

Does Feedback Foster or Hinder Innovative Work Behavior of Nurses? The Mediating Role of Cognitive Appraisal

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Abstract

This study intends to examine the impact of feedback on innovative work behavior (IWB) directly and indirectly through cognitive appraisal. The study was based on quantitative methodology. Data was collected through simple random sampling from nurses working in tertiary hospitals of twin cities (Rawalpindi and Islamabad) in Pakistan. Further, quantitative data was analyzed by SPSS and AMOS. The results imply that feedback can indirectly promote or inhibit innovative work behavior through cognitive appraisal, depending on whether viewed as a challenge or a threat. Thereby nursing management should implement training and development programs so that nurses can view feedback as a challenge that could positively impact innovative work behavior.

Keywords: Feedback, Cognitive Appraisal, Innovative Work Behavior, Conservation of Resources Theory, Nurses

1. Introduction

Innovative work behavior (IWB) is critical for organizational growth. Nowadays, innovative work behavior is being discussed and applied in a variety of sectors including technology, engineering, management, and even education. Despite the fact that healthcare sectors' growth is primarily based on their employees' IWB, the same phenomenon has received little attention in the healthcare industry (Weintraub & McKee, 2019; Yasir & Majid, 2019).

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According to prior studies, doctors demonstrate knowledge-gathering skills, but nurses demonstrate idea creation skills, which are more significant for innovative behavior (Asurakkody & Shin, 2018; Heydari et al., 2023). As nurses have to make important decisions that need innovative behavior (Dy Bunpin et al., 2016). Their capacity to think creatively enables them to come up with new ideas for dealing with newly founded work-related demands (Yasir & Majid, 2019). Nurses are thus in a better position to contribute to practice innovation (Ahmed et al., 2019; Shih & Susanto, 2017). It is emphasized that nurses' innovativeness is crucial given that they are responsible for up to 80% of primary care (Asurakkody & Shin, 2018) and have a significant role in almost all treatments (Lateef, 2022). They not only directly affect patients' health (Akhtar et al., 2020) but also actively participate in developing and supporting unique strategies to promote health, reduce risk factors for health related issues, limit illnesses, enhance therapeutic policies and procedures (Ahmed et al., 2019) and play a critical role in developing innovative procedures and tactics for improving and upgrading healthcare services (Asurakkody & Shin, 2018). Since nurses hold a unique position in terms of healthcare innovation (Åmo, 2006; Asurakkody & Shin, 2018). Thereby, without nurses, healthcare systems cannot be innovative (Lateef, 2022). Despite the significance of nurses' innovative work behavior, there is a noticeable absence of it among nurses (Abdelrazek Abdelhalem Abdelatti et al., 2022; Heydari et al., 2023; Tung et al., 2014; Khan et al., 2016).

Factors that may assist in cultivating IWB are categorized on three levels of analysis; individual, group, and organization (Afsar, 2016). The majority of studies, particularly in the healthcare sector, are centered on organizational and group-level determinants, with just 13% of studies considering individual-level antecedents of IWB (Slåtten et al., 2020). At the individual level, job characteristics are the prominent determinant of IWB (Kwon & Kim, 2020). Amongst other feedback is considered one of the critical resources that can influence IWB (Kwon & Kim, 2020).

Nevertheless, a positive association between feedback and IWB has been confirmed by many scholars. However, the association between feedback and IWB is inconsistent (Wan et al., 2018) as feedback is a unique stressor that can be a double-edged sword, encouraging both positive and negative outcomes. Drawing on the theoretical foundation of Lazarus and Folkman's (1984) transactional theory, it is argued that the immediate determinant that triggers an individual's reaction is not job characteristics itself, rather it is the individual's appraisal of core job characteristic as a challenge or threat depending upon individual differences. Therefore inconsistent effects of any stressor (i.e., Feedback) may potentially be subject to an individual's cognitive appraisal (Lazarus, 1984; Naseer et al., 2019). As individuals cognitively appraise their job stressors as a challenge stimulates the motivation necessary for creative thinking (Byron & Nazarian, 2010). While those appraising job stressors as threat they tend to minimize their effort on discretionary behavior (González-Morales & Neves, 2015).

Based on the above argument, the current study attempts to clarify the perplexing effect of feedback by incorporating the cognitive appraisal (challenge and threat appraisals) as a mediator as suggested by Mitchell et al. (2019), Naseer et al. (2019), and Van Veldhoven et al. (2020). Furthermore, the current study also explained the mechanism through which feedback influences IWB and thus contributed toward scant literature on IWB in the nursing

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context as suggested by Ahmed et al. (2019), Asurakkody and Shin (2018), and Baker, (2020).

2. Literature Review

2.1 Feedback and Innovative Work Behavior

Feedback is referred to the information that employees receive regarding the effectiveness of their job performance (Hackman & Oldham, 1974). The last job characteristic, feedback, is likewise thought to be linked to innovative work behavior (Cangialosi et al., 2021; Yang & Cho., 2015). Feedback gives information about an employee's performance, which encourages intrinsic motivation (Deegahawature, 2014), inspires creative thinking (Coelho & Augusto, 2010), and facilitates innovative work behavior (Cangialosi et al., 2021). Employees who do not receive performance feedback have no reason for feeling good or bad about their work, which reduces internal motivation and has a detrimental impact on creative thinking (Coelho & Augusto, 2010). On the other hand, employees who receive feedback on their job performance are more inclined to regulate their work behaviors. As receiving feedback reduces uncertainty and employees take change-oriented actions which enhance employee innovativeness (Battistelli et al., 2013). Furthermore, feedback not only provides information for evaluating current efforts but also motivates employees to attempt new things in the pursuit of a better result. It provides an opportunity to learn more about the work and gain a better knowledge of it. This encourages employees to use their domain-specific abilities and improves creative output (Coelho & Augusto, 2010) and innovative work behavior (Cangialosi et al., 2021). Thereby it is postulated that

H1: There is a significant relationship between Feedback and innovative work behavior.

2.2 Feedback and Cognitive Appraisal

Feedback: It is defined as the information that employees receive regarding the effectiveness of their job performance (Hackman & Oldham, 1974). By receiving feedback employees afford an opportunity to improve their performance to achieve 49 expected goals which foster motivation (Lee et al., 2020). Feedback, however, isn't necessarily a motivator (Gnepp et al., 2020). Employees will be motivated only if they accept feedback or believe that there is room for improvement (Gnepp et al., 2020) or that the task can be completed with fewer resources (Kluger & DeNisi, 1996). Employees who believe they are on pace to meet their goals are more likely to feel valued at work (Humphrey et al., 2007). Such positive feedback results in emotional comfort and motivation. While an overabundance of positive feedback can lead to ingratiated feelings among employees (Pee, 2011). On the other hand, employees who believe they are not on track to achieve their objectives will find different ways to attain their objectives only if they can change their behavior Humphrey et al. (2007). Otherwise such negative feedback may create discomfort and threaten one's confidence and self-determination (Pee, 2011). Since the findings on the impacts of feedback are inconclusive, (Fried & Ferris, 1987; Grant & Parker, 2009; Gnepp et al., 2020; Kluger & DeNisi, 1996), it is found that cognitive appraisal (Kluger & DeNisi, 1996) and individual differences (Gnepp et al., 2020) are key contributors to this variation. As when an individual receives feedback, he/she cognitively evaluate it both for its harm-benefit potential for the self and for the need to take a new action (Kluger & DeNisi, 1996). For this reason, it is argued that the differential effects of feedback on particular valence depend on its appraisal by individuals (Brown &

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Creaven, 2017).

H2a: There is a significant relationship between Feedback and challenge appraisal.

H2b: There is a significant relationship between Feedback and threat appraisal.

2.3 Cognitive Appraisal and Innovative Work Behavior

Challenge appraisal stimulates cognitive style that promotes positive outcomes like creativity (Majeed & Naseer, 2019; Ohly & Fritz, 2010). As challenge appraisal induces the feeling of growth and development that initiates the process of resource mobilization (González-Morales & Neves, 2015) and stimulates the motivation necessary for creative thinking (Byron & Nazarian, 2010). This accumulation of resources assists in cultivating extra-role behavior (González-Morales & Neves, 2015) that is consistent with COR theory's main tenet (Hobfoll et al., 2018).

On the contrary, threat appraisal thwarts one's ability to execute his/her task as expected (González-Morales & Neves, 2015), as well as they, tend to minimize their effort on discretionary behavior, when more effort and energy are needed, without any fear of penalty (González-Morales & Neves, 2015). Furthermore, individuals with a limited pool of resources are usually drained out as they are left with fewer resources for other tasks therefore they attempt to restore their resources by engaging in avoidance coping strategy (Naseer et al., 2019). They tend to use simple strategies and focus on common methods which undermine creative and novel thinking (Byron & Nazarian, 2010). Therefore it can be postulated that cognitive appraisal either threat or challenge has a considerable effect on individuals' innovative work behavior.

H3a: There is a significant relationship between challenge appraisal and innovative work behavior

H3b: There is a significant relationship between threat appraisal and innovative work behavior

2.4 Cognitive Appraisal as a Mediator between the relationship of Feedback and Innovative Work Behavior

Numerous researchers have shown that the impact of stressors on results connected to the workplace is mediated by cognitive appraisal (as challenge or threat). According to Ohly & Fritz (2010), a challenge appraisal has a mediating function in determining the impact of several job characteristics (time pressure and control over the job) on proactive behavior and creativity. Job characteristics that have the potential for growth, well-being, development, success, and personal gain are likely to be viewed as a challenge, whereas JC that present obstacles to or obstruct opportunities for one's career and well-being are likely to be viewed as a threat (Li et al., 2020; Naseer et al., 2019). Aforementioned arguments corroborate that the perplexing outcome of feedback is contingent upon its cognitive appraisal as a challenge or threat by individuals (Lee et al., 2020; Naseer et al., 2019)

The stimulation of the cognitive style that supports positive results like creativity is caused by challenge appraisal (Majeed & Naseer, 2019; Ohly & Fritz, 2010). The challenge appraisal fosters a sense of progress and development, which starts the process of resource mobilization González-Morales & Neves (2015) and ignites the energy required for creative thinking (Byron & Nazarian, 2010).

Threat appraisal, on the other hand, makes it difficult for someone to complete a task as

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expected and they also have a tendency to put less effort into discretionary behavior when it is necessary without worrying about facing consequences (GonzálezMorales & Neves, 2015). Additionally, people with few resources are frequently exhausted since they have fewer resources for other jobs, thus they adopt avoidance coping strategies in an effort to restore their resources (Naseer et al., 2019). They frequently employ straightforward tactics and emphasize on common methods which undermine creative and novel thinking (Byron & Nazarian, 2010).

H4a: Challenge appraisal significantly mediates the relationship between Feedback and innovative work behavior

H4b: Threat appraisal significantly mediates the relationship between Feedback and innovative work behavior

Following the principle of resource investment of conservation of resource (COR) theory, people invest resources to protect against resource loss, recoup from resource losses, and acquire new resources. And according to the principle of desperation of COR theory, people shift into a defensive mode to defend themselves from additional resource loss, when their resources are exhausted or stretched which can lead to irrational or aggressive behavior (Hobfoll, 2018). Therefore, COR theory's resource investment and desperation principle can both be used to support the aforementioned claim. Appraisal of the challenge elicits favorable feelings that the time and effort will be well spent and will lead to additional resource accumulation. This kind of appraisal offers people the drive to identify, use, or create the resources (Xanthopoulou et al., 2009) they need to demonstrate IWB. Threat appraisal, on the other hand, arouses unfavorable emotions, such as the worry of further resource depletion as a result of resource investment. Such an appraisal puts one's resources in jeopardy, discouraging workers and impeding their IWB. The study's overall objectives are as follows:

- I. To ascertain the effect of feedback on innovative work behavior.
- II. To investigate the effect of feedback on (i) challenge appraisal (ii) and threat appraisal.
- III. To examine the effect of (i) challenge appraisal (ii) and threat appraisal on innovative work behavior
- IV. To investigate to see if (i) challenge appraisal and (ii) threat appraisal mediate the relationship between feedback and innovative work behavior.

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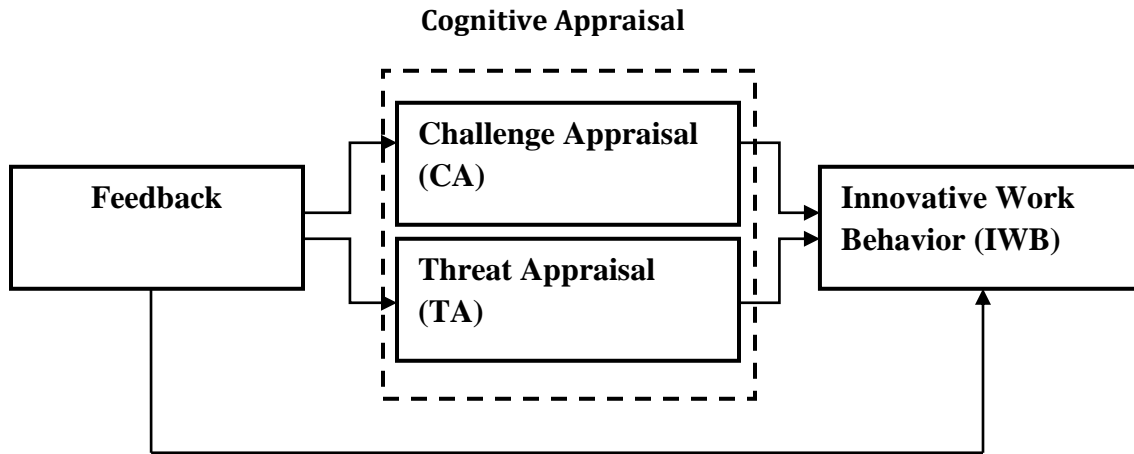


Figure 1: Conceptual Framework

3. Methodology

3.1 Design

Based on a theory development approach, the emphasis of this study was theory testing and verification rather than theory generation or theory modification, thus embracing a positivism philosophy and consequently based on a deductive research approach. Further, in current research data was gathered at a particular point in time due to time constraints by employing quantitative method, thus categorized as a cross-sectional and objective study.

3.2 Sample

The population of this study was nurses of tertiary hospitals in twin cities (Rawalpindi & Islamabad) of Pakistan. A wide range of departments and high numbers of in-patients beds (as it serves the basis of the required number of nurses) served as the basis for selecting tertiary care hospitals (both public and private). Self-administered questionnaires were used to collect data at a specific time. This survey comprises replies from 427 nurses based on the simple random sampling technique.

3.3 Statistical Analysis

In this study quantitative data was analyzed using SPSS.25 and AMOS.21. First, the mean, standard deviation, and demographic information were examined. Next, the measuring model's applicability was assessed in terms of its validity, reliability, and unidimensionality. The structural model was used to test the final hypothesis.

3.4 Measures

Feedback: It was assessed through a 3-items scale modified and validated by Morris and Venkatesh (2010) based on a job diagnostic survey of Hackman and Oldham (1974) ($\alpha = .865$). The said measure is used by other scholars like Morris and Venkatesh (2010), Pee and Chua (2016), Pee and Lee (2015), and Tripp et al. (2016).

Cognitive Appraisal: The cognitive appraisal was measured using a 6-item scale that was modified from LePine et al. (2016). Three items were used to measure challenge appraisal

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($\alpha=.879$), and three items measured threat appraisal ($\alpha=.893$). This measure is currently used by Ma et al. (2021).

Innovative Work Behavior: IWB was assessed using a 9-item scale developed by Janssen (2000). This 9- items scale comprises 3 items for each dimension of IWB; idea generation ($\alpha=.870$), idea promotion ($\alpha=.848$), and idea realization($\alpha=.843$). This scale is currently used by Ghazali and Amin (2018), and Jason and Geetha (2021).

3.5 Ethical Consideration

Informed consent was acquired prior to data collection by including a section outlining the study's objectives in the questionnaire's first part. So before proceeding, respondents read the informed consent document. The confidentiality issue was also dealt by developing an anonymous questionnaire survey with solely demographic data

4. Result

4.1 Sample Characteristics

According to the descriptive analysis, 42 (10%) of respondents were male nurses, whereas 385 (90%) were female nurses. According to the analysis, 259 (61%) of the responders are affiliated with public hospitals, and 168 (39%) are with private hospitals. Following is a sample distribution broken down by age level: 301 respondents (70%) were between the ages of 19 and 28; 96 respondents (23%) were between the ages of 29 and 38; and 30 respondents (7%) were between the ages of 39 and 48.

First-order correlation analysis indicates Feedback was found to have a positive moderate link with innovative work behavior and challenge appraisal ($r=0.52$, $p<.001$; $r=0.39$, $p<.001$), respectively, whereas there was a weak positive association with threat appraisal ($r=0.19$, $p<.001$). Additionally, a first-order correlation revealed a substantial positive association ($r=0.73$, $p<.001$) between challenge appraisal and inventive work behavior, and a moderately negative link ($r=-0.43$, $p<.001$) between challenge and threat appraisal. Although there is a moderately negative correlation ($r=-0.31$, $p<.001$) between threat appraisal and innovative work behavior (Table 1).

Table 1: Reliability, Validity, Mean, STD Deviation, and Inter-Correlations of Study Variables

Variables	Min. Loading	IR	(α)	CR	AVE	Mean	SD	FB	CA	TA	IWB	1	HTMT	2	3
FB	.79	.865	.868	.687	4.89	1.45	.829								
CA	.80	.879	.886	.722	4.21	1.42	.39***	.850				.395			
TA	.82	.893	.897	.743	3.93	1.82	.19***	-	.862			.193	-	.434	
IWB	.81	.846	.894	.739	3.85	1.44	.52***	.73***	-	.860		.517	.731	-	.310
										.31***					

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(n=427) R= **p<.01 , R=***p<.001

Note: IR (α) =Internal Reliability; CR= Composite Reliability; AVE= Average Variance Extracted; SD= Standard Deviation; FB=Feedback; CA= Challenge Appraisal; TA=Threat Appraisal; 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

SPSS and Amos.21 were utilized to analyze the data. The initial step was evaluating the measuring model's adequacy for unidimensionality, reliability and validity. So firstly the four factor model was assessed and validated by allocating factors to the corresponding latent variables as all items had factor loadings greater than 0.6 (Appendix I-Figure 2).

The measure's inter-item consistency and composite reliability (CR) were evaluated. According to Awang (2014), reliability can only be determined if the Cronbach alpha (α) and CR value are at least 0.7. The values of α and CR for every variable were more than 0.7 (Table 1). In view of this, every scale and item used in this study measured the components accurately. Convergence validity was assessed and established by the application of average variance extraction (AVE). According to Awang's (2014) analysis, all constructs satisfied the AVE minimum threshold of 0.5, which is necessary for each to have strong convergent validity (Table 1). Based on the assessment of Heterotrait-Monotrait (HTMT) ratios, which were found to be less than threshold level 0.85 (Henseler et al., 2015) (Table 1). The discriminant validity was also demonstrated. Additionally, it was also assessed by comparing each construct's square root of AVE to its corresponding correlation. According to Awang (2014), the results showed that the constructs are different from one another (Table 1). Lastly, the fitness indices of the measurement model demonstrated that it had achieved an acceptable level, in accordance with the recommendation made by Awang (2014), confirming the construct validity. [χ^2 (126) = 312.811, $p < 0.000$; Root Mean Square Error of Approximation (RMSEA) = 0.059; Standardized Root Mean Square Residual (SRMR) = 0.040; Comparative Fit Index (CFI) = 0.963; and Tucker-Lewis Index (TLI)= 0.955] (Table 1).

Furthermore, the absence of multicollinearity is empirically supported by the values of the VIF and Tolerance scores, which range from 1.333 to 1.553 (less than 10) and 0.644 to 0.750 (above 0.2), respectively. This study may have been biased towards common methods because only one data source was employed. Thus, the common method bias (CMB) intensity was determined by means of Harman's single factor test (Podsakoff et al., 2003). Since an unrotated factor analysis explained 41.835% (less than 50%) of the total variation, therefore CMB was not a threat for analysis.

R² for the whole model is 61% which explains that innovative work behavior captures 61% of the estimate of feedback through challenge appraisal and threat appraisal, which implied a satisfactory model (Appendix II- Figure 3).

4.3 Structural Model

Structural equation modeling (SEM), a multivariate methodology that takes measurement error into account when statistically analyzing the data, was utilized to explore the research hypothesis. The results of the hypothesis are shown in Table 2. (Appendix II- Figure 3).

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Table 2: Structural Model (n=427)

Variables				b	se	Bootstrap LLCI	Bootstrap ULCI
Direct Effect							
H1	FB	→	IWB	.332***	.059		
H2a	FB	→	CA	.395***	.051		
H2b	FB	→	TA	.193***	.066		
H3a	CA	→	IWB	.538***	.073		
H3b	TA	→	IWB	-.141**	.046		
Indirect Effect							
H4a	FB	→	CA → IWB	.226***	.041	.166	.305
H4b	FB	→	TA → IWB	-.029**	.015	-.063	-.010

(n=427) R=* p<.05, R=**p<.01, R=***p<.001

Note: FB= Feedback CA= Challenge Appraisal, TA= Threat Appraisal, IWB= Innovative Work Behavior

The first hypothesis states that feedback and innovative work behavior are related. The findings confirm Hypothesis 1 by demonstrating that feedback has a statistically significant direct impact on innovative work behavior ($\gamma = 0.332$, $p < 0.001$).

It was hypothesized in Hypotheses 2a and 2b that feedback is related to (a) challenge appraisal and (b) threat appraisal. The connections between the variables are statistically significant and confirmed ($\gamma = 0.395$, $p < .001$; $\gamma = 0.193$, $p < .001$), according to the results.

The third hypothesis postulated that innovative work behavior is positively impacted by both (a) challenge appraisal and (b) threat appraisal. It can be concluded from the results that challenge appraisal has a direct positive influence on innovative work behavior and threat appraisal has a direct negative effect on innovative work behavior ($\gamma = 0.538$, $p < .001$; $\gamma = -0.141$, $p < .01$) respectively, supporting Hypotheses 3a and 3b.

According to Hypotheses 4a and 4b, there is an indirect relationship between feedback and innovative work behavior through (i) challenge appraisal and (ii) threat appraisal. The results are in line with our expectations, demonstrating a statistically significant positive indirect effect of feedback on innovative work behavior through challenge appraisal and negative indirect effect of feedback on innovative work behavior through threat appraisal, respectively ($\rho = .226$, 95%; [CI=.166,.305]); ($\rho = -.029$, 95%; [CI=-.063, -.010]).

5. Discussion

The results of the study supported the first hypothesis, which stated that there is a relationship between feedback and innovative work behavior (IWB). The hypothesis was acknowledged and supported by past research. The current study's findings support those of Hammond et al. (2011), Nurjaman et al. (2019), and Werleman (2016) and offer empirical proof of a relationship between feedback and IWB in the nursing context. Individuals can acquire knowledge about their job by obtaining feedback, which is a crucial antecedent and

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motivating factor for employee innovativeness (Černe et al., 2017; Werleman, 2016). The second hypothesis, according to which feedback has an impact on cognitive appraisal of either a challenge or a threat, is similarly confirmed. The current study supports the claims made by Naseer et al. (2019) and Noesgaard and Hansen (2017) that job characteristics can be viewed as both a challenge and a threat at the same time. The current study's findings provide empirical evidence for the relationships between feedback and challenge appraisal, as well as between feedback and threat appraisal. According to Ohly and Fritz (2010), people do not automatically achieve success when they put in a lot of effort. People who think they can perform the tasks required to obtain their goals are more likely to have a sense of accomplishment and, thus, find their work to be a challenge. Conversely, when employees are under more pressure than they can handle, they may perceive that as a threat. It was also noted by González-Morales and Neves (2015) that stressors that present a challenge might not necessarily be viewed as such. Additional research by Gerich and Weber (2020) and Webster et al. (2011) offers empirical support for the idea that work stressors, such as workload, role conflict, and role ambiguity, as well as task complexity, responsibility, time constraints, and interruptions, can be evaluated as both challenges and threats at the same time.

The third hypothesis's results are consistent with those of Espedido and Searle (2018), Espedido et al. (2020b), González-Morales and Neves (2015), Ohly and Fritz (2010), and other studies that have demonstrated the relationship between challenge and threat appraisal and extra-role performance, creativity, proactive behavior, and creative fluency. Performance is impacted by an employee's perception of the challenge or threat of their work. Extra-role behavior, such as innovation, initiative, and creative work practices, requires a strong justification from the individual because it is outside the purview of a formal job description. Challenge appraisals operate under the premise that satisfying job criteria will likely yield desired outcomes, such as elevated feelings of mastery, self-worth, and recognition from others (Espedido et al., 2020b). Because of this, challenge appraisal encourages employees to devote their energies to extra-role behavior and supports adaptive cognitive processes (Espedido & Searle, 2018). Threat assessments, on the other hand, might not encourage extra-role behavior. Threat assessment is associated with feelings of exhaustion and depletion, whereas tasks outside the purview of a formal job description necessitate greater work and energy from the individual (Espedido & Searle, 2018). Threat assessments thus have a detrimental emotional effect and result in maladaptive coping strategies (Espedido et al., 2020b), such as withdrawal behavior that prevents the performance of extra-role activities (González-Morales & Neves, 2015).

The final hypothesis is accepted and supports the claims made by Ohly and Fritz (2010) and Naseer et al. (2019). They asserted that viewing a stressor as a challenge fosters creative thinking. As a challenge appraisal focuses attention on a certain activity with tenacity and zeal, which sets off IWB. While viewing a stressor as a threat prevents one from being creative, viewing a stressor as a threat diverts focus from a particular job and inhibits IWB.

6. Limitations and Future Directions

The present study may have limitations due to the lack of clarity surrounding causal inferences as mediator cognitive appraisal captured at a single-point of time following cross-sectional study. Second, because the study primarily included nurses employed at tertiary

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institutions in twin cities, its sample may not be entirely representative of Pakistan's nursing workforce.

The cognitive appraisal of feedback was examined in the current study which has not been evaluated before. Further research is required to ensure that the results presented in this study can be applied to a wider population. Since the perception of feedback may differ between settings and occupations, such replication should involve a varied workforce from diverse businesses/organizations in order to ensure generalizability (Noesgaard & Hansen, 2017). Furthermore, even though this study only looked at one job characteristic—feedback—future research might concentrate on combinations of different job characteristics. By considering the role of various combinations of job characteristics, one can obtain insight into how diverse job recipes may lead to varied appraisal. Because results can still be subpar even at high levels of one characteristic if the other characteristics are below average (Cangialosi et al., 2021).

7. Conclusion

Based on the study's findings, it appears that feedback and creative work practices are mediated by cognitive appraisal. Thus, it is plausible to consider feedback as a stressor with potential for positive as well as negative effects. Innovative work behavior is fostered by challenge appraisal, but it is impeded by threat appraisal. Nursing management must find a way to assist nurses in viewing feedback as a challenge rather than a threat in order to promote innovative work behavior. One such tactic is training to enhance one's capacity to foster innovative work behavior.

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. Afsar, B. (2016). The impact of person-organization fit on innovative work behavior: The mediating effect of knowledge sharing behavior. *International Journal of Health Care Quality Assurance*, 29(2), 104–122. <https://doi.org/10.1108/IJHCQA-01-2015-0017>
3. Ahmed, A. K., Ata, A. A., & Abd-elhamid, Z. N. (2019). Relationship between the leadership behaviors, organizational climate, and innovative work behavior among nurses. *American Journal of Nursing Research*, 7(5), 870–878. doi: 10.12691/ajnr-7-5-20
4. Akhtar, M., Syed, F., Husnain, M., & Naseer, S. (2020). Person-organization fit and innovative work behavior: The mediating role of perceived organizational support, affective commitment and trust. *Pakistan Journal of Commerce and Social Sciences*, 13(2), 311–333. <https://www.econstor.eu/bitstream/10419/200994/1/4339.pdf>
5. Åmo, B. W. (2006). Employee innovation behaviour in health care: The influence from management and colleagues. *International Nursing Review*, 53(3), 231–237. doi: 10.1111/j.1466-7657.2006.00455.x
6. Asurakkody, T. A., & Shin, S. Y. (2018). Innovative behavior in nursing context: A concept analysis. *Asian Nursing Research*, 12(4), 237–244. <https://doi.org/10.1016/j.anr.2018.11.003>
7. Awang, Z. (2014). Validating the measurement model : Cfa. *Structural equation modelling using amos grafic* (pp. 54–73)
8. Baker, K. (2020). Commentary: Does thriving and trust in leader explain the line between

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- transformational leadership and innovative work behavior? A crosssectional survey. *Journal of Research in Nursing*, 25(1), 52–53.
9. Battistelli, A., Montani, F., & Odoardi, C. (2013). The impact of feedback from job and task autonomy in the relationship between dispositional resistance to change and innovative work behaviour. *European Journal of Work and Organizational Psychology*, 22(1), 26–41. <https://doi.org/10.1080/1359432X.2011.616653>
 10. Brown, E. G., & Creaven, A. M. (2017). Performance feedback, self-esteem, and cardiovascular adaptation to recurring stressors. *Anxiety, Stress and Coping*, 30(3), 290–303. <https://doi.org/10.1080/10615806.2016.1269324>
 11. 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>
 12. Cangialosi, N., Battistelli, A., & Odoardi, C. (2021). Designing innovative jobs: a fuzzy-set configurational analysis of job characteristics. *Personnel Review*. Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/PR-02-2021-0105>
 13. Černe, M., Hernaus, T., Dysvik, A., & Škerlavaj, M. (2017). The role of multilevel synergistic interplay among team mastery climate, knowledge hiding, and job characteristics in stimulating innovative work behavior. *Human Resource Management Journal*, 27(2), 281–299. <https://doi.org/10.1111/1748-8583.12132>
 14. 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>
 15. Deeghawature, 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>
 16. Dy Bunpin, J. J., Chapman, S., Blegen, M., & Spetz, J. (2016). Differences in innovative behavior among hospital-based registered nurses. *Journal of Nursing Administration*, 46(3), 122–127. <https://doi.org/10.1097/NNA.0000000000000310>
 17. Espedido, A., & Searle, B. J. (2018). Goal difficulty and creative performance : The mediating role of stress appraisal. *Human Performance*, 31(3), 179–196. <https://doi.org/10.1080/08959285.2018.1499024>
 18. Espedido, A., Searle, B. J., & Searle, B. J. (2020b). Proactivity , stress appraisals , and problem-solving : A cross-level moderated mediation model level moderated mediation model. *Work & Stress*, 35(2), 132–152. <https://doi.org/10.1080/02678373.2020.1767723>
 19. 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>
 20. Gerich, J., & Weber, C. (2020). The ambivalent appraisal of job demands and the moderating role of job control and social support for burnout and job satisfaction. *Social Indicators Research*, 148(1), 251–280. <https://doi.org/10.1007/s11205-019-02195-9>
 21. Ghazali, I. L., & Amin, A. (2018). Developing a conceptual framework for innovative behaviour in healthcare organization. *International Journal of Engineering & Technology*, 7(4.34), 11–13. doi:10.14419/ijet.v7i4.34.23572
 22. Gnepp, J., Klayman, J., Williamson, I. O., & Barlas, S. (2020). The future of feedback: Motivating performance improvement through future-focused feedback. *PLoS ONE* ,15(6), e0234444. <https://doi.org/10.1371/journal.pone.0234444>
 23. González-Morales, M. G., & Neves, P. (2015). When stressors make you work: Mechanisms linking challenge stressors to performance. *Work and Stress*, 29(3), 213–229. <https://doi.org/10.1080/02678373.2015.1074628>

Does Feedback Foster or Hinder Innovative Work Behavior of Nurses? The Mediating Role of Cognitive Appraisal

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. 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>
28. 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>
29. Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: the reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
30. Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: a meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92(5), 1332–1356. <https://doi.org/10.1037/0021-9010.92.5.1332>
31. Janssen. (2000). Job demands, perceptions of effort-reward fairness and innovative work behavior. *Journal of Occupational and Organizational Psychology*, 73(3), 287–302. <https://doi.org/10.1348/096317900167038>
32. 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>
33. 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>
34. Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254–284. <https://doi.org/10.1037/0033-2909.119.2.254>
35. Kwon, K., & Kim, T. (2020). An integrative literature review of employee engagement and innovative behavior: Revisiting the JD-R model. *Human Resource Management Review*, 30(2), 100704. <https://doi.org/10.1016/j.hrmr.2019.100704>
36. Lateef, A. (2022). Innovative strategies in nursing practice: new perspectives. *Nursing Communications*, 6(0), e2022008. <https://doi.org/10.53388/in2022008>
37. Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer publishing company
38. Lee, J. Y., Rocco, T. S., & Shuck, B. (2020). What is a resource: toward a taxonomy of resources for employee engagement. *Human Resource Development Review*, 19(1), 5–38. <https://doi.org/10.1177/1534484319853100>
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>

Does Feedback Foster or Hinder Innovative Work Behavior of Nurses? The Mediating Role of Cognitive Appraisal

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. Ma, J., Liu, C., Peng, Y., & Xu, X. (2021). How do employees appraise challenge and hindrance stressors? Uncovering the double-edged effect of conscientiousness. *Journal of Occupational Health Psychology*, 26(3), 243–257. <https://doi.org/10.1037/ocp0000275>
42. Majeed, M., & Naseer, S. (2019). Is workplace bullying always perceived harmful? The cognitive appraisal theory of stress perspective. *Asia Pacific Journal of Human Resources*, 59(4), 618–644. <https://doi.org/10.1111/1744-7941.12244>
43. 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>
44. 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>
45. 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>
46. 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>
47. 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>
48. Ohly, S., & Fritz, C. (2010). Work characteristics, challenge appraisal, creativity, and proactive behavior: A multi-level study. *Journal of Organizational Behavior*, 31(4), 543–565. <https://doi.org/10.1002/job.633>
49. 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>
50. Pee, L. G., & Lee, J. (2015). Intrinsically motivating employees' online knowledge sharing: Understanding the effects of job design. *International Journal of Information Management*, 35(6), 679–690. <https://doi.org/10.1016/j.ijinfomgt.2015.08.002>
51. 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>
52. 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>
53. Shih, H. A., & Susanto, E. (2017). Perceived identifiability, shared responsibility and innovative work behavior. *International Journal of Human Resource Management*, 28(22), 3109–3127.
54. 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>
55. Tripp, J. F., Riemenschneider, C. K., & Thatcher, J. B. (2016). Job satisfaction in agile development teams: agile development as work redesign. *Journal of the Association for Information Systems*,

Does Feedback Foster or Hinder Innovative Work Behavior of Nurses? The Mediating Role of Cognitive Appraisal

- 17(4), 267–307. <https://doi.org/10.17705/1jais.00426>
56. 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.
 57. Van Veldhoven, M., Van den Broeck, A., Daniels, K., Bakker, A. B., Tavares, S. M., & Ogbonnaya, C. (2020). Challenging the universality of job resources: why, when, and for whom are they beneficial? *Applied Psychology*, 69(1), 5–29. <https://doi.org/10.1111/apps.12211>
 58. 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>
 59. Webster, J. R., Beehr, T. A., & Love, K. (2011). Extending the challenge-hindrane 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>
 60. Weintraub, P., & McKee, M. (2019). Leadership for innovation in healthcare: An exploration. *International Journal of Health Policy and Management*, 8(3), 138– 144. <https://doi.org/10.15171/ijhpm.2018.122>
 61. Werleman, A. A. (2016). The effect of enriched job design on innovative work behaviour. <http://arno.uvt.nl/show.cgi?fid=142234>
 62. Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior*, 74(3), 235–244. <https://doi.org/10.1016/j.jvb.2008.11.003>
 63. 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>
 64. Yasir, M., & Majid, A. (2019). Boundary integration and innovative work behavior among nursing staff. *European Journal of Innovation Management*, 22(1), 2–22. <https://doi.org/10.1108/EJIM-02-2018-0035>

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Appendix I

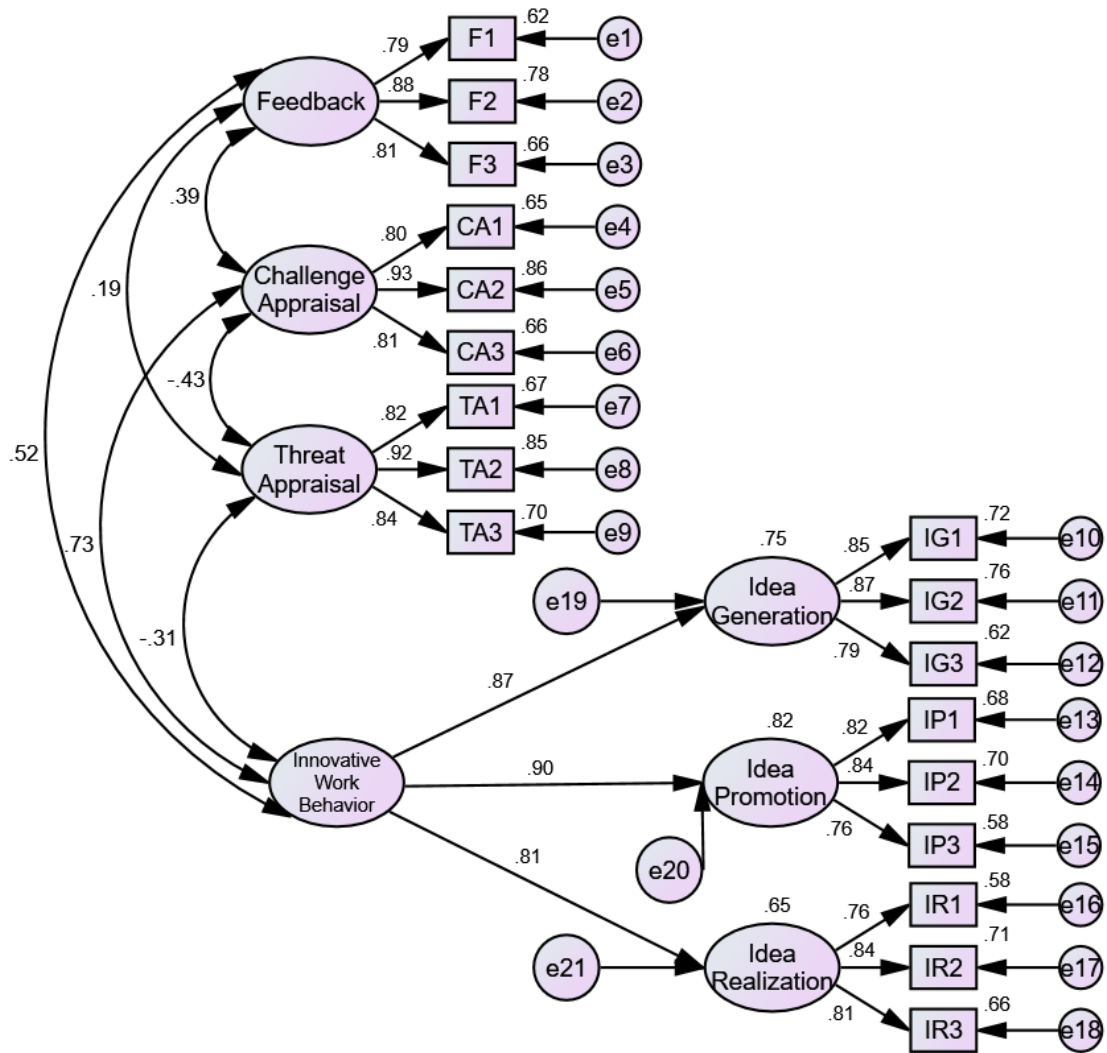


Figure 2: Measurement Model

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Appendix II

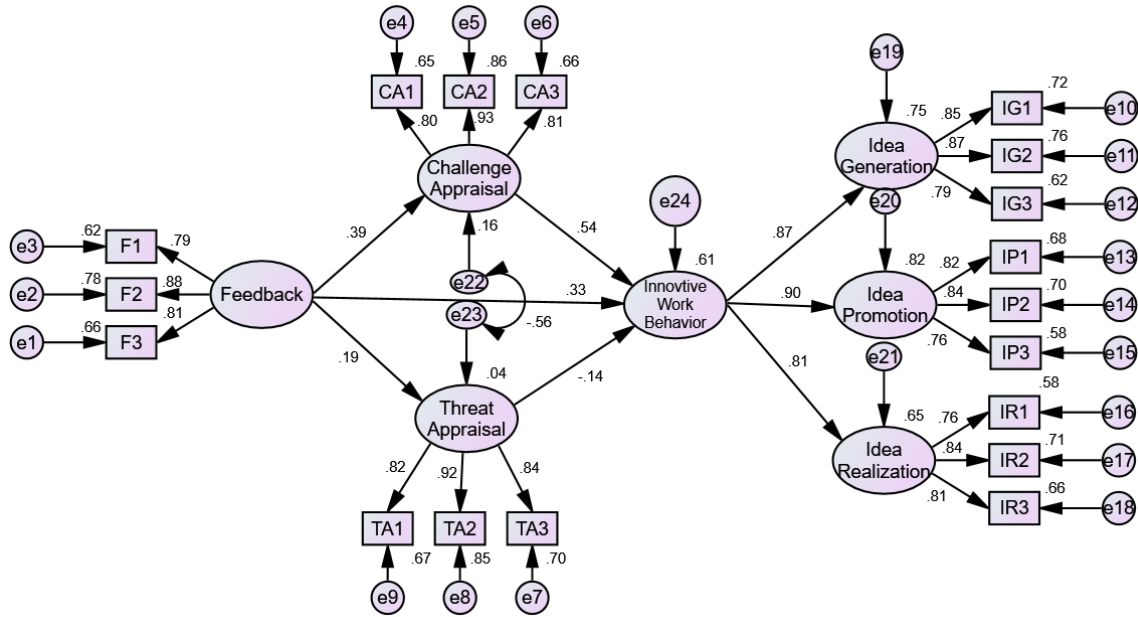


Figure 3: Structural Model