Dual Effect of Task Significance on Innovative Work Behavior through Cognitive Appraisal and Work Engagement: Moderating Role of PsyCap

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Received on: 26-07-2024 Accepted on: 28-08-2024

Abstract

Purpose: The study aims to examine the dual effects of task significance on innovative work behavior through cognitive appraisal and work engagement, while considering PsyCap's moderating function.

Design/methodology/approach: Current study is quantitative and for this structured questionnaire was used to collect primary data from nurses employed at tertiary hospitals of twin cities of Pakistan.

Findings: The results of the study support the idea that task significance is a special kind of stressor that can have both positive and negative effects. Employee engagement and innovative work behavior are boosted by challenge appraisal of task significance, whereas they are hindered by threat appraisal. Therefore, nursing management must create measures (such as training for developing PsyCap) to impact nurses' perceptions of task significance as challenges rather than threats to promote nurses' innovative work behavior.

Originality: The current study is original and has not been conducted and submitted earlier to any other journal.

Keywords: Task Significance, Cognitive Appraisal, Work Engagement, Innovative Work Behavior, Psychological Capital

Introduction:

In the 1800s, Florence Nightingale—the pioneer of modern nursing—emphasized that we should strive towards creating a more habitable environment rather than accepting life as it is and that change is more vital than adjusting to it. Since Florence Nightingale was the first to highlight the need for innovation in nursing, her idea is extremely crucial (Kara, 2016; Tosun & Tosun, 2020). Likewise, the International Council of Nurses (ICN) emphasizes the significance of innovation in the nursing business globally by declaring 2009 as the year of

innovation in nursing (Heydari et al., 2023). To innovate and deliver excellent, patient-centered care, nurses must possess a certain amount of agility. However, because mistakes might have grave consequences, the healthcare sector carries a high risk. But if the innovation challenges are successfully navigated, the results can be quite beneficial. Nursing innovation can take many various forms, from straightforward problem-solving techniques to in-depth research and cutting-edge technologies intended to enhance patient care, (Ayvaz et al., 2019). In general, it involves introducing innovations that result in both little and major adjustments to the way nurses deliver care (Brysiewicz et al., 2015; Thomas et al., 2016). Nursing has produced a number of innovative products and methods. These include the Wearable Serum Hanger by Yeliz Dogan Merih, the Bedside Handover Method by Dearmon and colleagues (Snide & Nailon, 2013), the Kangaroo Care Model by Kambarami, and the STOMAKIT by Ozlem Oktay (Kara, 2016; Tosun & Tosun, 2020).

Even though nurses' innovative work behavior (IWB) is important, there is a noticeable deficiency in this domain among nurses. (Abdelrazek Abdelhalem Abdelatti et al., 2022; Tung et al., 2014; Zaman et al., 2020; Z. Khan et al., 2016). It can be one of the factors preventing most healthcare organizations from offering high-quality healthcare services at a reasonable cost (Hasan et al., 2020; Khalid & Abbasi, 2018). Therefore, it is necessary to identify the determinant of IWB so that reasonable actions can be taken to the enhancement of nurses' IWB. At the individual level, JCs are regarded as the most critical and dominant determinant of innovative work behavior (Kwon & Kim, 2020).

Work engagement is another important factor (Pennbrant & Dåderman, 2021) that can improve the quality of healthcare services (Bayoumy, 2019; Cao et al., 2019; Hara et al., 2021). Undoubtedly nursing profession is emotionally exhausting and the COVID-19 outbreak has made their duties more tough and challenging. They have to work in a new context which is more stressful due to the fear of becoming infected and infecting others. Such a toxic situation may harm their engagement (Zhang et al., 2021; Xu et al., 2021), and a shortfall in the nurse's engagement can affect the quality of care adversely (Pennbrant & Dåderman, 2021). It is observed that even the best hospitals in the world need to improve the WE of their nurses (Ashfaq et al., 2023; Shahid et al., 2023; Wan et al., 2018). Therefore, it is necessary to identify the determinant of work engagement so that reasonable actions can be taken to the enhancement of nurses' engagement (Shahid et al., 2023; Wan et al., 2018). It is argued that the JC model can be used by management to foster WE, as this model has the potential to motivate individuals to engage in wider contacts (Böckerman et al., 2020; Hackman & Oldham, 1974; Oldham, 1976).

Among all of the job characteristics, task significance is one of the most crucial resources that is believed to have a substantial effect on innovative work behavior through work engagement (Böckerman et al., 2020).

Indeed the relationship between task significance and IWB is well established yet this relationship is inconsistent (Coelho & Augusto, 2010; Deegahawature, 2014). Similarly, the relationship between task significance and WE are also well established nevertheless in the nursing context this relationship is inconsistent (Bayoumy, 2019; Othman & Nasurdin, 2019; Wan et al. 2018). In this regard, Mitchell et al. (2019) and Li et al. (2020) proclaimed that such inconsistent effects may be possible due to the cognitive appraisal of individuals depending

on their differences. Thus, Li et al. (2020) have highlighted the need to carry out further studies revealing varying consequences of job characteristic (i.e., task significance) through the mediation of cognitive appraisal (CA and TA) in association with JCs (i.e., task significance) and their outcomes (e.g., WE and IWB).

Furthermore, such cognitive appraisal is further contingent upon individual differences that can be determined by personal resources such as PsyCap (Chadwick et al., 2013; Zaniboni et al., 2013). As individual with high level of PsyCap is more likely to view the situation as a challenge rather than a threat (Chadwick et al., 2013; Secosan et al., 2021). An evaluation of a situation's challenge has a favorable impact on employee engagement at work (Mitchell et al., 2019) that might inevitably culminate IWB (Zappalà et al., 2021).

In light of this, this study aims to integrate the mediating role of cognitive appraisal in the association of task significance and work engagement, as proposed by P. Li et al. (2020), which further encourages workers to demonstrate innovative work behavior (Zappalà et al., 2021). Further, psychological capital is included as a moderator between the association of task significance and cognitive appraisal. Current study will assist in determining that whether nurses have adequate resources (both job and personal), or whether work redesign or training programmes are needed for nurses to perceive their jobs as challenges that will boost their engagement and may contribute to innovative work behavior (Zappalà et al., 2021).

Review of Literature

2.1 Task Significance and Innovative Work Behavior

Task significance is the extent to which a specific task has a noticeable and significant influence on other people's lives (including internal as well as the external environment) (Hackman & Oldham, 1974). In the context of innovation, task significance has garnered some attention (Cangialosi et al., 2021). Employees are more concerned about their work and more eager to go above and beyond when they know their jobs have a substantial impact on others, which improves intrinsic motivation (Deegahawature, 2014; Grant & Parker, 2009) and fosters IWB (Cangialosi et al., 2021; Yang & Cho., 2015). Individuals who perceive high task significance are more likely to see their work knowledge as a valuable tool for achieving significant results for their organizations and they spend more time thinking about and improving their work. This implies that employees who believe their job is important to the organization invest more time and energy in work processes and experimentation, thus enhancing their learning potential and, as a result, improving the possibility of coming up with, developing, and putting into practice innovative and useful ideas (Cangialosi et al., 2020). While others came to the opposite conclusion, suggesting that jobs having a high level of significance may hinder individual extra-role behavior (Marić et al., 2019) like innovativeness (Coelho & Augusto, 2010; Deegahawature, 2014).

Hypothesis 1: Task significance and innovative work behavior are significantly associated.

2.2 Task Significance and Work Engagement

Task significance allows having a greater impact on others within as well as outside the organization that influences work engagement. It leads to the perception of the job as useful, worthwhile, and valuable which enhances the psychological state, and intrinsically motivates

employees (Marić et al., 2019) to demonstrate high levels of work engagement (Wan et al., 2018). Nurses with a high job significance are more likely to provide adequate and thorough guidance to patients and their family members because they recognize that their actions have a significant effect on the physical and psychological well-being of patients both during and after hospitalization. Such a sense of meaningfulness and responsibility increases nurses' engagement (Othman & Nasurdin, 2019). On the other hand, task significance was not found to affect the nurse's engagement (Bayoumy, 2019).
Hypothesis 2: Task significance and work engagement are significantly associated.

2.3 Task Significance and Cognitive Appraisal

As a component of experiencing meaningfulness, task significance performs a pivotal role in motivating employees. However, major meta-analyses of the job design literature reveal mixed results when it comes to task significance and work-related outcomes (Fried & Ferris, 1987). Such differential effects of task significance on work-related outcomes are a function of individual differences (Fried & Ferris, 1987) for that reason different people may react differently to task significance (Grant, 2008; Grant & Parker, 2009). Specifically, jobs that need the protection and promotion of human life have a greater level of task significance such as held by healthcare employees. As their actions have a direct impact on the lives of others. It is argued that when an employee perceives that he can make a difference in the lives of others, his perception (challenge or threat) of the stressor differs (El-Asmar, 2013). Such perception of the stressor or the level of stress he would experience depends on how important he thinks his job is and its impact on others (El-Asmar, 2013; Morgeson & Humphrey, 2006). When he believes that having a higher level of work significance will enable him to attain personal and professional goals and that he can easily manage the extra responsibility, he will likely appraise it as a challenge (El-Asmar, 2013) On the other hand, concentrating on the task's adverse characteristics could make it appraised as a threat. To summarize, different people may react differently to task significance solely depending on their appraisal of the task.
Hypothesis 3a: Task significance and challenge appraisal are significantly associated.
Hypothesis 3b: Task significance and threat appraisal are significantly associated.

2.4 Mediating Role of Cognitive Appraisal between the Relationship of Task Significance and Work Engagement

Job characteristics that are seen as chances for personal development, success, and gain are called challenge appraisals, while those that are seen as barriers that could endanger one's career and well-being are called threatening appraisals. This is because the outcome of job characteristics varies depending on the individual's cognitive appraisal of the job as a challenge or threat (P. Li et al., 2020; Naseer et al., 2019).
According to Webster et al. (2011), challenging assessment produces sensations of excitement, pleasure, and enthusiasm, whereas threat appraisal arouses negative emotions such as fear and anger. As a result, job characteristics will probably provide favorable results when viewed as a challenge and undesirable results when viewed as a threat (Naseer et al., 2019). On the one hand, people who concentrate on the challenges (challenge appraisal) of having high job characteristics (i.e., task significance) will be more engaged in their work (S.

H. Lin et al., 2014). On the other hand, people who concentrate on the threat (threat appraisal) resulting from high job characteristics (i.e., task significance) will weaken self-regulation, which will manifest as low work engagement (Mitchell et al., 2019). Given that it is postulated that:

Hypothesis 4a: Challenge appraisal is a significant moderator between the relationship of task significance and work engagement.

Hypothesis 4b: Threat appraisal is a significant moderator between the relationship of task significance and work engagement.

2.5 Cognitive Appraisal and Work Engagement as Mediators between the relationship of Task Significance and Innovative Work Behavior.

Since cognitive appraisal of job characteristics determines its eventual outcome when it is cognitively appraised as a challenge will likely result in positive outcomes (Naseer et al., 2019). when job characteristics are viewed as a challenge, it is likely to elicit positive emotions and resultantly individuals will be highly engaged (S. H. Lin et al., 2014). When people are engaged at work, they experience positive emotions like pleasure, contentment, concentration, and enthusiasm, which may lead to a higher level of employee involvement in innovative work behavior (Aktar & Pangil, 2017; Montani et al., 2020; Agarwal, 2014). Conversely, negative consequences that could lead to low work engagement are likely to occur when job characteristics are cognitively assessed as a threat (Mitchell et al., 2019). Because people with low levels of engagement and a small pool of resources are typically depleted and have less energy for other activities, they try to replenish their resources by using avoidance coping strategies (Naseer et al., 2019). Individuals prefer to apply simple tactics and concentrate on conventional wisdom that stifles innovative behavior (Byron & Nazarian, 2010). Thus it is proposed that

Hypothesis 5a: Challenge appraisal and work engagement significantly mediate the association of task significance and innovative work behavior.

Hypothesis 5b: Threat appraisal and work engagement significantly mediate the association of task significance and innovative work behavior.

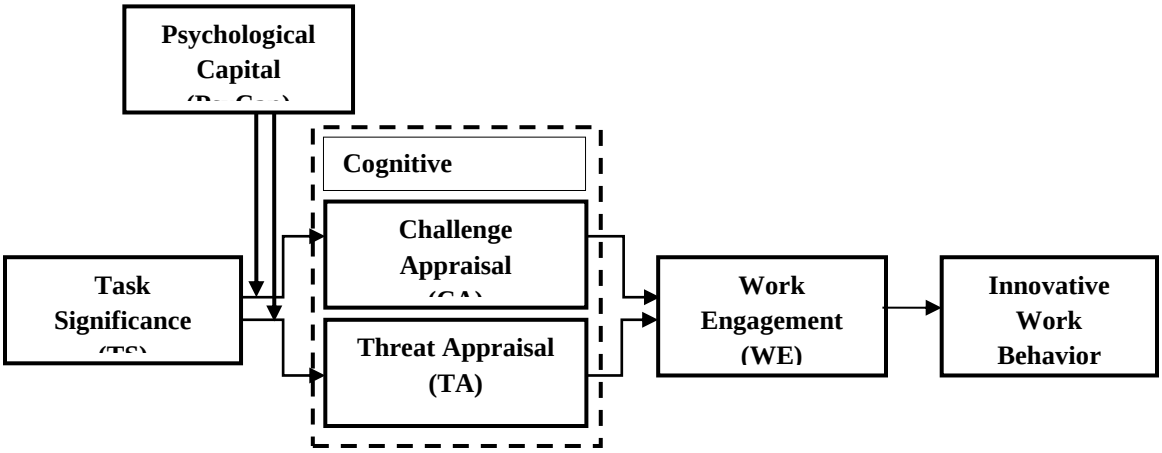
2.6 PsyCap as a moderator between the association of TS and cognitive Appraisal

PsyCap encapsulates the positive characteristics of optimism, hope, resilience, and efficacy that are thought to be essential for cognitive processing that stimulate human motivation and affect one's capacity to successfully manage and direct one's job (Duddeck, 2016). People with higher PsyCap outperform those with lower PsyCap because they have greater resources available to them for goal pursuit (Luthans et al., 2007). Similarly, someone would probably regard a job as a threat if they felt their resources were limited or nonexistent (Thompson, 2013). Therefore, compared to people with low PsyCap levels, those with high PsyCap levels are more likely to see work-related stressors as challenges rather than threats. As individuals high in PsyCap have more resources to draw upon (Luthans et al., 2007) and likely to appraise the work as challenge (Thompson, 2013) that stimulates positive affective reactions such as work engagement (Mitchell., et al. 2019) which in turn stimulates positive feelings about work that sparks willingness of employees to try new things and experiment, leading to the creative ideas and novel solution, referred to IWB (Agarwal, 2014). Drawing

on the findings of Naseer et al., (2019) that individuals who cognitively appraised core JC as threatening have little perceived resources (PsyCap) that further hinders individual's engagement and innovative work behavior. Therefore it is hypothesized that

Hypothesis 6a: PsyCap moderates the association of task significance and challenge appraisal.
Hypothesis 6b: PsyCap moderates the association of task significance and threat appraisal.
Hypothesis 7a: PsyCap moderates the mediated relationship between task significance and innovative work behavior through challenge appraisal and work engagement.
Hypothesis 7b: PsyCap moderates the mediated relationship between task significance and innovative work behavior through threat appraisal and work engagement.

One of the necessary units to understand how people perceive stressors is perception of resources. Personal traits, things, circumstances, or energies that people value can all be considered resources (Hobfoll, 1989; Hobfoll et al., 2018). Individuals who are believed to have more resources are better positioned to gain them and are less likely to lose them. Accordingly, those who feel themselves to have fewer resources are more susceptible to resource loss because they have fewer resources at their disposal to deal with the stressful situation (Thompson, 2013). Consequently, COR theory is used as a foundational theory to evaluate the cognitive appraisal of the stressor (task significance) as a challenge or threat, and its indirect impact on innovative work behavior.



Source(s): Prepared by the authors

Methodology

Design

Given that hypotheses are derived from the literature and based on widely accepted theories, the current study is objective and perceptual, grounded in the positivist approach (Saunders et al., 2007, 2019).

Sample

Tertiary hospitals in Pakistan's twin cities were selected because they are the primary medical facility as they offer highly specialized in-patient services. A self-administered questionnaire was used to collect data. Registered nurses participated in the study using a

simple random sampling procedure. In this study only registered nurses were sampled as in government hospitals only registered nurses are hired. Based on model complexity models with five or fewer constructs required a minimum sample of 100 (Hair et al., 2019). This survey comprises replies from 361 nurses which are above the minimum required sample size. Since the data was collected at a single point of time, thereby it is a cross sectional study.

Statistical Analysis

AMOS 21 and SPSS were used to analyze quantitative data. In this study, six steps of SEM was employed for multivariate data analysis as recommended by Hair et al. (2019). First, the data's mean and standard deviation were ascertained. After that demographic details about the respondents were explored. Next, the unidimensionality, validity, and reliability of the measurement model were investigated to ascertain its appropriateness. Lastly, hypotheses were investigated using structural equation modeling (SEM). The study's significance level was set at 0.1% ($p \leq .001$).

Measure

Responses to the current study were gathered using a continuum, with 1 denoting "strongly disagree" and 7 denoting "strongly agree." Additionally, demographic information was gathered, such as age and type of organization. The items' average score was used for the analysis. Since English is the official language of Pakistan, all of the scales used in this study were in English language.

Three questions make up the task significance scale, which Morris and Venkatesh (2010) adapted from Hackman and Oldham's job diagnostic survey (1974). The aforementioned measure is used by other scholars such as Pee and Chua (2016) and Morris and Venkatesh (2010). Three items for challenge appraisal and three items for threat appraisal made up the six-item cognitive appraisal measure, which was adapted from LePine et al. (2016). That similar measure is used by other studies, including LePine et al. (2016). CA (α=.914) and TA (α=.898). Work engagement was assessed using the UWES-9, a nine-item survey developed by Schaufeli et al. (2006). This scale is now being used by Van Zyl et al. (2019) and Jason and Geetha (2019). (α=.810). A nine-item scale devised by Janssen (2000) was employed to analyze innovative work behavior (α=.852).

Inclusion/Exclusion Criteria

Given the current state of Pakistan's healthcare system, this study focuses on the nation's public and private hospitals located in the twin cities: Rawalpindi and Islamabad. These tertiary hospitals were chosen because these are the largest medical facilities providing highly specialized services and having most in-patient beds, which suggest that they have more nursing staff.

Ethical Consideration

A brief explanation of the study's purpose was included in the first section of the questionnaire to obtain informed consent prior to data collection. Upon reading the informed consent, participants continued to express their willingness to willingly participate in the study. The confidentiality issue was also resolved by developing an anonymous

questionnaire that simply asked for demographic data.

Result

4.1 Sample Characteristics

The descriptive analysis revealed that 548 (89%) of the respondents were female nurses, whereas 68 (11%) of the respondents were male nurses. The data shows that 179 (29%) of the respondents are associated with private hospitals, whereas 437 (71%) are associated with public hospitals. An age-level-specific sample distribution is provided below: Three quarters of the respondents, or 425 (69%), were in the 19–28 age range, 154 (25%) were in the 29–38 age range, and 37 (6%) were in the 39–48 age range.

A first-order correlation analysis revealed that task significance had a weak positive association with threat appraisal (r=0.25, p<.001), but a positive moderate link with challenge appraisal, work engagement, and innovative work behavior (r=0.40, p<.001; r=0.32, p<.001; r=0.41, p<.001), respectively. Furthermore, a first-order correlation showed that challenge appraisal had a moderately negative link with threat appraisal (r = -0.47, p<.001) and a high positive association with work engagement and inventive work behavior (r = 0.76, p<.001; r = 0.72, p<.001), respectively. Although there is a moderate negative correlation of threat appraisal with work engagement and innovative work behavior (r = -0.48, p<.001; r = -0.46, p<.001) respectively (See Table 1).

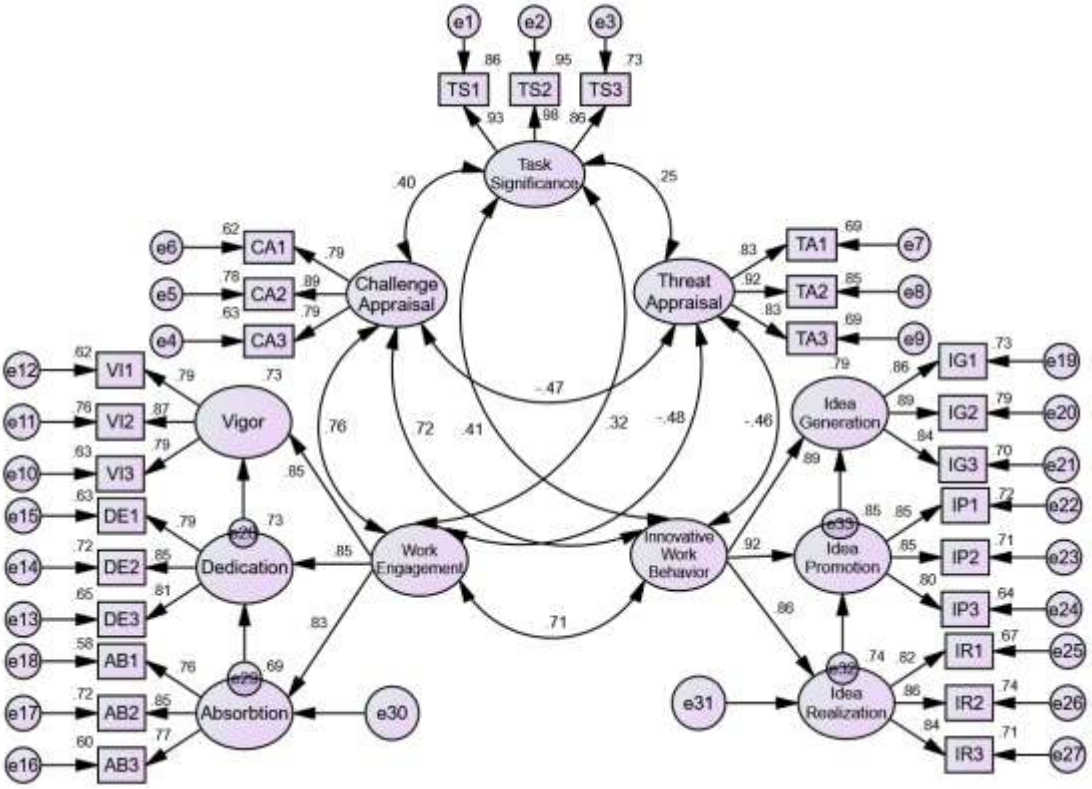
Variables	Min. Loading	IR (α)	CR	AVE	Mean	SD	TS	CA	TA	WE	IWB	HTMT 1	HTMT 2	HTMT 3	HTMT 4
TS	.86	.94	.944	.849	4.98	1.17	**.922**								
CA	.79	.85	.863	.677	4.26	1.44	.40***	**.823**				.405			
TA	.83	.89	.897	.744	3.93	1.81	.25***	-.47***	**.862**			.253	-.473		
WE	.83	.82	.882	.714	4.24	1.33	.32***	.76***	-.48***	**.845**		.322	.760	-.480	
IWB	.86	.87	.919	.792	3.89	1.51	.41***	.72***	-.46***	.71***	**.890**	.407	.717	-.463	.714

Table 1: Reliability, Validity, Mean, STD Deviation, and Inter-Correlations of Study Variables
Source(s): Prepared by the authors
R= **p<.01 , R=***p<.001
Note: IR (α) =Internal Reliability; CR= Composite Reliability; AVE= Average Variance Extracted; SD= Standard Deviation; TS=Task Significance; CA= Challenge Appraisal; TA=Threat Appraisal; WE: Work Engagement and IWB= Innovative Work Behavior; HTMT= Heterotrait-Monotrait Ratio. Diagonal

Values in bold are square root of the AVEs and off-diagonal values are correlations between the constructs

4.2 Measurement Model

The data analysis was conducted using SPSS and Amos.21. First, the measuring model's validity, reliability, and unidimensionality were evaluated. The four-factor model was first assessed and verified by allocating factors to the pertinent latent variables because all of the items had factor loadings greater than 0.6 (Appendix I-Figure 2).



Source(s): Prepared by the authors

The measures' inter-item consistency and composite reliability (CR) were evaluated. Awang (2014) states that reliability can only be proven if both the Cronbach alpha (α) and the CR value are at least 0.7. α and CR values for every variable were more than 0.7 (Table 1). As a result, every scale and tool used in the research accurately evaluated every element.
The validity of convergence was assessed and established using Average Variance Extraction (AVE). Awang (2014) reported that all concepts had strong convergent validity if they could meet the AVE minimum threshold of 0.5 (Table 1).

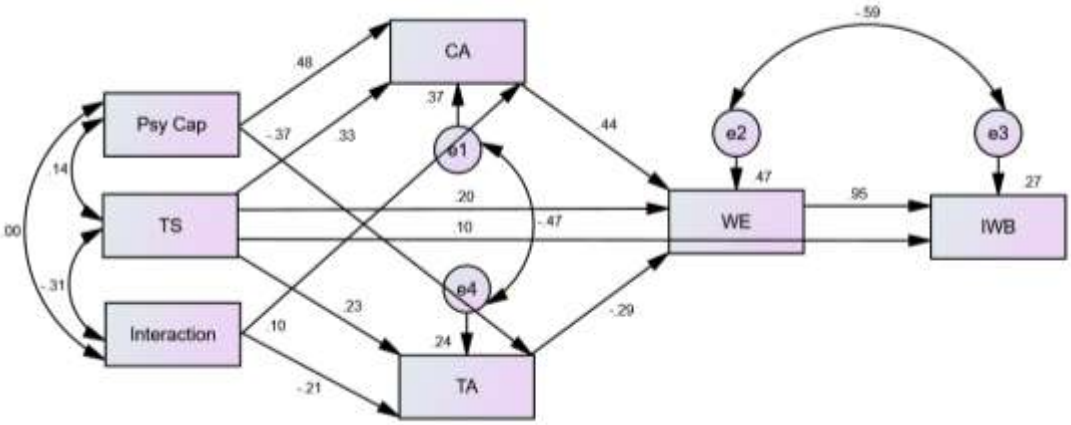
Additionally, the discriminant validity was confirmed. It was assessed through Heterotrait-Monotrait (HTMT) ratios, that (according to Heseler et al., 2015) found to be below the

threshold level of 0.85. It was also evaluated by comparing the square root of AVE for each component to the associated association (Table 1).

Finally, the measurement model's fitness indices proved that it had reached a satisfactory level, supporting the construct validity and supporting Awang's (2014) recommendation [χ 2 (308) = 637.272, p< 0.000; RMSEA = 0.042; SRMR = 0.032; CFI = 0.973; and TLI= 0.969]. Additionally, the values of the VIF and tolerance score, which fall between 1.307 to 2.130 (less than 10) and 0.469 to 0.765 (above 0.2), respectively, provide empirical evidence for the lack of multicollinearity. The fact that this study only used one data source suggests that it may have been biased toward the use of standard procedures. Therefore, the common method bias (CMB) intensity was ascertained using Harman's single-factor test (Podsakoff et al., 2003). Since an unrotated factor analysis explained 41.672% (less than 50%) of the total variation, CMB posed no threat to the analysis.

The total model's R^2 of 27% suggests an appropriate model, explaining how task significance accounts for 27% of the variation in innovative work behavior through cognitive appraisal and work engagement (Appendix II- Figure 3).

Structural Model



Source(s): Prepared by the authors

Note TS=Task Significance; CA= Challenge Appraisal; TA=Threat Appraisal; WE: Work Engagement, IWB= Innovative Work Behavior; and PsyCap=Psychological Capital

4.3 Structural Model

Structural equation modeling (SEM), a multivariate tool that takes measurement error into account when statistically analyzing the data, was used to evaluate the research hypotheses. Table.2 displays the hypothesis's findings (Appendix II- Figure 3).

Table 2: Structural Model

Variables		b	se	Bootstrap LLCI	Bootstrap ULCI
	Direct Effect				
H1	TS → IWB	.095***	.049		
H2	TS → WE	.198***	.038		
H3a	TS → CA	.331***	.042		
H3b	TS → TA	.232***	.058		
	Indirect Effect				
H4a	TS → CA → WE	.167***	.023	.132	.206
H4b	TS → TA → WE	-.077***	.016	-.107	-.053
H5a	TS → CA → WE → IWB	.182***	.023	.144	.221
H5b	TS → TA → WE → IWB	-.084***	.018	-.116	-.057
	Moderation				
H6a	PsyCap ↓ TS → CA → WE	.103**	.047		
H6b	PsyCap ↓ TS → TA → WE	-.205***	.065		
	Moderated Mediation				
H7a	PsyCap ↓ TS → CA → WE → IWB	.018***	.007	.005	.034
H7b	PsyCap ↓ TS → TA → WE → IWB	.028	.006	-.169	.428

Source(s): Prepared by the authors

R=***p<.001

Note TS=Task Significance; CA= Challenge Appraisal; TA=Threat Appraisal; WE: Work Engagement, IWB= Innovative Work Behavior; and PsyCap=Psychological Capital

According to the results, **H1** and **H2** confirmed that TS has a direct, favorable impact on innovative work behavior and work engagement ($\gamma = 0.095$) and ($\gamma = 0.198$) respectively. Based on the findings, **H3a** and **H3b** also confirmed that TS has a statistically significant direct influence on CA ($\gamma = 0.331$) and TA ($\gamma = 0.232$) respectively.

In light of the findings, **H4a** and **H4b** also verified that TS is positively associated with WE through CA, while TS is negatively associated with WE through TA. According to the findings 4a and 4b also confirmed that CA has a significant direct effect on WE (.167, *p*-value < 0.001, 95%; [CI= .132, 0.206]), (-0.077, *p*-value < 0.001, 95%; [CI=-0.107, -0.053]) respectively

Likewise **H5a** and **H5b** has supported the positive indirect effect of TS on innovative work behavior through challenge appraisal and work engagement, and the negative indirect effect of TS on innovative work behavior through threat appraisal and work engagement respectively. Therefore, $H5_a$ and $H5_b$ are statistically significant and accepted (.182, *p*-value < 0.001, 95%; [CI= .144, 0.221]), (-0.084, *p*-value < 0.001, 95%; [CI=-0.116, -0.057]) respectively.

Considering the results, **H6a** and **H6b**, moderating effect of PsyCap was analyzed between the relationship of TS and (a) challenge appraisal and (b) threat appraisal. The results of these path coefficients confirm that PsyCap moderates the relationship between TS and (a) challenge appraisal and (b) threat appraisal (β = 0.103, p-value < 0.01) (β = -0.205, p-value < 0.001) respectively

Lastly, **H7a** and **H7b**, moderated effect of PsyCap was analyzed between the relationship of TS and innovative work behavior through (a) challenge appraisal and (b) threat appraisal and work engagement. The results confirm that moderation effect of PsyCap between the mediated relationship of task significance and innovative work behavior through challenge appraisal and work engagement. While the results show the insignificant moderation effect of PsyCap between the mediated relationship of TS and innovative work behavior through threat appraisal and work engagement (β = 0.018, p-value < 0.001) (β = 0.028, p-value >0.01) respectively.

Discussion

The objective of this research was to use cognitive appraisal and work engagement to examine the direct and indirect links between task significance and innovative work behavior. It was recognized that task significance has a positive and considerable impact on both innovative work behavior and job engagement. In line with the findings of Agarwal & Gupta (2018), Bayoumy (2019), Hammond et al. (2011), Kim et al. (2019), Nurjaman et al. (2019), and Werleman (2016), the results of this study empirically demonstrate a relationship between task significance and innovative work behavior and work engagement in the nursing context.

It also turns out that the third assumption—that task significance has a major influence on cognitive appraisal—is valid. According to the current study, job features can be viewed as both a challenge and a threat at the same time, as stated by Naseer et al. (2019) and Noesgaard and Hansen (2017). Overall results supported the assertions of Naseer et al. (2019) and Taris and Hu (2020) by indicating that task significance brings both positive and negative outcomes through their cognitive appraisal. Individuals who concentrate on the positive aspects of task significance, such as resource accumulation, perceive the task as a challenge which increases engagement and fosters innovative behavior. In contrast, a person's attention to the negative aspects of job significance (such as the depletion of resources) encourages the task to be perceived as a threat, which results in a stressful experience that lowers employee engagement and forbids employees from devoting their energy to innovative work behavior. These results particularly complement the research by Ahmed (2020) and Mitchell et al. (2019), which asserted that the way resources are employed dictates their ultimate results. When an appraisal is viewed as a challenge, it motivates individuals to act beyond their job description (IWB), and when it is viewed as a threat, it discourages employees from engaging in extra-role behavior (IWB). Because of this, it is implied that task significance is not an effective tool for inspiring all employees; rather, it depends on each person's frame of reference and attitudes toward their work, as well as how they evaluate and perceive the characteristics of their jobs (Fried & Ferris, 1987). The second

last hypothesis of the study, psychological capital moderates the association of task significance and cognitive appraisal, supporting the findings of Chadwick et al. (2013) that people who perceive stressors as challenges are more likely to perceive them as challenges, while people who perceive stressors as threats are more likely to perceive them as threats. The perception of resources is one of the fundamental concepts needed to understand how people evaluate the stress they experience at work.

The COR theory (Hobfoll, 1989) states that those who believe they have more resources have a greater likelihood of acquiring them and a lower risk of losing them. Similarly, people who regard themselves as having fewer resources are also more likely to lose resources and have less to spend in certain circumstance, which raises the possibility of additional loss. Higher mastery levels allow people with high PsyCap levels to better use the resources at their disposal and handle professional circumstances with greater skill. Because of this, people who had highly perceived PsyCap evaluated the task significance as challenging. On the other hand, those with low perceived PsyCap viewed the task as a threat.

Theoretical Contribution

The present study added to the body of knowledge regarding job design, specifically job characteristics, by incorporating the cognitive appraisal as a mediator in determining the association between task significance and work engagement, as proposed by P. Li et al. (2020). This assessment, which establishes the reasons and timing of an individual's interpretation of a job as a challenge or a threat, is based on the perception of resources. The argument made in the work design literature that job resources can be seen as both threatening and challenging, and that they can have both positive and negative consequences, is thus supported by this study. As suggested by Mitchell et al. (2019), it also offers a distinct explanation for the disparities pertaining to the varying impact of task significance on results. Furthermore, while cognitive appraisal of job resources was disregarded, the majority of studies concentrated on job demands about cognitive appraisal. In response to calls from multiple scholars, the current study examined the appraisal of job characteristics as either a challenge or a threat, providing new insight into the field. It also suggests a novel underlying mechanism related to job resources (task significance), cognitive appraisal as mediator, PsyCap as moderator, and its results.

Furthermore, aside from its paramount significance within the healthcare sector, the concept of innovative work behavior has garnered relatively little scrutiny. Given this, the study has advanced our knowledge of innovation in the healthcare industry and brought attention to the significance of nurses' innovative work practices. Additionally, the current study makes a methodological contribution. A straightforward random sample technique was employed to gather the data for the present study. Although it took some time, this strategy was successful in broadening the inferences and boosting confidence in the results.

Practical Implications

Current research has practical implication as investigating how nurses view their task as threats or challenges was helpful. According to the findings, nurses perceive their work as both a challenge and a threat, depending on their PsyCap. Thereby, it is necessary to change the perception of nurses regarding the task significance, where they see it as a threat. It can

be done either by redesigning their task or by improving their PsyCap. Since redesigning a job is challenging and time-consuming, it is easier and less expensive to boost their PsyCap so that they see their task significance as a challenge that will increase their engagement and, eventually, their innovative work behavior.

Limitations and Future Directions

The ambiguity around causal inferences as mediators may be a drawback of the current investigation. The cross-sectional study design involved the collection of cognitive evaluation and work engagement at a specific point in time. Furthermore, the study's sample could not be representative of all nurses in Pakistan since it only included nurses working at tertiary hospitals in twin cities.

As innovators, nurses are catalysts for change (Shih & Susanto, 2017). Healthcare organizations have to recognize and support the factors that motivate creative thinking (Slåtten et al., 2020). Only task significance was examined in this study; to provide a fuller knowledge of extra-role behavior at work, the mix of components should be expanded to include aspects related to job resources. Additionally, future research might examine the unique effects of job characteristics on idea creation, idea promotion, and idea realization as JC may have varying impacts on each IWB component (Bos-Nehles et al., 2017). In the current study, we did not evaluate the innovativeness of nurses in public and private hospitals separately; therefore, a comparative study may be conducted in the future. Furthermore, since doctors play an equally important role in fostering innovation in healthcare organizations, future research involving both doctors and nurses may also be taken into consideration in dyadic studies.

Concluding Remarks

The study's findings provide credence to the notion that task significance is a unique type of stressor that can have both beneficial and detrimental impacts. Challenge appraisal of job attributes increases work engagement and innovative work behavior, while threat appraisal impedes employee engagement and innovative work behavior. Thus, to increase nurses' innovative work behavior nursing management need to develop strategies (such as training for cultivating PsyCap) to influence nurses' perception of workplace characteristics as a challenge rather than a threat.

References

1. Abdelrazek Abdelhalem Abdelatti, A., Mohamed Adam, S., & Mohamed Abdrabou, H. (2022). Relationship between Workplace Empowerment and Innovative Work Behavior among Staff Nurses. *Egyptian Journal of Health Care*, *13*(4), 1060–1070. https://doi.org/10.21608/ejhc.2022.266938
2. Agarwal, U. A. (2014). Examining the impact of social exchange relationships on innovative work behaviour: Role of work engagement. *Team Performance Management*, *20*(3/4), 102–120. https://doi.org/10.1108/TPM-01-2013-0004
3. Ahmed, A. (2020). A missing link between job autonomy and unethical behavior. *Etikonomi*, *19*(1), 95-118. https://doi.org/10.15408/etk.v19i1.12391
4. Aktar, A., & Pangil, F. (2017). Antecedents and consequences of employee engagement: a conceptual study. *IOSR Journal of Business and Management*, *19*(06), 54–67.

https://doi.org/10.9790/487x-1906065467
5. Ashfaq, F., Abid, G., Ilyas, S., & Binte Mansoor, K. (2023). Perceived organisational support and work engagement among health sector workers during the COVID-19 pandemic: A multicentre, time-lagged, cross-sectional study among clinical hospital staff in Pakistan. *BMJ Open*, *13*(6), 1–10. https://doi.org/10.1136/bmjopen-2022-065678
6. Awang, Z. (2014). *Validating the measurement model : Cfa. Structural equation modelling using amos grafic* (pp. 54–73)
7. Ayvaz, C., Akyol, M. E., & Demiral, Y. E. (2019). Innovation in Nursing and Innovative Attitudes of Nurses, International Health Administration and Education. *Sanitas Magisterium)*, *5*(2), 52–59. https://dergipark.org.tr/ijhadec
8. Bayoumy, S. A. (2019). Relationship between job characteristics and work engagement among nursing staff. *International Journal of Nursing Didactics*, *9*(01), 24–29. doi:10.15520/ijnd.v9i01.2406
9. Böckerman, P., Bryson, A., Kauhanen, A., & Kangasniemi, M. (2020). Does job design make workers happy? *Scottish Journal of Political Economy*, *67*(1), 31–52. https://doi.org/10.1111/sjpe.12211
10. Bos-Nehles, A., Renkema, M., & Janssen, M. (2017). HRM and innovative work behaviour: a systematic literature review. *Personnel Review*, *46*(7), 1228–1253. https://doi.org/10.1108/PR-09-2016-0257
11. Bremner, N., & Carrière, J. (2011). The effects of skill variety , task significance , task identity and autonomy on occupational burnout in a hospital setting and the mediating effect of work meaningfulness. *Telfer School of Management*, *March*, 11.02. https://ruor.uottawa.ca/bitstream/10393/19845/1/TelferSchool_WP-11-02_Bremner_Carriere.pdf
12. Byron, K., & Nazarian, D. (2010). The relationship between stressors and creativity : a meta-analysis examining competing theoretical models. *Journal of Applied Psychology, 95*(1), 201–212. https://doi.org/10.1037/a0017868
13. Cao, Y., Liu, J., Liu, K., Yang, M., & Liu, Y. (2019). The mediating role of organizational commitment between calling and work engagement of nurses: A cross-sectional study. *International Journal of Nursing Sciences*, *6*(3), 309–314. https://doi.org/10.1016/j.ijnss.2019.05.004
14. Cangialosi, N., Odoardi, C., & Battistelli, A. (2020). A three-way interaction model of innovative behavior, task-related learning, and job characteristics. *Performance Improvement Quarterly*, *33*(2), 153–172. https://doi.org/10.1002/piq.21322
15. Chadwick, I. C., & Raver, J. L. (2013). Continuously improving in tough times: Overcoming resource constraints with psychological capital. Orlando, Florida, US: Academy of Management Conference 2013.Reterieved from http://hdl.handle.net/1974/8355
16. Coelho, F., & Augusto, M. (2010). Job characteristics and the creativity of frontline service employees. *Journal of Service Research*, *13*(4), 426–438. https://doi.org/10.1177/1094670510369379
17. Deegahawature, M. (2014). Managers' inclination towards open innovation: Effect of job characteristics. *European Journal of Business and Management*, *6*(1), 8–16. http://www.iiste.org/Journals/index.php/EJBM/article/view/10202
18. Duddeck, L. (2016). The relationship of stress appraisal and personality with work performance. *june*, 1–46. University Utrecht
19. El-asmar, S. (2013). , *2013 © Serena El-Asmar, 2013*.
20. Espedido, A., Searle, B. J., & Searle, B. J. (2020a). Daily proactive problem-solving and next day stress appraisals : the moderating role of behavioral activation the moderating role of behavioral activation. *Anxiety, Stress, & Coping*, 33(4), 416-428. https://doi.org/10.1080/10615806.2020.1751828

21. Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, *40*(2), 287–322. https://doi.org/10.1111/j.1744-6570.1987.tb00605.x
22. Grant, A. M. (2008). The significance of task significance : job performance effects , relational mechanisms , and boundary conditions. *Journal of Applied Psychology*, *93*(1), 108–124. https://doi.org/10.1037/0021-9010.93.1.108
23. Grant, A. M. (2008). The significance of task significance : job performance effects , relational mechanisms , and boundary conditions. *Journal of Applied Psychology*, *93*(1), 108–124. https://doi.org/10.1037/0021-9010.93.1.108
24. Grant, A. M., & Parker, S. K. (2009). Redesigning work design theories: the rise of relational and proactive perspectives. *The Academy of Management Annals*, *3*(1), 317–375. https://doi.org/10.1080/19416520903047327
25. Hackman, J. R., & Oldham, G. R. (1974). The job diagnostic survey: An instrument for the diagnosis of jobs and the evaluation of job redesign projects. *Technical Report no.4, Department of Administrative Sciences*, Yale University.
26. Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: a meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, *5*(1), 90–105. https://doi.org/10.1037/a0018556
27. Hara, Y., Asakura, K., Sugiyama, S., Takada, N., Ito, Y., & Nihei, Y. (2021). Nurses working in nursing homes: A mediation model for work engagement based on job demands-resources theory. *Healthcare (Switzerland)*, *9*(3), 1–11. https://doi.org/10.3390/healthcare9030316
28. Hasan, M., Ali, S., & Naqvi, W. (2020). Frustration-aggression leading to health crisis : case of pakistani young doctors ' movement. *Pakistan Social Sciences Review*, *4*(1), 493–506. doi:10.35484/pssr.2020(4-I)39
29. 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
30. Heydari, N., Rakhshan, M., Torabizadeh, C., & Salimi, G. (2023). Research article Individual innovation from the perspective of nursing students: A qualitative study. *BMC Nursing*, *22*(1), 1–11. https://doi.org/10.1186/s12912-023-01311-y
31. 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
32. Huyghebaert, T., Gillet, N., Lahiani, F. J., & Fouquereau, E. (2016). Curvilinear effects of job characteristics on ill-being in the nursing profession: A cross-sectional study. *Journal of Advanced Nursing*, *72*(5), 1109–1121. https://doi.org/10.1111/jan.12894
33. Janssen. (2000). Job demands, perceptions of effort-reward fairness nd innovative work behavior. *Journal of Occupational and Organizational Psychology*, *73*(3), 287–302. https://doi.org/10.1348/096317900167038
34. Jason, V., & SN, Geetha. (2021). Regulatory focus and innovative work behavior: The role of work engagement. *Current Psychology*, *40*(6), 2791-2803. https://doi.org/10.1007/s12144-019-00220-1
35. Kara, D. (2016). Global Journal on Advances in Pure & Applied Sciences. *Global Journal on Advances in Pure & Applied Sciences*, *5*(5), 170–174.
36. Khalid, F., & Abbasi, A. N. (2018). Challenges faced by Pakistani healthcare system: Clinician's perspective. *Journal of the College of Physicians and Surgeons Pakistan*, *28*(12), 899–901. https://doi.org/10.29271/jcpsp.2018.12.899
37. Khan, Z. A., Nawaz, A., Khan, I., & Khan, D. I. (2016). The challenges concerning the healthcare leadership towards innovation in developing countries like Pakistan. *Advances in Life Science and Technology*, *40*(2), 1–4.

https://www.iiste.org/Journals/index.php/ALST/article/view/27996/28741
38. Kim, W., Han, S. J., & Park, J. (2019). Is the role of work engagement essential to employee performance or ' nice to have '? *Sustainability, 11*(4), 1050. https://doi.org/10.3390/su11041050
39. LePine, M. A., Zhang, Y., Crawford, E. R., & Rich, B. L. (2016). Turning their pain to gain: Charismatic leader influence on follower stress appraisal and job performance. *Academy of Management Journal*, *59*(3), 1036–1059. https://doi.org/10.5465/amj.2013.0778
40. Li, P., Taris, T. W., & Peeters, M. C. W. (2020). Challenge and hindrance appraisals of job demands: one man's meat, another man's poison? *Anxiety, Stress and Coping*, *33*(1), 31–46. https://doi.org/10.1080/10615806.2019.1673133
41. Lin, S. H., Wu, C. H., Chen, M. Y., & Chen, L. H. (2014). Why employees with higher challenging appraisals style are more affectively engaged at work? The role of challenging stressors: A moderated mediation model. *International Journal of Psychology*, *49*(5), 390–396. https://doi.org/10.1002/ijop.12064
42. Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, *60*(3), 541–572. https://doi.org/10.1111/j.1744-6570.2007.00083.x
43. Marić, M., Hernaus, T., Tadić Vujčić, M., & Černe, M. (2019). Job characteristics and organizational citizenship behavior: A multisource study on the role of work engagement. *Drustvena Istrazivanja*, *28*(1), 25–45. https://doi.org/10.5559/di.28.1.02
44. Mitchell, M. S., Greenbaum, R. L., Vogel, R. M., Mawritz, M. B., & Keating, D. J. (2019). Can you handle the pressure ? The effect of performance pressure on stress appraisals , self-regulation , and behavior. *Academy of Management Journal*, *62*(2), 531-552. https://doi.org/10.5465/amj.2016.0646
45. Montani, F., Vandenberghe, C., Khedhaouria, A., & Courcy, F. (2020). Examining the inverted U-shaped relationship between workload and innovative work behavior: The role of work engagement and mindfulness. *Human Relations, 73* (1), 59-93. https://doi.org/10.1177/0018726718819055
46. Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, *91*(6), 1321–1339. https://doi.org/10.1037/0021-9010.91.6.1321
47. Morris, M. G., & Venkatesh, V. (2010). Job characteristics and job satisfaction: Understanding the role of enterprise resource planning system implementation. *Mis Quarterly,34*(1),143-161. https://doi.org/10.2307/20721418
48. Naseer, S., Donia, M. B. L., Syed, F., & Bashir, F. (2019). Too much of a good thing: The interactive effects of cultural values and core job characteristics on hindrance stressors and employee performance outcomes. *Human Resource Management*, *59*(3), 271–289. https://doi.org/10.1002/hrm.21993
49. Noesgaard, M. S., & Hansen, J. R. (2017). Work engagement in the public service context : the dual perceptions of job characteristics. *International Journal of Public Administration*, 41(13), 1047–1060. https://doi.org/10.1080/01900692.2017.1318401
50. Nurjaman, K., Marta, M. S., Eliyana, A., Kurniasari, D., & Kurniasari, D. (2019). Proactive work behavior and innovative work behavior: Moderating effect of job characteristics. *Humanities and Social Sciences Reviews*, *7*(6), 373–379. https://doi.org/10.18510/hssr.2019.7663
51. Othman, N., & Nasurdin, A. M. (2019). Job characteristics and staying engaged in work of nurses: Empirical evidence from Malaysia. *International Journal of Nursing Sciences*, *6*(4), 432–438. https://doi.org/10.1016/j.ijnss.2019.09.010
52. Pee, L. G., & Chua, A. Y. (2016). Duration, frequency, and diversity of knowledge contribution: Differential effects of job characteristics. *Information & Management*, *53*(4), 435-446.

https://doi.org/10.1016/j.im.2015.10.009
53. Pee, L.G. (2011). The effects of job design on employees' knowledge contribution to electronic repositories. *ICIS*. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.850.4070&rep=rep1&type=pdf
54. Pennbrant, S., & Dåderman, A. (2021). Job demands, work engagement and job turnover intentions among registered nurses: Explained by work-family private life inference. *Work*, *68*(4), 1157–1169. https://doi.org/10.3233/WOR-213445
55. 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
56. Saunders, M., Lewis, P. H. I. L. I. P., & Thornhill, A. D. R. I. A. N. (2007). *Research methods for business students (4th ed).* Pearson Education Limited, England.
57. Saunders, M., Lewis, P. H. I. L. I. P., & Thornhill, A. D. R. I. A. N. (2019). *Research methods for business students (8th ed).* Pearson Education Limited, England.
58. Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, *66*(4), 701–716. https://doi.org/10.1177/0013164405282471
59. Secosan, I., Virga, D., Crainiceanu, Z. P., Bratu, L. M., & Bratu, T. (2021). The Moderating Role of Personal Resources Between Demands and Ill-Being of Romanian Healthcare Professionals in the COVID-19 Pandemic. *Frontiers in Public Health*, *9*(12), 1–10. https://doi.org/10.3389/fpubh.2021.736099
60. Shahid, H., Ather, M. A., Shahid, S., & Imran, Z. (2023). Psychological capital and work engagement: a mediated moderation model of positive emotions and emotional intelligence. *Journal of Social Sciences Review*, *3*(2), 562–578. https://doi.org/10.54183/jssr.v3i2.239
61. Shih, H. A., & Susanto, E. (2017). Perceived identifiability, shared responsibility and innovative work behavior. *International Journal of Human Resource Management*, *28*(22), 3109–3127. https://doi.org/10.1080/09585192.2016.1143860
62. Slåtten, T., Mutonyi, B. R., & Lien, G. (2020). The impact of individual creativity, psychological capital, and leadership autonomy support on hospital employees' innovative behaviour. *BMC Health Services Research*, *20*(1), 1–17. https://doi.org/10.1186/s12913-020-05954-4
63. Snide, J., & Nailon, R. (2013). Nursing staff innovations result in improved patient satisfaction. *American Journal of Nursing*, *113*(10), 42–50. https://doi.org/10.1097/01.NAJ.0000435349.68781.77
64. Taris, T. W., & Hu, Q. (2020). Going your own way: a cross-cultural validation of the motivational demands at work scale (Mind@Work). *Frontiers in Psychology*, *11*(6), 1–13. https://doi.org/10.3389/fpsyg.2020.01223
65. Thompson, I. (2013). Challenge and hindrance stressor appraisals, personal resources, and work engagement among K-12 teachers. https://scholar.utc.edu/theses/410
66. Tosun, A., & Tosun, H. (2020). Innovation Management and Nursing. *Health Sciences Research in the Globalizing World*, *6*, 155–165.
67. Tung, L. V., Akkadechanunt, T., & Chontawan, R. (2014). Factors related to innovation behavior among nurses in tertiary general hospitals , the central region , the socialist republic of vietnam. *Nursing Journal*, *41*(2), 117–132.
68. Van Zyl, L. E., van Oort, A., Rispens, S., & Olckers, C. (2019). Work engagement and task performance within a global Dutch ICT-consulting firm: The mediating role of innovative work behaviors. *Current Psychology*, *40*(8), 4012-4023. https://doi.org/10.1007/s12144-019-00339-1
69. Wan, Q., Zhou, W., Li, Z., & Shang, S. (2018). Associations of organizational justice and job characteristics with work engagement among nurses in hospitals in china. *Research in Nursing and Health*, *41*(6), 555–562. https://doi.org/10.1002/nur.21908

70. Webster, J. R., Beehr, T. A., & Love, K. (2011). Extending the challenge-hindrance model of occupational stress: The role of appraisal. *Journal of Vocational Behavior*, *79*(2), 505–516. https://doi.org/10.1016/j.jvb.2011.02.001
71. Xu, D., Zhang, N., Bu, X., & He, J. (2021). The effect of perceived organizational support on the work engagement of Chinese nurses during the COVID-19: the mediating role of psychological safety. *Psychology, Health & Medicine*, 27(2), 481–487. https://doi.org/10.1080/13548506.2021.1946107
72. Yang, H.-C., & Cho, H.-Y. (2015). Effects of individuals, leader relationships, and groups on innovative work behaviors. *Journal of Industrial Distribution & Business*, *6*(3), 19–25. https://doi.org/10.13106/ijidb.2015.vol6.no3.19.
73. Zaman, Q., Qureshi, F. A., & Butt, M. (2020). Mediating Effect of Perceived Organizational Support on the Relationship between Leader-Member Exchange and the Innovation Work Behavior of Nursing Employees: A Social Exchange Perspective. *Business Innovation and Entrepreneurship Journal*, *2*(1), 67–76. https://doi.org/10.35899/biej.v2i1.63
74. Zaniboni, S., Truxillo, D. M., & Fraccaroli, F. (2013). Differential effects of task variety and skill variety on burnout and turnover intentions for older and younger workers. *European Journal of Work and Organizational Psychology*, *22*(3), 306–317. https://doi.org/10.1080/1359432X.2013.782288
75. Zappalà, S., Toscano, F., Polevaya, M. V., & Kamneva, E. V. (2021). Personal initiative, passive-avoidant leadership and support for innovation as antecedents of nurses' idea generation and idea implementation. *Journal of Nursing Scholarship*, *53*(1), 96–105. https://doi.org/10.1111/jnu.12615
76. Zhang, M., Zhang, P., Liu, Y., Wang, H., Hu, K., & Du, M. (2021). Influence of perceived stress and workload on work engagement in front-line nurses during COVID-19 pandemic. *Journal of Clinical Nursing*, *30*(11–12), 1584–1595. https://doi.org/10.1111/jocn.15707