

## IMPACTS OF INTELLECTUAL STIMULATION ON EMPLOYEES' INNOVATIVE BEHAVIORS: THE MEDIATING ROLE OF CONTINGENT REWARDS

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### ABSTRACT

In organizational behavior, the workforces' innovative behavior is a widely researched issue due to its meaningful relationship with various organizational outcomes. In the same way, effective behavior is an outcome of various dynamic issues among which the leadership behavior is worth mentioning. The leaders, over the intellectual stimulation, motivate and inspire their workforces to show their efforts and potentials by adapting innovative ways to achieve organizational objectives. The concerned workforces might be able to realize the said objective more effectively when they have justifiable insight about the provision of fair rewards. In this connection, this article aimed at exploring relationships among variables understudy in the context of higher educational institutions, KP, Pakistan. Applying the statistical procedures, this study provides significant evidence about the relationships among research variables which might be helpful for the institutional management in introducing suitable policies, programs, and practices for promoting the workforces' innovative behavior in higher institutions.

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## 1. INTRODUCTION

In the organizational context, leadership behavior is considered as a dynamic factor towards organizational success. However, in an educational context, leadership effective behavior together with employees' innovative performance are critical success factors towards socio-academic and socio-economic development (Adalberto & Ruben, 2002). Similarly, in a higher educational context, such behaviors are phenomenal as these institutions are solely responsible for providing competent and skilled workforces to different sectors of economies (Diane & Oliver, 2004). The leaders over their artistic attribute like intellectual stimulation, inspire and encourage their

employees to utilize their utmost efforts, potential, and performance in achieving institutional tasks (Bass & Riggio, 2006). Through leadership effectiveness, workforces in turn, “show their commitment” and performance by using innovative techniques to achieve “desired tasks” and thus bringing the desired change in institutions (Gilley et al., 2008). Still, certain factors are responsible for bringing variation in the relationship between leadership behavior (intellectual stimulation) and employee behavior (innovativeness) among which a fair reward system (contingent rewards) is the most suggested phenomenon.

The intellectual stimulation is the affective attribute of leadership wherein leaders motivate the workforces to realize the assigned tasks thereby following the institutional norms and values, which in turn, helps in developing employees’ positive behavior (Ismail et al., 2010). Through intellectual stimulation, leaders persistently inspire employees to think and act through innovative and supportive manners to achieve the desired tasks in a challenging environment (Aryee et al., 2012). The leader tries to enhance the employees’ interests, responsiveness, and abilities to problem-solving in effective manners. The leader over intellectually stimulating behavior encourages innovation, creativity, information exchanges, and critical thinking in institutions (Gong et al., 2013). Resultantly, employees’ innovative behavior helps in generating, promoting, and realizing novel ideas and practices towards the attainment of institutional objectives (Strauss & Parker, 2014). Thus, the leadership effective behavior and employees’ innovative work performance are the building blocks for institutional credibility and performance, however, these conceptions are expected to be more strengthened when concerned leaders use contingent rewards in cultured behaviors.

The contingent rewards are an effective attribute of leadership wherein rewards are conditional with the employees’ performance level in institutions. The leader uses rewards as incentives to motivate employees to think innovatively and perform effectively to achieve the desired goals (Brahim et al., 2015). The leader provides rewards to those employees who meet the desired standard of performance while punishing those employees who are unable to meet the standards or deviate from standards (Muhammad & Kuchin, 2016). Likewise, fairness in providing performance-based rewards is vigorous in shaping employees' behavior positively. Likewise, the innovative behavior together with the knowledge and skills of employees are critical in promoting creativity and innovation in institutions (Sethibe & Steyn, 2017). Similarly, fair rewards on the part of leading towards their employees are also vital in shaping the innovative behavior of the concerned employees. The employees’ perception of fairness in procedures is vital in encouraging innovation in the institutions (Majumdar & Ray, 2018). Thus, the leader's stimulating behavior, the employees’ innovative thinking, and the rewards system are dynamic factors for the institutions to achieve their desired reputation and ranking.

## 2. LITERATURE REVIEW

The employees’ innovative behavior is the outcome of many institutional efforts and practices which are instrumental in promoting “creativity and innovation” in the higher education context. The leaders stimulating behavior, the employees’ responsiveness, and the fairness in contingent rewards are dynamic forces that can increase or decrease the performance, productivity, and success of the institutions. Leadership behavior remained the nucleus for various institutional outcomes like innovation and creativity, performance and productivity, and credibility and success. Thus, this

study aimed to propose and test the model that comprises different variables like intellectual stimulation (transformational leadership) (Bass & Avolio, 2004), contingent rewards (transactional leadership) (Bass, 1998), and employees' innovative behavior (Scott & Bruce, 1994). This section provides comprehensive data about an understanding of research variables together with their interrelationships intending to test the same model in the higher education context.

## 2.1 INTELLECTUAL SIMULATION

The leader, through intellectual stimulation, inspires workforces to be innovative and creative by making their own decisions in challenging situations. The transformational leaders, over the intellectual stimulation, mainly adopt the inspiring behavior towards the employees to motivate and direct them towards institutional vision (Bass & Avolio, 2004). It provides resources for moral and social support through which employees are inspired to think creatively, participate actively, and solve problems efficiently. It helps in creating an environment wherein employees participate independently, share ideas without restrictions, and perform effectively to achieve institutional tasks efficiently (Bass & Riggio, 2006). Through intellectual stimulation, the leader attempts to nurture employees' intellectual capabilities and self-confidence thus help in showing their utmost efforts and wholehearted performance (Walumbwa et al., 2008). Innovation and creativity are the main kinematics of intellectual stimulation wherein a leader attempts to nurture the employees' innovative behavior that further helps in developing their abilities to perform innovatively (Pieterse & Knippenberg, 2010).

Through intellectual stimulation, leaders share the vision and mission of the institution and try to utilize the employees' intellectual capabilities to realize the said vision. The leaders' inspiring behavior helps the employees to perform through innovative techniques to achieve the assigned tasks (Odumeru et al., 2013). The leaders' intellectually stimulating feature and employees' innovative behavior are dynamic forces that promote professionalism, increase productivity, and encourages creativity and innovation (Jaiswal & Dhar, 2015). The leaders' characteristics like intellectual stimulation, personal recognition, fairness, and polite behavior help in strengthening and sustaining the relationship between employees and leaders that results in inspiring employees by shaping their positive work behavior (Ali et al., 2017). Thus, it helps in promoting creative behavior and innovative culture in institutions. The intellectual stimulation coupled with an innovative culture and supportive environment helps foster the employees' trust in leadership and managing their confidence that results in positive and "innovative work behavior" of concerned "employees in institutions" (Muzafary et al., 2019).

## 2.2 EMPLOYEES INNOVATIVE BEHAVIOR

The workforces' innovative behavior at the workplace results in various institutional outcomes like innovative culture, social and contextual influences, instrumental interaction, and employee potential to solve prevailing issues over innovative techniques (Ramamoorthy et al., 2005). Resultantly, institutional credibility gets enhanced which further helps in chasing institutional objectives and success. The innovative behavior is mainly concerned with generating new ideas, developing new techniques, and implementing these ideas through different practices to achieve the vision and mission of the institution (Jong & Hartog, 2008). In this connection, the emotionally intelligent and psychologically empowered employees are expected to have proactive and innovative behavior to attain institutional tasks. Thus, creativity and innovativeness are the precious

assets of employees which resultantly become the valuable assets of institutions (Jong & Hartog, 2010). The employees who have creative behavior and advanced knowledge are considered as dynamic forces of the institutions which help them in achieving the desired institutional standards and ranking (Aryee et al., 2012).

In the contemporary era, institutions need only those employees who have advanced knowledge and creative behavior, so that, the institutions might be able to survive and to compete in a highly competitive environment (Wang et al., 2015). The institutions are required to realize the innovative behavior of workforces by strengthening and supporting them when new ideas are created/produced. Thus, workforces' stimulation means in implementing new ideas coupled with norms and values of the institution (Bosnehes & Venendal, 2017). The researchers argued that innovation and creativity are two separate concepts while others argued these are used interchangeably. The literature reveals that rewards are also playing a significant role in promoting the employees' innovative behavior in institutions (Hansen & Thingvad, 2018). Thus, employees' perception of fairness in providing rewards and recognition is critical in shaping their attitude and behavior. In this connection, perceptual fairness, just procedures, fair interaction, impartial distribution of resources, and autonomy at the workplaces are the vital predictors for the employees' innovative behavior in institutions (Muzafary et al., 2019).

### **2.3 CONTINGENT REWARDS**

The contingent rewards are an effective attribute of transactional leadership which is used by leaders as “motivational tools to inspire their employees” to show their efforts and potential in achieving assigned tasks and desired objectives (Judge & Piccolo, 2004). The leaders provide rewards contingent on the performance and effort of the concerned employees. Therefore, leaders' intellectual stimulating behavior and provision of fair rewards are vital aspects in shaping the attitude and behavior of the employees (Limsila & Ogunlana, 2008). This behavior thus helps employees in bringing positive change in their behavior concerning innovation and creativity (Turunc et al., 2010). The employees are always concerned with the intrinsic and extrinsic rewards for efforts which include recognition, economic incentives, promotion, bonuses, and other perks and privileges (Byron & Khazanchi, 2012). Similarly, the contingent rewards hold emotional exchange that involves stimulating behaviors of the leader towards their employees in the form of personal recognition. These rewards, in turn, have an encouraging influence on employees' self-confidence, trust, commitment, and innovative behavior (Zhang & Zhou, 2014).

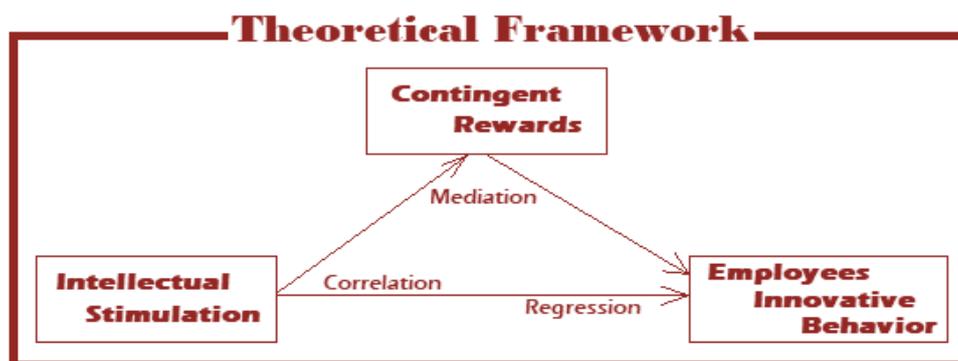
The leaders offer different rewards to their employees in response to the services they provide in pursuing institutional tasks. These rewards are used as incentives for motivating the employees to show their efforts, engagement, and innovative behavior to achieve assigned tasks effectively (Jiang & Yang, 2015). The leaders also offer diverse nature of punishments to employees when tasks are not met as per desired standards (Harari et al., 2016). Therefore, the assurance of performance-based fair rewards helps shape the innovative behavior of the employees (Mumford & McIntosh, 2017). Different studies found a direct connection between contingent rewards and employees' innovative behavior in a different context, however, limited research focused the said connection in higher education context in developing countries (Hughes et al., 2018). Similarly, through contingent rewards, transactional leaders ensure direct participation and convincing involvement of employees in institutional tasks thereby using all the motivational techniques to improve their innovative behavior and to develop their commitment and performance (Qi et al., 2019).

## 2.4 INTELLECTUAL STIMULATION, CONTINGENT REWARDS & INNOVATIVE BEHAVIOR

The innovation ensures the applicability of best ideas into practice which helps in producing the series of innovative eventualities (Rank et al., 2004). Innovation and creativity not only help in searching the best options for improving organizational performance and success but also helps in nurturing the employees' innovative capabilities (Shalley & Zhou, 2008). The intellectually inspired employees are expected to show high commitment, greater performance, and established innovative behavior (Turunc et al., 2010). Thus, leaders who are effective in disseminating creativity are measured as successful in promoting innovative dynamics (Aryee et al., 2012). The creative and innovative potentials as well as efforts enable leaders and employees to identify and resolve the institutional issues through creative capabilities (Zhang & Zhou, 2014). The intellectually inspired employees show a higher degree of innovative behavior which can be more strengthened when a fair reward system is used in the institutions (Malik et al., 2015). The contingent rewards act as a dynamic force in stimulating employees towards institutional tasks (Mumford & McIntosh, 2017). Therefore, intellectual stimulation and contingent rewards are dynamic factors towards the employees' innovative behavior (Hansen & Thingvad, 2018).

## 2.5 THEORETICAL FRAMEWORK AND HYPOTHESIS

The employees' innovative behavior is an amalgamation of various dynamic concerns which are playing an important role in shaping their attitude and behavior. Thus, based on the literature reviewed, a conceptual model/theoretical framework is proposed comprises two dimensions of leadership behaviors (intellectual stimulation) and (contingent rewards) and one dimension of employees' behavior (innovative behavior). Thus, leadership behavior is aimed to examine their direct effect (intellectual stimulation) and indirect effect (contingent rewards) on the employees' innovative behavior.



**Figure 1** Theoretical Framework

H#1: There is a significant and positive association between predicting and criterion variables.

H#2: The mediator significantly mediates the relationship between predictor and criterion variables.

## 3. RESEARCH DESIGN

This study research design comprises descriptive (what is going on) and explanatory (why is it going on). Thus, it provides an entire procedure like the data collection and analysis methods, population (participants), and instrument (measurement) used in conducting the research.

### 3.1 PROCEDURE AND PARTICIPANTS

The survey approach is used to access the population. The questionnaire approach is used to collect primary data from the respondents (sample from a population). The population comprises 1148 employees working in selected higher institutions four universities of Khyber Pakhtunkhwa, Pakistan. A 296 sample-size has been selected via statistical formula (Yamane, 1967). Thus, 296 questionnaires were distributed among which 270 were recollected with a response rate of 91%. The data has already been used in PhD dissertation.

### 3.2 INSTRUMENT AND MEASUREMENT

An adapted version of the questionnaire is used to collect first-hand data from respondents to measure the research variables. Likewise, intellectual stimulation was assessed through six items from the transformational leadership scale (Rafferty & Griffin, 2004). The contingent rewards were assessed over six items from the transactional leadership scale (Avolio et al., 1999). While, the employees' innovative behavior was also assessed through six recommended items (Scott & Bruce, 1994). To measure research variables in the instrument, a 7-point Likert scale was used ranging from 1 for "strongly disagree", 7 for "strongly agree", with 4 signifying neutral.

### 3.3 RELIABILITY AND VALIDITY

The reliability (internal consistency) of the instrument was done through Cronbach Alpha against eighteen items containing six for each variable. However, the validity of items in the questionnaire was done through KMO and Bartlett tests which provide information about sample adequacy and variances which are equal for all samples (Tables 1 to 3).

**Table 1** Reliability Statistics

S.No	Research Variables	Items	Cronbach Alpha
1	Intellectual Stimulation	06	.777
2	Contingent Rewards	06	.804
3	Employees Innovative Behavior	06	.728
4	Questionnaire	18	.868

**Table 2** Validity Statistics (KMO & Bartlett's Test)

S.No.	Research Variable	KMO	Bartlett's Test		
			Chi-Square	df	Sig.
1	Intellectual Stimulation	.704	229.64	16	<0.001
2	Contingent Rewards	.819	247.64	14	<0.001
3	Employees Innovative Behavior	.744	239.35	13	<0.001

**Table 3** Validity Statistics (Matrix & Items Loading)

S.No.	Research Variable	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6
1	Intellectual Stimulation	.471	.582	.544	.461	.543	.611
2	Contingent Rewards	.595	.725	.614	.448	.572	.524
3	Innovative Behavior	.404	.660	.530	.757	.522	.619

Table 1 shows that computed values for Cronbach Alpha regarding all variables are above the required value (.7). Therefore, from statistics, it is determined that the variables in the instrument have acceptable reliability in terms of internal consistency. Table 2 shows the validity examination regarding all research variables wherein the "KMO values for all variables are above" the required value (.7). Thus, it is concluded that the variables in the instrument have acceptable validity in terms of sample adequacy. While Bartlett tests show the significance of all variables (<0.001) in

terms of the correlation matrix for structure detection. Table 3 shows the factor loadings for items used in the instrument wherein the required loading is 0.4, thus all the items in instruments have loading values above 0.4 meaning that the items have an acceptable association.

#### 4. DATA ANALYSIS

The statistical results obtained through hypotheses testing regarding the relationships among the research variables have been presented in data analysis. The correlation procedure is used for examining the association among research variables while hierarchical regression is used to test the “direct impact” (independent on dependent) and the “indirect impact” (independent on dependent through a mediator).

**H#1:** There is a significant and positive association between predicting and criterion variables.

**Table 4** Correlation Analysis (N = 270).

Variable		Intellectual Stimulation	Contingent Rewards
Intellectual Stimulation	Pearson Correlation	1	.622**
	Sig. (2-tailed)		<0.001
Contingent Rewards	Pearson Correlation	.622**	1
	Sig. (2-tailed)	<0.001	
Employees Innovative Behavior	Pearson Correlation	.713**	.841**
	Sig. (2-tailed)	<0.001	<0.001

The correlation procedure was run to examine the association “among research variables”. The results from regression (Table 4) provide significant information about the positive association among the “research variables” likewise, intellectual stimulation and contingent rewards are positively associated (R=.622 & P-value = <0.001), contingent rewards and employees innovative behavior (R=.841 & P-value = <0.001) and intellectual stimulation and the employees' innovative behavior (R=.713 & P-value = <0.001). Therefore, from correlation results, it is concluded that “there is significant” association among research variables meaning that both intellectual stimulation and contingent rewards are vital for improving the employees’ innovative behavior and thus hypothesis H#1 is accepted.

**H#2:** The mediator significantly mediates the relationship between predictor and criterion variables.

**Table 5:** Regression Analysis (Computing <sup>a</sup>)

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE Estimate	F	Sig.
1	.622 <sup>a</sup>	.386	.384	.68245	168.80	.000 <sup>b</sup>

**Table 5a:** Coefficient of Regression Analysis (Computing <sup>a</sup>)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.968	.239		4.060	<0.001
	Intellectual Stimulation	.646	.050	.622	12.993	<0.001

a. Predictor: (Constant), Intellectual Stimulation

b. Dependent Variable: Contingent Rewards

The mediation is a statistical procedure which comprises certain steps (a, b, c &  $\hat{c}$ ) with certain conditions likewise (a) must be significant, (b) must be significant, (c) must be signed and ( $\hat{c}$ ) may or may not be significant (Barren & Kenny, 1986). In this regard, Tables 5 & 5a provide information about the indirect relationship between predictor and mediator (a). The results show (38.6%) variance in the mediator (contingent rewards) due to predicting variables (intellectual stimulation). Likewise, the coefficient of regression shows the significant impact of predictor on the criterion variable ( $\beta = .646$  &  $p = <0.001$ ). Therefore, the first step of mediation fulfills the first condition of the mediation process.

**Table 6: Regression Analysis (Computing  $c, \hat{c}$  &  $b$ )**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE Estimate	Change Statistics				
					R <sup>2</sup> Change	df1	df2	F	Sig.
1	.713 <sup>a</sup>	.508	.506	.76815	.508	1	268	277.062	<0.001 <sup>b</sup>
2	.875 <sup>b</sup>	.766	.764	.53125	.257	1	267	436.290	<0.001 <sup>c</sup>

**Table 6a Regression Analysis (Computing  $c, \hat{c}$  &  $b$ )**

Coefficient of Regression						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	Intellectual Stimulation	.932	.056	.713	16.645	<0.001
2	(Constant)	-.856	.191		-4.477	<0.001
	Intellectual Stimulation	.406	.049	.310	8.205	<0.001
	Contingent Rewards	.814	.048	.648	17.126	<0.001

a. Predictor: (Constant): Intellectual Stimulation

b. Mediator: Contingent Rewards

c. Dependent Variable: Employees Innovative Behavior

Tables 6 & 6a provide information about the remaining conditions of mediation ( $c, \hat{c}$  &  $b$ ) with significant results through two different regression models. Model 1 provides information about the direct effect by showing (50.8%) variance in the employees' innovative behavior due to the intellectual stimulation together with significant statistical results ( $\beta = 0.932$  &  $p = <0.001$ ). The second regression model shows (76.6%) variance in employees' innovative behavior due to the intellectual stimulation and contingent rewards with diverse statistical outcomes. Likewise, the intellectual stimulation shows the statistical significance ( $\beta = .406$  &  $p = <0.001$ ) while contingent rewards ( $\beta = .814$  &  $p = .000$ ). Therefore, the hierarchical provide significant data about all the conditions in deciding the mediation. Likewise, the change in R<sup>2</sup> (50.8% to 76.6%), change in  $\beta$  values for intellectual stimulation (.932 to .406) while the p-value remained significant in all conditions. Thus, the change in R<sup>2</sup> and change in  $\beta$  values provide confirmation that contingent rewards partially mediated the relationship between intellectual stimulation and employees' innovative behavior. Hence, from results, the hypothesis H#2 is partially accepted.

## 5. DISCUSSION

The leadership through different traits inspire their employees to show their efforts and potential by using innovative behaviors to achieve the vision and mission of the institution (Jung et

al., 2003). In this connection, on the leadership continuum, two leadership styles (transformational & transactional) are considered as most effective in inspiring employees' behavior through their different artistic attributes (Harland et al., 2005). In this regard, the transformational over intellectual stimulation, stimulate employees to show their innovative, creative, and affirmative behavior in achieving leaders' vision and institutional tasks (Jong & Hartog, 2007). The leadership behavior (intellectual stimulation) in dynamic in influencing employees' attitudes and behavior in performing institutional activities effectively as well as helps in promoting the innovation in institutions (Oke et al., 2009). The intellectually stimulated employees are concerned more with assigned tasks and perform their responsibilities innovatively to achieve the assigned tasks with desired standards (Aryee et al., 2012).

The leaders over transactional traits offer different incentives like contingent punishments and rewards to motivate employees to perform professionally. These rewards are dependent upon the performance standards of the concerned employees (Maryam et al., 2013). The researchers argued that without effective leadership and effective inspirations, leadership will not be able to bring along the desired change (Atkinson & Mackenzie, 2015). The leaders through transactional behavior offer different exchanges (rewards) for the efforts and performances that the employees show by adopting innovative techniques in following leaders' vision and the institutional long-term objectives (Ryan & Herman, 2017). The researchers recommend the association between creativity and rewards by auguring that creativity-contingent rewards enhance employees' creative performances depending upon the nature and choice of rewards (Hughes et al., 2018). Thus, the leaders' inclusive behavior towards sharing institutional resources is critical for employees' innovative behavior (Qi et al., 2019).

The empirical results provide significant information about the relationships among research variables that have been previously examined by various researchers in different contexts. Likewise, different studies examined the positive association between intellectual stimulation and employees' innovative behavior and performance (Elkins & Keller, 2003; Gumusluoglu & Ilsev, 2009; Ryan et al., 2012; Ganga et al., 2017). This study results revealed the significant association and impact of the contingent rewards on employees' creative and innovative behavior which were previously examined by various research studies (Kahai et al., 2003; Damanpour & Schneider, 2009; Khan et al., 2012; Hansen & Thingvad, 2018). This study confirmed statistically the facilitating role of contingent rewards as motivation in relations between intellectual stimulation and employees' innovative behavior that were previously examined by various researchers with diverse results (Kahai et al., 2003; Turunc et al., 2010; Sethibe & Steyn, 2017; Faraz et al., 2018).

## 6. CONCLUSION

This study aimed at examining the impact of intellectual stimulation on employees' innovative behavior through the facilitating role of contingent rewards by collecting the primary data from employees working in selected higher educational institutions. For this purpose, a theoretical framework was developed from existing research thereby emerging the research hypotheses. The hypotheses were analyzed by using different statistical tools likewise correlation confirmed the significant association between the predictors and criterion variables ( $R=.622$  &  $P\text{-value} = <.001$ ), ( $R=.841$  &  $P\text{-value} = <0.001$ ), and ( $R=.713$  &  $P\text{-value} = .000$ ) respectively. Similarly, the

hierarchical regression “confirmed mediating role” (partial mediation) of contingent rewards in the relationship between intellectual stimulation and employees’ innovative behavior thereby bringing some variations in R<sup>2</sup> (50.8% to 76.6%) and  $\beta$  values (.932 to .406). Thus, this study offers significant theoretical and empirical contributions to the existing database of knowledge about the prevailing issues like intellectual stimulation, contingent rewards, and the employees’ innovative behavior. However, some recommendations and practical implications have emerged from the results which might be helpful for the management, employees, and future researchers.

## 7. AVAILABILITY OF DATA AND MATERIAL

Data can be made available by contacting the corresponding authors

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