reflective measurement model had 26 indicators on four latent constructs. The PLS algorithm converged after five iterations, far fewer than the 300 allowed. Table 5 shows the results.

Indicator reliability. Standardized outer loadings lay between .684 and .793 and were all significant at the .001 level in the bootstrap (t values from 15.07 to 35.17). Three indicators, TL2 (.685), PS2 (.684) and DW4 (.693), were marginally below the .70 guideline. Hair et al. (2022) recommend deletion of the indicator only when it raises the composite reliability and/or AVE above the

threshold. These three items were already close to .70 and their constructs met every other criterion, so they were kept, which also preserves the content coverage of each scale.

Internal consistency. Cronbach's alpha (0.832 – 0.850) and rho_A (0.833 – 0.851) and composite reliability (0.878 – 0.887) were all greater than 0.70, with none exceeding 0.95. The internal consistency therefore was acceptable.

Convergent validity. AVE scores were .509 for transformational leadership, .526 for decent work, .545 for work engagement and .567 for psychological safety. Both are above .50 (Fornell & Larcker, 1981); this means that each construct

accounts for over 50% of the variance in its indicators. The value for transformational leadership is just above the cut-off and should be interpreted with caution.

Table 5: *Measurement model: outer loadings, reliability and convergent validity*

Construct	Item	Loading	t	α	rho_A	CR	AVE
Transformational leadership	TL1	.702	17.92	.839	.842	.879	.509
	TL2	.685	15.07				
	TL3	.692	19.53				
	TL4	.712	20.11				
	TL5	.720	20.17				
	TL6	.730	21.61				
	TL7	.754	26.11				
Decent work	DW1	.738	23.27	.850	.851	.886	.526
	DW2	.753	24.26				
	DW3	.732	23.70				
	DW4	.693	18.14				
	DW5	.714	21.59				
	DW6	.720	21.47				
	DW7	.726	21.18				
Psychological safety	PS1	.756	26.71	.847	.851	.887	.567
	PS2	.684	17.03				
	PS3	.793	35.17				
	PS4	.719	18.48				
	PS5	.769	28.51				
	PS6	.792	32.27				
Work engagement	WE1	.710	19.90	.832	.833	.878	.545

Construct	Item	Loading	t	α	rho_A	CR	AVE
	WE2	.722	19.56				
	WE3	.762	26.31				
	WE4	.757	26.88				
	WE5	.726	23.46				
	WE6	.750	26.01				

Note. α = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted. All loadings were significant at $p < .001$ (5,000 bootstrap resamples).

Discriminant validity. Three tests were applied. Under the Fornell-Larcker criterion, the square root of each construct's AVE (.714 for transformational leadership, .725 for decent work, .753 for psychological safety and .738 for work engagement) was greater than the construct's correlations with the others, the highest being .519 (Table 6). In the cross-loading matrix, every item loaded more strongly on its own construct than on any other, and the highest off-construct loadings

were modest: PS3 correlated .437 with decent work against .793 with its own construct, and TL6 correlated .442 with work engagement against .730 with transformational leadership. Finally, all HTMT ratios were below the conservative .85 threshold, with a maximum of .617 between transformational leadership and work engagement (Table 7). Discriminant validity was therefore established.

Table 6: Fornell-Larcker criterion

Construct	1	2	3	4
1. Transformational leadership	.714			
2. Decent work	.402	.725		
3. Psychological safety	.509	.509	.753	
4. Work engagement	.519	.486	.362	.738

Note. Bold diagonal values are square roots of AVE; off-diagonal values are latent variable correlations.

Table 7: Heterotrait-monotrait ratio (HTMT)

Construct	1	2	3	4
1. Transformational leadership	—			
2. Decent work	.475	—		
3. Psychological safety	.597	.599	—	
4. Work engagement	.617	.576	.430	—

4.4 Structural model assessment (SmartPLS)

Collinearity. Inner VIF values for

transformational leadership and decent work as predictors of each outcome were 1.19, and the highest outer VIF among the indicators was 1.93

(a psychological safety item). Both are well below 3, so collinearity and, by extension, common method bias were not a serious threat.

Path coefficients. Table 8 and Figure 2 give the structural results. Transformational leadership had a positive and significant effect on decent work ($\beta = .402$, $t = 7.93$, $p < .001$, 95% CI [.307, .506]), which supports H1. It also had positive direct

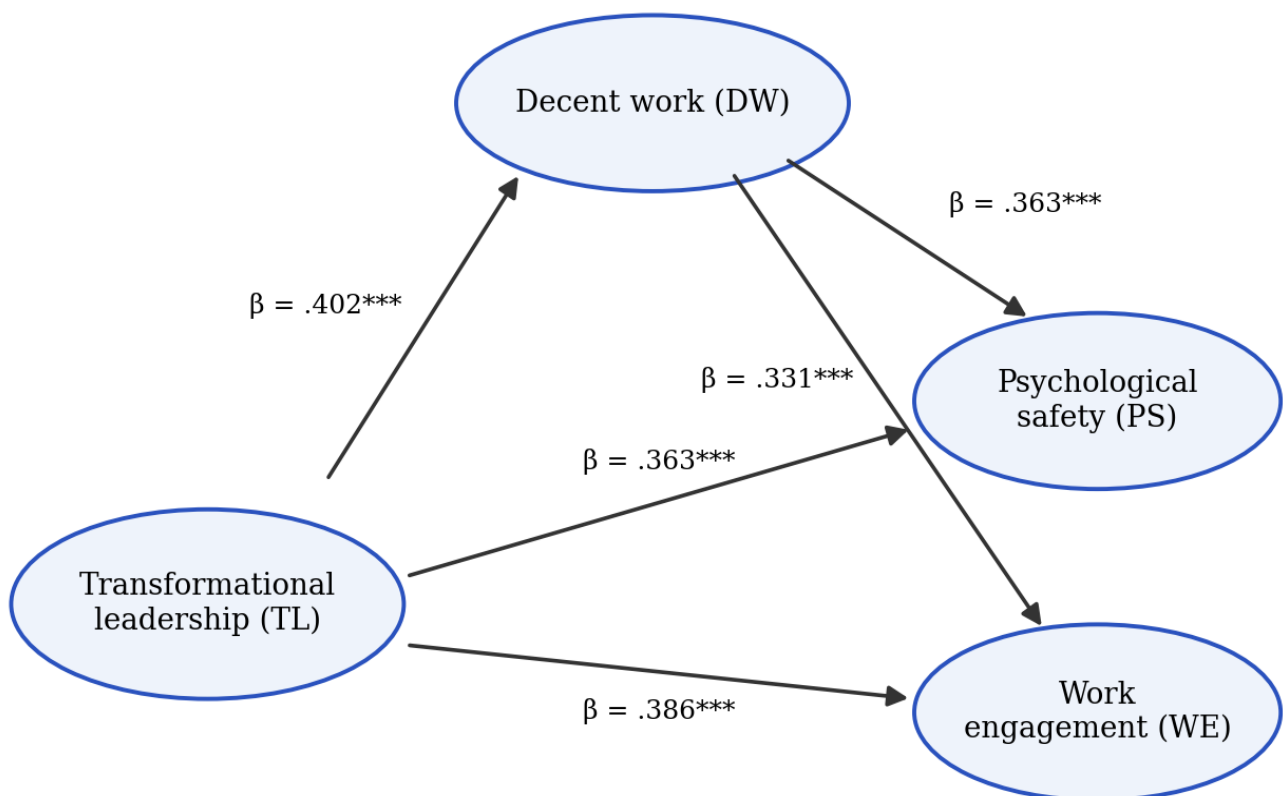
effects on psychological safety ($\beta = .363$, $t = 7.05$, $p < .001$, 95% CI [.260, .462]) and work engagement ($\beta = .386$, $t = 7.00$, $p < .001$, 95% CI [.275, .492]), supporting H2 and H3. Decent work positively predicted psychological safety ($\beta = .363$, $t = 6.96$, $p < .001$, 95% CI [.259, .465]) and work engagement ($\beta = .331$, $t = 6.22$, $p < .001$, 95% CI [.225, .433]), supporting H4 and H5. No confidence interval contained zero.

Table 8: Structural model results: direct effects (5,000 bootstrap resamples)

Hypothesis	Path	β	SE	t	p	95% CI	f ²	Decision
H1	TL → DW	.402	.051	7.93	< .001	[.307, .506]	.193	Supported
H2	TL → PS	.363	.051	7.05	< .001	[.260, .462]	.175	Supported
H3	TL → WE	.386	.055	7.00	< .001	[.275, .492]	.196	Supported
H4	DW → PS	.363	.052	6.96	< .001	[.259, .465]	.176	Supported
H5	DW → WE	.331	.053	6.22	< .001	[.225, .433]	.144	Supported

Note. TL = transformational leadership; DW = decent work; PS = psychological safety; WE = work engagement. Two-tailed *p* values from the bootstrap *t* statistics.

Figure 2: Estimated structural model (standardized path coefficients; *** $p < .001$)



Explanatory power. When considering the

amount of variance explained, transformational

leadership accounted for 16.2% (Cohen 1988, small to moderate) of the variance in decent work ($R^2 = .162$, 95% CI [.094, .256]). Leadership and decent work together explained 37.0% of the variance in psychological safety ($R^2 = .370$, 95% CI [.285, .470]) and 36.2% in work engagement ($R^2 = .362$, 95% CI [.269, .471]).

Effect size and relevance. The f^2 values (Table 8) ranged from .144 to .196, which puts every path just under or around the medium benchmark of .15. Blindfolding with an omission distance of

seven (eight for decent work, because its seven items would otherwise be omitted in a single pass) gave Q^2 values of .06 for decent work, .21 for psychological safety and .19 for work engagement. All were above zero, which indicates predictive relevance, although the value for decent work is small, in line with its modest R^2 .

Model fit. The standardized root mean square residual was .056, under the .08 cutoff that signals acceptable approximate fit.

Table 9: Explanatory power and predictive relevance

Endogenous construct	R^2	95% CI	Q^2
Decent work	.162	[.094, .256]	.06
Psychological safety	.370	[.285, .470]	.21
Work engagement	.362	[.269, .471]	.19

4.5 Mediation analysis

Table 10 reports the indirect, direct and total effects. The indirect effect of transformational leadership on psychological safety via decent work was .146 (SE = .029, $t = 5.07$, $p < .001$, 95% CI [.096, .209]). The indirect effect on work engagement was .133 (SE = .027, $t = 4.86$, $p < .001$, 95% CI [.086, .192]). The intervals do not include zero. Although the direct effects also remained strong with the addition of the mediator,

decent work was found to be a complementary (partial) mediator in both situations (Zhao et al., 2010), thus supporting H6a and H6b. The VAF was 28.7% for psychological safety (.146 / .509) and 25.7% for work engagement (.133 / .519); that is, about one-fourth to just over one-fourth of the total leadership effect was through decent work. The rest was direct, which suggests that leaders also influence these outcomes through channels not measured here, such as trust or role clarity.

Table 10: Direct, indirect and total effects of transformational leadership

Outcome	Direct effect	Indirect effect (via DW)	95% CI (indirect)	Total effect	VAF	Mediation
Psychological safety	.363***	.146***	[.096, .209]	.509***	28.7%	Partial
Work engagement	.386***	.133***	[.086, .192]	.519***	25.7%	Partial

Note. *** $p < .001$. VAF = variance accounted for (indirect / total).

4.6 Robustness check in SPSS: regression and bootstrapped mediation

To cross-check the PLS results with a different estimator, ordinary least squares regressions were run on the composite scores (Table 11). The regression assumptions were acceptable: Durbin-Watson values lay between 1.94 and 2.08, and the

VIF of the two predictors in the multiple regressions was about 1.19.

Alone, transformational leadership explained 16.0% of the variance in decent work, $F(1, 248) = 47.33$, $p < .001$ ($B = 0.41$, $\beta = .40$). It explained 25.3% of the variance in psychological safety, $F(1, 248) = 83.78$, $p < .001$ ($\beta = .50$), and 26.5%

in work engagement, $F(1, 248) = 89.44$, $p < .001$ ($\beta = .52$). When decent work entered the equations, R^2 rose to .365 for psychological safety, $F(2, 247) = 70.95$, $p < .001$, and to .357 for work engagement, $F(2, 247) = 68.59$, $p < .001$. Both predictors were significant in both models, and the coefficient of transformational leadership dropped (from $\beta = .50$ to .36 for psychological safety and from .52 to .38 for work engagement) without vanishing. This is what is observed in partial mediation (Baron & Kenny, 1986).

The results of bootstrapped indirect effects (5000

samples, percentile intervals) supported the PLS findings. The unstandardized indirect effect was 0.160 (95% CI [0.100, 0.231]), the direct effect was 0.390 and the total effect was 0.551. For work engagement the indirect effect was 0.139 (95% CI [0.084, 0.201]), the direct effect 0.401 and the total effect 0.541. There were no zeros in either interval. The two tools gave the same results, and any minor numerical differences are due to PLS-SEM using a weighted score on the latent variables while regression is using a simple composite mean.

Table 11: Regression results (SPSS)

Dependent variable	Predictor	B	SE	β	t	p	R^2
Decent work	Transformational leadership	0.407	0.059	.400	6.88	< .001	.160
Psychological safety	Transformational leadership	0.551	0.060	.503	9.15	< .001	.253
Work engagement	Transformational leadership	0.541	0.057	.515	9.46	< .001	.265
Psychological safety	Transformational leadership	0.390	0.061	.356	6.44	< .001	.365
	Decent work	0.394	0.060	.366	6.61	< .001	
Work engagement	Transformational leadership	0.401	0.058	.382	6.87	< .001	.357
	Decent work	0.342	0.057	.331	5.95	< .001	

4.7 Group differences

One-way ANOVA and independent-samples t tests were used to determine if there were any differences among the four constructs between demographic groups. There were no significant differences found when the data were compared by gender, age, education, job position, experience, or hospital (all $p > .05$). Work

engagement by department, $F = 2.27$, $p = .062$ and psychological safety by hospital, $F = 2.00$, $p = .094$ were the smallest p values, although these did not become significant. Perceptions of leadership, decent work and the two outcomes were thus similar whoever the respondent was and whichever hospital they worked in, which supports pooling the five hospitals into one sample.

4.8 Summary of hypothesis testing

Table 12: Summary of hypotheses

Hypothesis	Statement	Result
H1	TL $\rightarrow$ DW	Supported
H2	TL $\rightarrow$ PS	Supported
H3	TL $\rightarrow$ WE	Supported

Hypothesis	Statement	Result
H4	DW $\rightarrow$ PS	Supported
H5	DW $\rightarrow$ WE	Supported
H6a	TL $\rightarrow$ DW $\rightarrow$ PS (mediation)	Supported (partial)
H6b	TL $\rightarrow$ DW $\rightarrow$ WE (mediation)	Supported (partial)

5. Discussion

The study aimed to determine if transformational leadership positively influences psychological safety and work engagement among hospital employees at DHQ in Punjab and if perceived decent work is a partial mediator in the relationship between transformational leadership and these variables. The answer is yes, both on the basis of the evidence of 250 people, and from the evidence of the vote. All hypothesized paths were positive and significant, and the mediation tests revealed that the role of decent work is relevant but not primary in the leadership effect.

5.1 Leadership and decent work

The model begins with decent work and the positive relationship with transformational leadership ($\beta = .402$) is perhaps the novel finding. One could assume that, decent work is more of a policy or labour market question, and that the role of a hospital supervisor has little impact on it. The data, however, indicate otherwise. This also correlated with employees' rate of their immediate leaders' inspiring, supportive and intellectually stimulating qualities, which they also rated as safer, fairer and more values-friendly in their working conditions. This is in line with the argument of Lysova et al. (2019) that leadership is a key factor in shaping the meaning and dignity of work, and it adds a specific organizational precondition to the psychology of working model (Duffy et al., 2016) of perceived decent work.

One interpretation that can be made is that supervisors do an interpretation of the organizational conditions for their employees. In public hospitals, pay rates and service rules go higher than ward or department levels, while supervisors determine the duty rosters, observe rest breaks, and observe the rules regarding

recognition and health and safety issues. A transformational manager is more likely to deal with these day-to-day issues as courteous. Leadership accounted for just 16% of the variation in decent work, however. The model allows for room for factors that are not necessarily under the control of leaders, such as compensation, infrastructure, and access to healthcare.

5.2 Leadership, psychological safety and work engagement

The direct effect of transformational leadership on psychological safety ($\beta = .363$) is consistent with Detert and Burris (2007) and Nembhard and Edmondson (2006) who found that leaders' openness and inclusiveness promote participation and speaking in healthcare and other organizations. Also, it aligns with Carmeli et al. (2010) who suggested that leader behaviors that demonstrate availability and appreciation create a sense of psychological safety. Individualized consideration and intellectual stimulation might be particularly beneficial in a hierarchical culture, one in which challenging the superior can have social consequences, and where transformational leadership is open to input. The outcome is good for patient safety: promoting questions and making staff feel safe asking questions helps the organization identify errors and learn from them.

The direct impact of the transformational behavior on work engagement ($\beta = .386$) was slightly larger and in line with the studies of Tims et al. (2011) and Breevaart et al. (2014) who linked transformational behavior to work engagement. From a job demands–resources angle, a leader who communicates purpose and shows concern supplies a motivational resource that sustains vigor, dedication and absorption. “Relationship strength” is also representative of the larger body of meta-analytic studies that shows that transformational leadership is significantly related

to a number of follower outcomes (Judge & Piccolo, 2004; Wang et al., 2011).

5.3 The role of decent work

Decent work was a positive predictor of psychological safety ($\beta = .363$) and work engagement ($\beta = .331$). These coefficients are nearly as high as the coefficient for leadership, meaning that people's perceptions of working conditions are as important as their perceptions of leadership. The link between feelings of psychological safety and the connection is intuitive: When people feel physically and interpersonally safe, when they are treated fairly, when they work in an organization whose values they believe in, they have less reason to be afraid of speaking up. One explanation for engagement is provided by the theory of conservation of resources (COR) (Hobfoll, 1989). If not focused on self-protection, workers can allocate their energy to work.

The mediation outcome is the picture that is completed. The indirect effects (.146 for psychological safety and .133 for work engagement) were significant, and the VAF values indicate that approximately 29% and 26% of the total leadership effects went via decent work. The mediation is complementary as both the indirect path and the direct path were positive (as per the classification of Zhao et al., 2010). Leadership is thus important in two respects. It enhances decent conditions perceived by employees and, in addition to that, creates trust, motivation and a sense of security directly. It is important to note that over 70% of the total effect remained direct, and decent work is only one of several mechanisms.

The two indirect effects are similar in size. This appears to be equally effective for a relational outcome (safety to speak up) and an energetic outcome (engagement). This is consistent with Kahn's (1990) understanding that psychological safety and meaningfulness are both intrinsic factors for engagement, and can indicate that interventions that foster one can also foster the other. The two outcomes were only correlated at $r = .36$, the weakest link in the matrix and should not be used interchangeably.

5.4 A note on response patterns

It does have one feature that should be candidly

mentioned. The item means were very close to the midpoint of the scales for each construct and the item distributions had negative kurtosis. These patterns may occur when the views in the sample are genuinely mixed but may instead be characteristic of the response style or represent sampling characteristics. They have no impact on the internal consistency and on the structural relationships reported here. This does not mean that such descriptive statements as "Moderate" satisfaction of employees with their leaders, should be taken at face value. The relationships among variables are better supported than the absolute levels.

6. Implications

6.1 Theoretical implications

The study has three theoretical contributions. First, it combines the concept of transformational leadership with the psychology of working framework because it demonstrates that leadership is linked to the perception of decent work, which means that decent work can be designed within organizations and is not a structural inevitability. Second, it highlights the link between leadership and perceived decent work, thereby reinforcing the view that decent work is not a structural given within organizations, but can be shaped. Second, it provides a basis for decent work as a mediator in leadership, complementing the typical mediators like trust, empowerment and identification. Third, it brings social exchange theory and resource-based theory into the public sector hospital context of South Asian people, which helps validate the cross-cultural applicability of these theories across cultures with different power distance.

6.2 Practical implications

The results indicate a number of practical implications for hospital administrators and the Primary and Secondary Healthcare Department. Leadership development should be a strategic investment, first. Medical superintendents, department heads and supervisors can be asked to practice these transformational behaviors that are most closely related to the outcomes studied: sharing a clear purpose, listening to individual concerns and encouraging questions and new ideas. For example, supervision can be done through coaching and feedback, such as staff

feedback on a regular basis, which helps supervisors become aware of their behavior.

Secondly, supervisors should be encouraged and provided with the means to enhance the component(s) of decent work in their control. These include fair and predictable duty rotations, protected rest periods, visibility on workplace safety, respectful treatment and clear recognition. For those hospitals with central pay and benefits, hospital leaders can advocate on behalf of their employees to the top and honestly tell them what is and isn't possible.

Third, psychological safety is a skill that can be taught. Hospital leaders can establish routines that view reported errors and near misses as learning opportunities rather than disciplinary actions and ensure that junior staff have the floor first and respond visibly to concerns raised, during brief team debriefs. Such routines were more likely to be successful if decent work and psychological safety were linked together; the basic conditions of work were even more likely to be successful.

Last but not least, policy makers could include the concept of “perceived decent work” and “psychological safety” in the regular staff surveys that are conducted in DHQ hospitals. The indicators would help identify the need for early attention to leadership if they were tracked alongside more traditional service delivery indicators.

7. Limitations and Directions for Future Research

Some of the conclusions are limited. It was a cross sectional design and not based on temporal evidence, but on theory. For instance, employees who are engaged and safe may be more likely to give positive ratings to their leaders and conditions. A better study design to establish causality would be a longitudinal or multi-wave design or an experimental leadership intervention.

Data were self-reported at one point in time. Harman's test and VIF values were not indicative of significant common method bias, which should not be interpreted as conclusive. Objective measures, like time-separated measurement, absenteeism, and incident reporting, as well as supervisor-ratings of engagement, could be added to future studies.

The sample selection was non-random probability sampling and the sample was selected from five DHQ hospitals in Punjab and generalization to other provinces, private hospitals and other professions should be made with caution. Approximately 71% of respondents were frontline staff, and clinical and non-clinical departments were combined; a larger number of respondents would be required to test the model to see if it is different for doctors, nurses and administration staff. However, the convergent validity of the transformational leadership scale was just above the .50 criterion and three items had loadings slightly below .70, suggesting that further refinement of the scales in this context might be beneficial.

A single mediator was included in the model. Other likely pathways are trust in the leader, empowerment, role clarity, and job resources, and the direct effects are quite large, suggesting that some of these may be at work. Future research could involve testing parallel or serial mediation, or explore moderators like power distance orientation, leader gender/position. Interviews with hospital workers, as well as other qualitative research, would also illustrate how good work is interpreted by workers at the site and how managers contribute to this from a day-to-day perspective.

8. Conclusion

This study explored the association between transformational leadership with psychological safety and work engagement among the employees of DHQ hospitals in Lahore, Punjab, Pakistan and whether decent work would explain these associations. The results of the analyses conducted with PLS-SEM in SmartPLS and descriptive, correlational and regression analyses in SPSS indicated that: transformational leadership was positively related to decent work, to psychological safety, and to work engagement; decent work was positively related to both outcomes; and decent work partially mediated the relationship of transformational leadership with both outcomes. The model accounted for more than 33% of the variance of the two outcomes.

The message at the center is applied. Supervisor behaviour is one of the more readily available levers to improving the working life within a public hospital where budgets and structures

evolve slowly. Leaders who inspire, listen and treat employees as individuals seem to make work more decent, and workers who feel decent about the work are more likely to ensure that they speak up. Therefore, investing in leadership

development—along with the daily environment in which supervisors can make a difference—is a good idea for a healthier workforce and ultimately for safer patient care.

Conflict of Interest

The authors showed no conflict of interest.

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References

- Bakker, A. B., & Albrecht, S. (2018). Work engagement: Current trends. *Career Development International*, 23(1), 4–11. <https://doi.org/10.1108/CDI-11-2017-0207>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates.
- Blau, P. M. (1964). *Exchange and power in social life*. Wiley.
- Blustein, D. L., Olle, C., Connors-Kellgren, A., & Diamonti, A. J. (2016). Decent work: A psychological perspective. *Frontiers in Psychology*, 7, Article 407. <https://doi.org/10.3389/fpsyg.2016.00407>
- Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014). Daily transactional and transformational leadership and daily employee engagement. *Journal of Occupational and Organizational Psychology*, 87(1), 138–157. <https://doi.org/10.1111/joop.12041>
- 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>
- Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal*, 22(3), 250–260. <https://doi.org/10.1080/10400419.2010.504654>
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64(1), 89–136. <https://doi.org/10.1111/j.1744-6570.2010.01203.x>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, 50(4), 869–884. <https://doi.org/10.5465/amj.2007.26279183>
- Duffy, R. D., Allan, B. A., England, J. W., Blustein, D. L., Autin, K. L., Douglass, R. P., Ferreira, J., & Santos, E. J. R. (2017). The development and initial validation of the Decent Work Scale. *Journal of Counseling Psychology*, 64(2), 206–221. <https://doi.org/10.1037/cou0000191>
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of working theory. *Journal of Counseling Psychology*, 63(2), 127–148. <https://doi.org/10.1037/cou0000140>
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. <https://doi.org/10.2307/2666999>
- Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 23–43. <https://doi.org/10.1146/annurev-orgpsych-031413-091305>
- Ferraro, T., Pais, L., dos Santos, N. R., & Moreira, J. M. (2018). The decent work questionnaire: Development and validation in two samples of knowledge workers. *International Labour Review*, 157(2), 243–265. <https://doi.org/10.1111/ilr.12039>

- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, 70(1), 113–165. <https://doi.org/10.1111/peps.12183>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- 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. <https://doi.org/10.1037/0003-066X.44.3.513>
- IBM Corp. (2023). *IBM SPSS Statistics for Windows* (Version 29.0) [Computer software]. IBM Corp.
- International Labour Organization. (1999). *Decent work: Report of the Director-General* (International Labour Conference, 87th Session). International Labour Office.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768. <https://doi.org/10.1037/0021-9010.89.5.755>
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.5465/256287>
- Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology*, 88(2), 246–255. <https://doi.org/10.1037/0021-9010.88.2.246>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>
- Lysova, E. I., Allan, B. A., Dik, B. J., Duffy, R. D., & Steger, M. F. (2019). Fostering meaningful work in organizations: A multi-level review and integration. *Journal of Vocational Behavior*, 110, 374–389. <https://doi.org/10.1016/j.jvb.2018.07.004>
- Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27(7), 941–966. <https://doi.org/10.1002/job.413>
- Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review*, 27(3), 521–535. <https://doi.org/10.1016/j.hrmr.2017.01.001>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Panthee, B., Shimazu, A., & Kawakami, N. (2014). Validation of the Nepalese version of the Utrecht Work Engagement Scale. *Journal of Occupational Health*, 56(6), 421–429.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>

- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
- Ringle, C. M., Wende, S., & Becker, J.-M. (2022). *SmartPLS 4* [Computer software]. SmartPLS GmbH. <https://www.smartpls.com>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92. <https://doi.org/10.1023/A:1015630930326>
- Tims, M., Bakker, A. B., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement? *The Leadership Quarterly*, 22(1), 121–131. <https://doi.org/10.1016/j.leaqua.2010.12.011>
- Wang, G., Oh, I.-S., Courtright, S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & Organization Management*, 36(2), 223–270. <https://doi.org/10.1177/1059601111401017>
- Zhao, X., Lynch, J. G., Jr., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206. <https://doi.org/10.1086/651257>