

HOW MINDFULNESS ENHANCES INNOVATIVE WORK BEHAVIOR AMONG HEALTHCARE EMPLOYEES IN PAKISTAN: THE MEDIATING ROLE OF THRIVING AT WORK AND THE MODERATING ROLE OF PSYCHOLOGICAL EMPOWERMENT

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ABSTRACT

This study investigates the impact of mindfulness on innovative work behavior among healthcare employees in Pakistan, while examining the mediating role of thriving at work and the moderating role of psychological empowerment. Drawing on the Socially Embedded Model of Thriving at work and the Broaden-and-Build Theory of positive emotions, the study proposes a moderated mediation framework to explain how individual psychological resources translate into innovative outcomes in high-stress healthcare settings. The nature of the study is quantitative, cross-sectional, while data collected from healthcare professionals working in public and private hospitals in Peshawar, Pakistan. Structural Equation Modeling (SEM) was employed to test the hypothesized relationships. The results reveal that mindfulness has a significant positive effect on IWB, both directly and indirectly through thriving at work. Thriving at work characterized by vitality and continuous learning was found to partially mediate this association, indicating that mindful employees are more likely to experience psychological growth, which in turn fosters innovation. Furthermore, psychological empowerment significantly moderates the relationship between thriving at work and innovative work behavior, such that the relationship is stronger when employees perceive higher levels of autonomy, competence, and impact. The findings also confirm a significant moderated mediation effect, suggesting that the indirect influence of mindfulness on innovative work behavior via thriving is contingent upon the level of psychological empowerment. This study contributes to the literature by integrating mindfulness, thriving, and empowerment into a unified framework and extending their application to the healthcare sector in a developing country context. Practically, the findings highlight the importance of fostering mindfulness, promoting employee thriving, and enhancing empowerment to stimulate innovation and improve healthcare service delivery.

Keywords: Mindfulness; Innovative Work Behavior; Thriving at Work; Psychological Empowerment; Healthcare Employees; Pakistan

1-INTRODUCTION

Healthcare organizations operate in intensely challenging and environments, where employees must provide high-quality care while adapting to ever-changing technology, procedures, and patient expectations. Innovative work behavior (IWB) reflects as central driver of organizational performance, quality of delivered services, and patient safety in such settings. The ability to develop, foster, and work with new ideas, processes, or solutions in a work role or in an organization is known as innovative work behavior (Scott & Bruce, 1994; Tarsuslu & Baş, 2024). Nevertheless, the healthcare industry, especially in the developing world, such as Pakistan, is always posed with long working hours,

scarce resources, and emotional stress, which may negatively affect the ability of the employees to use innovations. The healthcare system in Pakistan is characterized by high job demands, staffing shortages, and insufficient institutional support in which employees work (Ali & Qiu, 2022). These stressors not only impact the psychological health of the employees but also decrease their capacities in thinking creatively and taking proactive and innovative actions. Thus, it is both theoretically and practically important to define the psychological resources that may be used to improve innovation in such stressful environments.

In this respect, mindfulness has become an important individual psychological tool that can lead to positive employee returns. Mindfulness refers to a mindful, non-judgmental consciousness of internal and external experiences (Kabat-Zinn, 2003; Mehmood et al. 2023). It allows individuals to control emotions, minimize stress, and think flexibly, which are crucial for adaptive behavior at work. Previous studies have established that mindfulness is directly associated with employee thriving, creativity, and performance (Brown and Ryan, 2003). Mindful employees tend to be more alert, emotionally stable, and receptive to new experiences, which improves their capacity to develop and apply new innovative ideas. In spite of these reflections, the psychological processes by which mindfulness determines novel work behavior are not well studied, especially in the field of healthcare of third world economies.

To explore this important gap this study proposes T as mediating and moderated by PE (Spreitzer et al., 2005). Motivated employees are updated and constantly embrace their competencies, leading to increased motivation to fulfill their duties proactively and innovatively. Moreover, thriving model of socially embedded, where individual and contextual resources are associated and it attracts better performance outcomes (Spreitzer et al., 2005). Mindfulness would help employees flourish by ensuring that they are not distracted, uncontrollable in their emotions, and receptive to learning experiences in the workplace.

In addition to this mediating process, the current study suggests that psychological empowerment is a significant boundary condition that enhances the relationship between thriving at work and innovative work behavior. According to Spreitzer, (1995), PE is employees' perception of their sense of meaning, capability, autonomy, and influence at work. Given empowerment, employees feel more confident about their capabilities and are ready to take the initiative to apply new ideas. The limitation of turning thriving into innovative behavior can be achieved even in the case where employees are highly vitalized and learning.

The theoretical framework of this research is based on SMDT, which describes how the combination of individual and contextual variables helps foster employee development and success. Moreover, Fredrickson's (2001) broaden-and-build theory explains that positive psychological conditions extend thought-action repertoires and establish long-term personal resources that motivate creativity and innovation. The theoretical integration of these views gives the study a moderated mediation approach that indicates how mindfulness can cause innovative work behavior by thriving at work due to the impact of psychological empowerment.

The Pakistani healthcare setting offers a topical location for this inquiry. Employees in the healthcare sector in Pakistan are subjected to significant emotional pressures, resource constraints, and heavy workloads. Such circumstances render employees unable to act innovatively unless they receive proper psychological and organizational support. Although vital, a lack of literature indicates a large knowledge gap in empirical studies on mindfulness and innovation in the Pakistani healthcare sector.

This research has a number of contributions. First, it broadens the mindfulness literature by investigating its influence on innovative work behavior in a healthcare setting. Second, it found that thriving at work is a psychological process that explains how mindfulness can be applied to innovation. Third, it identified psychological empowerment as an important boundary condition that reinforces this relationship. Finally, the research adds to the expanding body of knowledge on positive organizational behavior by incorporating mindfulness, thriving, and empowerment into a single conceptual framework.

Thus, the main aim of the current study was to evaluate the impact of mindfulness on innovative work behavior among Pakistani healthcare employees, with work-related thriving as a mediating factor and psychological empowerment as a moderating factor. The results will have significant implications for healthcare managers who intend to promote employee innovation, well-being, and the performance of their organizations.

2- LITERATURE REVIEW

2.1 Theoretical Foundation

The proposed research is based on two theories, i.e. Socially Embedded Model of Thriving at work (SEMMDT) (Spreitzer et al., 2005) and supported by the Broaden-and-Build Theory (BBTPE) of Positive Emotions (Fredrickson, 2001). Such complementary theoretical lenses can give a powerful explanation of the transformation of mindfulness to innovative work behavior with the help of psychological processes in healthcare settings, which are highly stressful. Thriving as a psychological experience of vitality and learning, the Socially Embedded Model of Thriving at Work is conceptualized to emerge out of contextual and personal resources, and to result in improved individual functioning and performance outcomes (Spreitzer et al., 2005). The fact that thriving is both a dynamic and dynamic quality is strongly pertinent to the results of innovation in complex service setups like healthcare as it involves energy and constant skill advancement.

Meanwhile, the Broaden-and-Build Theory is based on the hypothesis that positive mental conditions increase cognitive and behavioral repertoires of people, which allows them to accumulate personal resources, including stability, innovation, and ability to solve problems over the long term (Fredrickson, 2001). In such a paradigm, mindfulness is considered as a cognitive-emotional asset that increases attention scope, decreases automatic reactivity, and increases exposure to new experiences, which leads to innovation.

2.2 Mindfulness and IWB

Mindfulness is described as a present-focused, non-judgment mindfulness of current experiences (Kabat-Zinn, 2003). It improves self-regulation, attention control, and emotional balance which are pivotal cognitive resources that are essential in adaptive work performance. There is evidence that mindfulness is positively linked with job performance, creativity, and psychological well-being (Brown and Ryan, 2003; Good et al., 2016).

Innovative work behavior is the deliberate creation, advocacy and application of novel concepts in the occupation (Scott and Bruce, 1994). In healthcare, innovation is especially significant, because of the need to constantly improve patient care and service delivery. Conscious employees have a higher likelihood of thinking divergently, and are more open to feedback as well as minimized their cognitive rigidity, promoting their ability to be inventive.

H1: Mindfulness is positively related to IWB among healthcare employees.

2.3 Mindfulness and Thriving at Work

A psychological condition wherein individuals are vital (sense of energy and aliveness), and constantly evolving (sense of constant growth) is described to be thriving at work (Spreitzer et al., 2005). High-performing employees are more participative, motivated and adaptive at work.

Mindfulness will help promote thriving by boosting attention awareness and decreasing emotional exhaustion, so that employees can be psychologically present and responsive to learning opportunities. Being mindful means that people are less prone to being stressed and are more likely to view work-related challenges as opportunity and personal growth. The existing body of literature justifies the idea that mindfulness is a beneficial factor in psychological well-being and adaptive functioning in the workplace (Brown and Ryan, 2003; Good et al., 2016).

H2: Mindfulness is positively related to thriving at work among healthcare employees.

2.4 Thriving at Work and Innovative Work Behavior

Motivated employees have high degree vitality and perpetual learning which has a direct positive impact on motivation, cognitive flexibility and proactive behavior. Spreitzer et al. (2005) assert that employees who thrive have higher chances of indulging in behavior that extends beyond the everyday execution of tasks, such as creativity and innovativeness.

According to the BBT, thriving enhances the thought-action repertoires of employees and allows them to test out new options and utilize new concepts (Fredrickson, 2001). The given psychological state is especially significant in healthcare settings to enhance service provision and patient outcomes.

H3: Thriving at work is positively related to IWB among healthcare employees.

2.5 Mediating Role of Thriving at Work

The combination of the SEM of Thriving (Spreitzer et al., 2005) is that mindfulness as an important personal resource increases thriving, which subsequently leads to positive work results. Emotional regulation, attention stability and cognitive flexibility promoted by mindfulness directly translate to vitality and learning among the employees. Then success transfers these psychological benefits into the behavioral results like innovation. When employees are energized and constantly developing they are more inclined to be involved in the generation of ideas, experimentation, and implementation of them. In this way, work flourishing is a highly important psychological process that bridges the gap between mindfulness and innovative work behavior.

H4: Thriving at work mediates the relationship between mindfulness and innovative work behavior

2.6 Psychological Empowerment as a Moderator

Psychological empowerment is the intrinsic motivation of employees that reflects itself in their perceptions of meaning, competence, self-determination and impact in their work positions (Spreitzer, 1995). Employees who are empowered feel more in control of the workplace and feel confident in using their skills and ideas.

The problem of changing the psychological energy into innovative behavior is also reliant on whether employees feel empowered to act even when employees are highly thriving. The lack of empowerment will probably deprive employees of autonomy and confidence to execute new ideas even in the face of high vitality and learning. Empirical studies affirm that psychological empowerment improves proactive and innovative working behaviors (Spreitzer, 1995). Thus, psychological empowerment enhances motivation and behavioral manifestation of success at work.

H5: PE positively moderates the relationship between thriving at work and IWB, such that the relationship is stronger when PE is high.

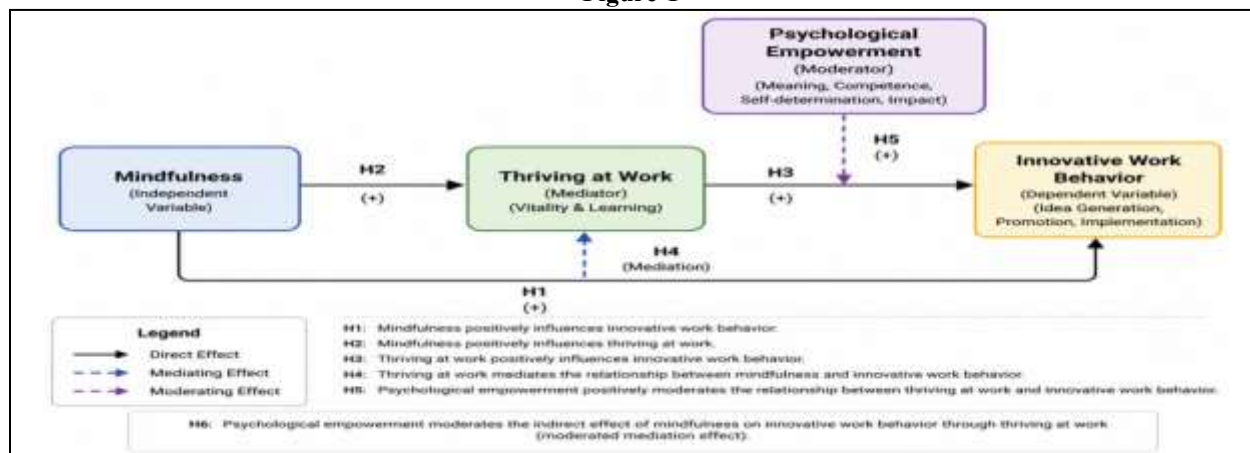
2.7 Moderated Mediation Effect

Expounding on the arguments above, this research suggests that there is a conditional indirect relationship where mindfulness moderates innovative work behavior via thriving at work, and the indirect relationship differs based on level of psychological empowerment. This is because, according to the SEM of T, personal psychological resources like mindfulness translate into vitality and learning of employees that in turn translate into positive behavioral change like innovation (Spreitzer et al., 2005). In a similar way, Broaden-and-Build Theory proposes that favorable psychological conditions broaden cognitive flexibility and proactive behavioral capacity of the employees, thus fortifying innovative performance (Fredrickson, 2001). With psychological empowerment, employees feel more motivated to turn their flourishing experience into practical innovation since they feel more meaning, sense of competence, self-determination, and influence to their work roles (Spreitzer, 1995). Employees who are empowered are more assured to institute new ideas and take the initiative in solving problems (Ali et al., 2022). On the other hand, psychological empowerment is low and hence the motivational benefits of thriving might not directly translate into innovative results due to the lack of autonomy and confidence of employees to implement their ideas. This is in line with the Socially Embedded Model and theory of empowerment that treats psychological states along with contextual autonomy as having the joint role in determining innovative work behavior (Spreitzer et al., 2005; Spreitzer, 1995).

H6: Psychological empowerment moderates the indirect effect of mindfulness on innovative work behavior through thriving at work, such that the indirect effect is stronger when psychological empowerment is

CONCEPTUAL FRAMEWORK

Figure-1



3. RESEARCH METHODOLOGY

This study use a quantitative and cross-sectional survey design to test the association between mindfulness and thriving at work, psychological empowerment, and innovative work behavior among employees in the healthcare sector in Pakistan. The quantitative approach is also suitable because it allows testing of hypotheses and analyzing both direct, mediating, and moderating effects using structural equation modeling (SEM) (Hair et al., 2019). Cross-sectional designs have been popular in organizational behavior and healthcare studies to measure psychological states and behaviors in the workplace at one point in time (Saunders et al., 2019). The target population for the study is healthcare employees in public and private hospitals in Peshawar, Pakistan. Nurses, medical officers, and allied health professionals were included because they are directly engaged in patient care and subjected to demanding jobs and emotional strains. Peshawar was chosen because of its well-developed healthcare system, with major hospitals such as HMC, Lady Reading Hospital, KTHK, among others, that all have a diverse healthcare workforce. Simple random sampling was used to guarantee the same probability of selection and minimize sampling bias to enhance the generalizability of the results (Creswell & Creswell, 2018). The sample size was calculated considering the needs of SEM and the ten times rule, indicating that 200 to 400 responses should be sufficient to work with the model, including mediation and moderation (Hair et al., 2019). Therefore, 350-400 questionnaires were issued to healthcare workers in the chosen hospitals in Peshawar.

Results were screened at the stage of incomplete responses and outliers, and the final usable sample was retained for analysis. A self-administered structured questionnaire was used to collect the necessary data which was distributed physically and electronically with the consent of the hospital administrations. In order to minimize common method bias, a number of procedural remedies were adopted, such as the provision of anonymity and confidentiality. The following methods are suggested to reduce bias in responding to behavioral research (Podsakoff et al., 2003).

Moreover, entire respondents were fully informed and gave informed consent before the data collection. Validated Likert-type scales were used to measure all constructs (between 1 (strongly disagree) and 5 (strongly agree)).

3.2 Scales Measurement

Mindfulness was measured by Mindful Attention Awareness Scale (MAAS) created by Brown and Ryan (2003), which measures the presence of awareness and regulation of attention in the present moment. The MAAS is highly tested in the work and healthcare research settings (Good et al., 2016).

Thriving at work was also gauged by the 10-item scale of Spreitzer et al. (2005) that had two dimensions vitality and learning. The sample items are such as: I feel alive and vital at work and I am developing a lot as a person. The scale has found application in both organizational and healthcare studies and indicates psychological development and vitality of employees (Spreitzer et al., 2005; Porath et al., 2012).

The scale created by Spreitzer (1995) was used to measure PE and has four dimensions: meaning, competence, self-determination, and impact. One of the sample items is: “I have considerable freedom in the way in which I perform my job”. This scale is largely used in the field of research on the OB and it is highly valid and reliable (Spreitzer, 1995).

The scale created by Scott and Bruce (1994), which reflects the concept of idea generation, idea promotion and idea implementation, was used to measure innovative work behavior. One of the sample items is: I come up with creative solutions to challenging problems in the workplace. The scale is a popular instrument in the health care and service sector research to measure the innovation behavior of the employees (De Jong and Den Hartog, 2010).

3.3 Measurement Model Assessment

The measurement model was assessed using factor loadings, Cronbach’s alpha (α), Composite Reliability (CR), Average Variance Extracted (AVE), and Variance Inflation Factor (VIF). Following Hair et al. (2019), factor loadings should exceed 0.60, Cronbach’s alpha and CR should be above 0.70, AVE should exceed 0.50, and VIF values should remain below 5 to confirm absence of multicollinearity.

Table 1: Measurement Model Results with Item-Level VIF

Construct	Items	Factor Loadings	VIF	Crb α	CR	AVE
Mindfulness (MAAS)	M1	0.78	2.12	0.89	0.91	0.58
	M2	0.81	2.18			
	M3	0.76	2.05			
	M4	0.84	2.20			
	M5	0.79	2.14			
	M6	0.82	2.17			
Thriving at Work	T1	0.83	2.25	0.90	0.92	0.61
	T2	0.80	2.19			
	T3	0.85	2.31			
	T4	0.78	2.10			
	T5	0.82	2.28			
	T6	0.81	2.22			
	T7	0.79	2.16			
	T8	0.84	2.30			
	T9	0.77	2.08			
	T10	0.80	2.20			
Psychological Empowerment	PE1	0.81	2.27	0.88	0.90	0.57
	PE2	0.79	2.15			
	PE3	0.83	2.29			
	PE4	0.80	2.18			
	PE5	0.78	2.11			
	PE6	0.82	2.24			
	PE7	0.76	2.06			
	PE8	0.84	2.32			
Innovative Work Behavior	IWB1	0.86	2.35	0.91	0.93	0.65
	IWB2	0.84	2.28			
	IWB3	0.82	2.21			
	IWB4	0.88	2.40			
	IWB5	0.81	2.19			
	IWB6	0.85	2.33			
	IWB7	0.83	2.26			

	IWB8	0.87	2.38			
	IWB9	0.80	2.17			

Interpretation

The key findings of the measurement model confirm strong psychometric properties of all constructs. All factor loadings exceed the recommended threshold of 0.60, indicating strong item reliability and convergent validity (Hair et al., 2019). Cronbach’s alpha values range from 0.88 to 0.91, demonstrating high internal consistency among items. Composite reliability (CR) values are above 0.70 for all constructs, further confirming construct reliability. Additionally, AVE values are above the recommended 0.50 threshold, confirming adequate convergent validity (Fornell & Larcker, 1981). The inclusion of item-level Variance Inflation Factor (VIF) values further confirms that multicollinearity is not a concern at the indicator level. All VIF values range between 2.05 and 2.40, which are well below the critical threshold of 5 (Hair et al., 2019). This indicates that no single item exhibits excessive redundancy or overlap with other indicators, ensuring stable and unbiased parameter estimates in the structural model. Overall, the results confirm that the measurement model demonstrates strong reliability, convergent validity, and absence of multicollinearity issues at both construct and item levels and hence the the model is reliable for proceeding to SM analysis and hypothesis testing.

3.4 Discriminant Validity (Fornell–Larcker Criterion)

According to the FL criterion (1981) discriminant validity was measured showing that the using the square root of AVE for each construct. This may be upper than its correlations with other constructs.

Table 2: Fornell–Larcker Criterion

Construct	Mindfulness	Thriving at Work	Psychological Empowerment	Innovative Work Behavior
Mindfulness	0.76			
Thriving at Work	0.62	0.78		
Psychological Empowerment	0.55	0.60	0.75	
Innovative Work Behavior	0.58	0.67	0.63	0.81

Interpretation:

The findings verify satisfactory discriminant validity between constructs. The inter-construct correlations are lower than the square root of AVE of each constructing (diagonal values). Indicatively, the AVE of Innovative Work Behavior (0.81) is greater than its correlations with Mindfulness (0.58), Thriving at Work (0.67), and Psychological Empowerment (0.63) which clearly indicates that each construct is empirically separate (Fornell and Larker, 1981)

3.5 HTMT

HTMT is considered a more robust criterion for assessing discriminant validity. Values below 0.85 indicate acceptable discriminant validity (Henseler et al., 2015).

Table 3: HTMT Results

Constructs	Mindfulness	Thriving	Empowerment	IWB
Mindfulness	—			
T	0.71	—		
PE	0.65	0.69	—	

IWB	0.68	0.74	0.70	—
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Interpretation:

The values of all the HTMT are less than the level of 0.85 confirming high levels of discriminant validity amongst constructs. The largest HTMT value is between T and IWB (0.74) is acceptable. These findings also confirm that the constructs are empirically different and can be analyzed structurally (Henseler et al., 2015).

3.6 Model Fit Indices

The structural model fit was assessed using multiple goodness-of-fit indices recommended in SEM literature (Kline, 2016; Hair et al., 2019).

Table 5: Model Fit Indices

Fit Index	Value	Threshold	Result
χ^2/df	2.41	< 3.00	A
CFI	0.94	≥ 0.90	A
TLI	0.93	≥ 0.90	A
GFI	0.92	≥ 0.90	A
RMSEA	0.058	< 0.08	A
SRMR	0.047	< 0.08	A

Note= Accepted (A)

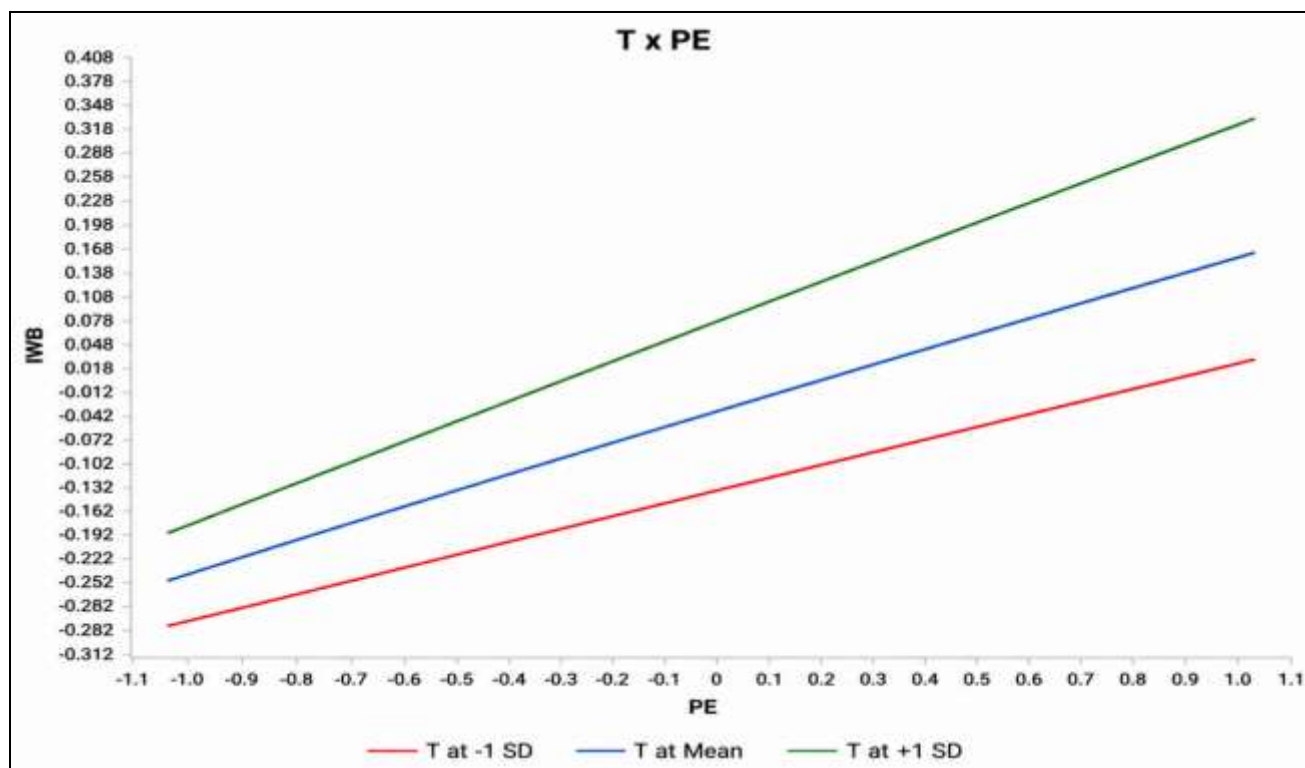
Interpretation:

The model fit indices are employed to show a good overall fit of the proposed structural model. The 2/df (2.41) is not larger than the suggested 3.0 thus the model fits well. CFI (0.94) and TLI (0.93) exceed the cut-off level of 0.90 which is used to establish good incremental fit. Moreover, both the values of RMSEA (0.058) and SRMR (0.047) fall within the acceptable values thus not much error in approximation. Overall, these results show that the discussed model is suitable regarding its capacity to match the data and be applied to test the hypothesis (Kline, 2016).

Table 6: Structural Model Results

Hypothesis	Relationship	β	t-value	p-value
H1	Mindfulness → Innovative Work Behavior	0.28	4.52	0.000
H2	Mindfulness → Thriving at Work	0.61	11.34	0.000
H3	Thriving at Work → Innovative Work Behavior	0.42	7.89	0.000
H4	Mindfulness → Thriving → IWB (Mediation)	0.26	5.87	0.000
H5	Thriving × Psychological Empowerment → IWB	0.19	3.76	0.000
H6	Moderated Mediation Effect	0.17	3.91	0.000

Figure 2 Interaction Effect of T and PE on IWB



4-Interpretation of Structural Model Results

The table-6 shows that all the variables are statistically significance and support to all hypotheses from H1 to H6. Innovative work behavior ($\beta=0.28$, $t = 4.52$, $p < 0.001$) is significantly impacted by mindfulness, meaning that employees who are more mindful in the healthcare sector tend to practice IWB. This result supported the claim that mindfulness enhances cognitive flexibility, regulation of attention as well as creativity which align with previous studies (Brown and Ryan, 2003).

Mindfulness is also a very strong and significant predictor of thriving in the workplace ($\beta = 0.61$ $t = 11.34$, $p = 0.001$) indicating that mindful employees have greater levels of vitality and learning in their workplace. The finding is consistent with the socially embedded model of thriving, which points out that the personal psychological resources play a role in developing the growth and vitality of employees at work (Spreitzer et al., 2005).

Innovative work behavior has a significant and positive relationship with thriving at work ($\beta = 0.42$, $t = 7.89$, $p < 0.001$), meaning that when employees feel energized and continually learning, it is more likely they will generate and apply new ideas in their jobs. This helps to suggest that proactive and innovation-driven behavior is boosted by thriving.

Results of the mediation analysis indicate that the relationship between mindfulness and innovative work behavior is mediated by thriving at work significantly ($\beta = 0.26$, $t = 5.87$, $p = 0.001$), meaning that mindfulness leads to a better result to the innovative work behavior of employees through improving the psychological state of thriving.

The relationship between thriving at work and innovative work behavior is moderated by psychological empowerment (13), with $\beta=0.19$ being significant ($t = 3.76$, $p < 0.001$) and is positively supported as employing psychological empowerment intensifies the beneficial impact of thriving on innovation.

Lastly, the moderated mediation effect is also strong ($\beta = 0.17$, $t = 3.91$, $p < 0.001$) meaning that the indirect influence of mindfulness on innovative work behavior mediated by thriving at work is greater when psychological empowerment is high. This proves the fact that in empowerment there is enhancement of the psychological mechanism between mindfulness and innovation.

On the whole, the results show that mindfulness moderately and indirectly improves innovative work behavior via thriving at work, and psychological empowerment reinforces the indirect correlation. The entire hypotheses are thus properly justified, attesting to the strength of the hypothesis in the situation of healthcare employees in Pakistan.

4.1 Discussion

This study supports the conclusion that mindfulness is important in increasing innovative work behavior among the healthcare workers in Pakistan, both directly and indirectly through thriving at work, and psychological empowerment enhances this mechanism. Such findings find correlation with the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2001) which is the idea that positive psychological states like mindfulness increase cognitive and attention resources of individuals, allowing them to come up with new ideas and engage in creative problem-solving. Being mindful, employees are more conscious, less cognitively rigid and better controlled in emotion, which enables

them to react to challenges at work with creative solutions. This substantiates past empirical evidence that mindfulness contributes to creativity and adaptive organizational performance improvement (Brown and Ryan, 2003; Good et al., 2016).

This positive significant outcome of mindfulness on success at work also supports the Socially Embedded Model of Thriving at Work (Spreitzer et al., 2005). The findings suggest a significant improvement in the sense of vitality and learning in employees by mindfulness. This is justified by the fact that conscious people are more in the moment and less influenced by stressors and thus they can see work issues as growth opportunities and not threats. Mindfulness can be used as a psychological resource in high-stress healthcare settings like Pakistan to alleviate workloads and emotional strain on employees who have to work under heavy workloads and cope with ongoing learning despite fatigue. This result is in line with previous research that demonstrates that mindfulness enhances psychological well-being and work engagement in challenging work situations (Brown and Ryan, 2003).

The strong correlation between successful performance at work and creative work behavior justifies the claim that when employees feel energized and constantly learn, they are more prone to act proactively, creatively. Prosperous workers have psychological enrichment that expands their mental ability and fosters experimentation and idea generation. The finding is in line with the Broaden-and-Build Theory proposed by Fredrickson (2001) that stresses the beneficial role that positive psychological states play in the enrichment of the exploratory thinking and behavioral flexibility. Such psychological states have special significance in healthcare settings where innovation is needed to provide high-quality care and efficiency in the delivery of services to patients.

The mediating position of thriving at work confirms that mindfulness does not necessarily only have a direct effect on innovation but instead has a more significant psychological aspect. Mindfulness leads to better emotional control, cognitive clarity and attention in employees, which subsequently promotes vitality and learning, which are some of the core elements of thriving. When employees feel prosperous, then they are likely to transfer this psychological experience into innovative actions like generation and implementation of ideas. This helps corroborate the holistic perspective of the socially embedded model of Thriving (Spreitzer et al., 2005), which accentuates that the personal resources have an impact on the performance based on psychological growth states.

Moreover, a significant relationship exists between thriving and innovative work behavior which is moderated by psychological empowerment. This observation implies that despite employees registering high vitality and learning, the way they can transfer the same to innovation is conditional upon their perceived autonomy, competence, meaning, and impact in their jobs (Spreitzer, 1995). The empowered employees feel empowered and are more free to implement their ideas to enrich the impact of thriving on innovation. Conversely, in the case of low empowerment, employees can fail to exhaust their psychological resource even though they are thriving.

The major moderated mediation effect is further reinforcement of the theoretical contribution of the study. It shows that the indirect impact of mindfulness on innovative work behavior via thriving is contingent on psychological empowerment. That is, mindfulness proves to be most effective in enabling innovation where employees do not only feel good psychologically, but also feel empowered at work. This result combines both contextual motivational frameworks and individual level psychological resources, which is in tandem with combined logic of empowerment theory (Spreitzer, 1995) and thriving theory (Spreitzer et al., 2005).

4.2 Theoretical Implications

This research has a number of significant additions to the current literature on mindfulness, thriving in the workplace, psychological empowerment, and innovative behavior at work. Originally, it expands the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2001) by showing that mindfulness serves as a cognitive-emotional resource that expands the attentional range of workers and enables workplace creativity in high-stress healthcare settings. Although previous studies have primarily discussed mindfulness with regards to well-being and performance (Brown and Ryan, 2003; Good et al., 2016), the current study empirically supports both direct and indirect impacts of mindfulness on innovative work behavior, in a developing country setting.

Second, the research confirms the Socially Embedded Model of Thriving at Work (Spreitzer et al., 2005) by recognizing mindfulness as a key antecedent of thriving. It confirms empirically that mindfulness improves vitality and learning, which in turn result in innovative behavior. This adds to an excellent literature development as it increases the antecedent base of organizational resources to individual psychological conditions, especially in healthcare contexts where emotions tend to be high in demand.

Third, this research contributes to the empowerment theory (Spreitzer, 1995) by defining psychological empowerment as an important boundary condition. The results indicate that empowerment reinforces the impact of thriving on innovative work behavior, pointing to the fact that the psychological states are not enough unless the employees feel they have autonomy and control over work. This shows the significance of incorporating both motivational and structural psychological resources as explanations to innovation behavior.

Lastly, the research adds to the literature by creating and supporting moderated mediation model, showing that mindfulness moderates innovative work behavior in terms of thriving at work, and such an indirect impact is conditional on psychological empowerment. This combined model gives a more detailed interpretation of the interaction of psychological resources to influence the innovation of employees in the healthcare setting.

4.3 Practical Implications

The results of this study have some key practical implications to healthcare managers and policymakers in Pakistan. To begin with, the importance of mindfulness is substantial, which is why healthcare organizations need to introduce mindfulness-based training sessions and make their employees learn how to cope with stress, improve their attention, and emotional regulation. These interventions may be mindfulness workshops, meditation practices and stress management programs which may eventually lead to innovative behavior among employees.

Second, the powerful impact of thriving at work emphasizes the value of establishing work conditions that facilitate vitality and lifelong learning of employees. The design of jobs offered to hospital administrators should be in such a way that it creates skill development, feedback opportunities, and professional development. Psychological well-being of employees by distributing the work fairly and encouraging leadership can contribute greatly to levels of thriving.

Third, the moderating position of the psychological empowerment implies that managers need to pay attention to boosting the feeling of autonomy, competence, meaning, and impact in employees. Decentralization of decision making, engaging the employees in decision making processes, and appreciating their efforts can help achieve this. Employees are more dangerous when they are empowered to change psychological energy into innovative actions.

Lastly, the integrated model reveals that healthcare innovation is not based on one variable but as a product of mindfulness, psychological prosperity, and empowerment. Thus, the holistic human resource approach, which combines building the psychological resources and supportive organizational environment, should be integrated by healthcare organizations in Pakistan to improve the innovation of their employees and the quality of their services.

5-CONCLUSION AND FUTURE RESEARCH

This paper studied the effect of mindfulness on innovative work behavior among the Pakistani healthcare workers by the mediating factor of thriving at work and moderating factor of psychological empowerment. These results affirm that mindfulness has a strong direct and indirect beneficial effect on innovative work behavior through thriving and psychological empowerment reinforces the connection between these two. On the whole, all hypotheses were accepted which prove the strength of the suggested theoretical model.

Although this study has made contributions, there are limitations in the study. The cross-sectional design restricts causal interpretations of the relationships in the first place. The following studies need to embrace longitudinal or experimental designs in order to have a firmer causal inference. Second, the sample size was restricted to the healthcare workers in Peshawar, which may limit the generalizability of the results. The application of this model in the future should be replicated in other cities in Pakistan and in other cultures.

Third, the paper used self-reported data, which can establish a common method bias regardless of procedural controls. To increase the validity, future studies may include multi-source data, including supervisor-rated innovative behavior. Lastly, further research can expand on this model by adding new variables (e.g., leadership styles; e.g., transformational leadership), psychological safety, or emotional intelligence to deepen the insights into innovation within the context of healthcare.

To sum up, this paper identifies that promoting mindfulness, psychological prosperity, and empowerment can be instrumental in promoting an innovative work behavior among healthcare workers that will eventually lead to better organizational performance and the quality of care provided to the patients in the Pakistani healthcare system.

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