

Effect of Perceived Transformational Leadership Style and Innovative Work Behavior: A Moderating Role of Psychological Empowerment

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Abstract

The current study aimed to explore effect of perceived transformational leadership style, psychological empowerment on innovative work behavior among IT workers in Pakistan. The data of the study was collected from 400 participants, with age ranged between 25-50 from different Government Offices, Institutes, and Departments of Punjab and Khyber Pukhtunkhwa provinces of Pakistan. A set of self-report measures were used for tapping on mentioned topics i.e. Multifactor Leadership Questionnaire (Bass &Avolio, 1997), Innovative Work Behaviour Scale (Janssen, 2000), Psychological Empowerment Scale (Spreitzer, 1995b). Cross-sectional survey research design was executed for the current study. Multiple regression analysis revealed that perceived transformational leadership style of IT workers was significant positive predictor of innovative work behaviour. All sub-dimensions of Transformational Leadership style (TRF) were also found to be significant positive predictor of IWB. Multiple regression analysis further demonstrated that psychological empowerment (PE) and its facet as significant positive predictor of IWB. Hierarchical regression accounted for moderation analyses revealed that PE, significantly moderated between perceived TRF and IWB such that interaction of these variables and TRF strengthened the positive effect of TRF on IWB. Implications of this study and suggestions for future empirical exploration of the construct have been also discussed.

Keywords: Transformational Leadership Style, Psychological Empowerment, Innovative Work Behaviour.

Introduction

Organizations are facing greater demands in today's rapidly changing business environment to remain competitive.i.e. Rapid technological shifts, globalization and broad access to information. Hence, most organizations have identified that their long-term survival depends on their ability to adjust with changes in the environment. This transition will result in demand for creativity (process of implementing and adopting new ideas or behaviours) at the person and organizational level (Baer, 2012; Scott & Bruce, 1994). It has been suggested that the nurturance of creative actions of the employees requires a stimulating and motivating atmosphere created by the organization's leaders. Innovation studies further stressed that leaders with a transformational leadership style play an important role in fostering the innovative behaviour of individuals within the organization (Birasnav, 2014; Burn, 1978; Mumford & Gustafson, 1998). In the light of the above literature review, we can assume that any successful organization depends not only on a leader's efficient behavior, but also on the need for each member of the organization to have an innovative attitude or innovation capability. (Jong & Hartog, 2008). Therefore, the present study attempt to examine

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the plausible effects of psychological empowerment on the relationship between independent (TRF) and dependent variables (IWB) among IT workers Pakistan. To meet this objective, this study will explore the possible relationship among independent (TRF), moderator (PE) dependent (IWB) variable perceived transformational leadership styles, psychological empowerment and innovative work behaviour. In addition to this primary objective, it will also investigate the moderating role of psychological empowerment on the relationship between perceived transformational leadership and innovative work behaviour. The next section provides a detail review of the contemporary literature on variables. So, following research questions will be investigate in this study.

- Q1. What is the nature of relationship between transformational leadership style and innovative work behaviour?
- Q 2.is there any relationship between psychological empowerment and innovative work behaviour?
- Q3. Is there any moderating role play by psychological empowerment in the relationship between transformational leadership style and innovative work behaviour?

Review of Literature

Bass (1985) describes transformation leadership as a way to influence and stimulate the motivation and commitment of the followers, and also to increase their performance beyond their expectations. He suggests five components of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, individualized consideration, and idealized attributes. As, transformational leaders have some unique abilities (good problem solving, facilitating other, good organizer, visionary etc.) required for bringing change on individual, team and organizational level (Hoyt & Blascovich, 2003; Jung, Chow &Wu, 2003; Ng, 2016; Wang, Oh, Courtright, & Colbert, 2011). Moreover, Previous researches also suggested that transformational leadership style has a direct and indirect link with employee's innovative work behavior (capacity of individual to introduce, promote and realization of self and other ideas). For example, a study Abbas and Riaz (2012) made an attempt to explore Pakistan's academic climate relationship between the TRF and IWB, taking into account 200 subjects. Analysis reveals significant positive relationship with its dimensions between the two variables. Ahamad (2016) recently conducted a study on the topic TL and IWB in secondary school teachers in Malaysia. The findings were significantly positive. Moreover, these also emphasized that individuals must feel empowered and be capable of acting under some inspirational leadership. They argue that such inspiring leadership inspires their followers to act more innovatively, especially when they are free to take an initiative (Shah, & Nisar, 2011). However, the finding of these researches are not consistent. For instance, Basu and Green (1997) noted a negative connection between TRF and IWB is negative whereas Moss and Ritossa (2007) found zero relationship between them. Therefore, researchers suggest that we can get the better understanding of the link between TRF and IWB by introducing third variable as mediator or moderator like psychological empowerment (Boerner, S., Dütschke, E., & Wied ,2008; Pieterse, van Knippenberg ,Schippers & Stam, 2010; van Knippenberg, De Dreu., & Homan, 2004). For current study, our first hypothesis that "Perceived transformational leadership styles will positively predict all of the three sub-dimensions of employee's innovative work behavior".

The notion of PE came from the theory of empowerment (Rappaport, 1987), which aims to acquire empowerment and its effect (Lee, 2001). Spreitzer (1995) defines psychological empowerment as "the intrinsic motivational task construct expressed in four cognitions, namely meaning, skill, self-determination, and impact" (p.1443). Researchers highlighted that psychological empowerment consist of four components: meaning, competence, self-determination and impact. They also argued that Individuals who gain the sense of empowerment are more constructive, innovative and functional than those who lack that sense (Amabile, 1988; Avolio, Zhu, Kho ,& Bhatia,2004; Zhang & Bartol,2010). Previous studies on IWB highlighted that PE is a very powerful predictor of employees innovative work behavior. For instance Rahman, Panatik & Alias (2014) observed a positive relationship between all the four dimensions of PE (meaning, competence, self -determination and impact) and IWB (idea development, promotion and

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realization). Similarly, Caremeli and Spreitzer (2009) studied the impact of trust, connectivity, and thriving on IWB. Yildiz, Uzun and Coskun (2017) explored the moderating role of Perceived social support and psychological empowerment on the relationship between proactive personality and IWB among 436 employees working in Turkey (Istanbul). The results showed that PE was significant predictor of IWB. Second hypothesis of current study is "Psychological Empowerment will positively relate to all subdimensions of employee's innovative work behavior".

In literature on leadership, the link between TRF and PE showed that a positive association (Allameh, Heydari, & Davoodi, 2012; Boonyarit, Chomphupart, & Arin ,2010; Sağnak, Kuruöz, Polat,& Soylu , 2015). However, some researchers also suggested that PE is relatively independent of TRF. Therefore, transformational leadership style can facilitate innovative work behavior among workers only when the feel psychologically empowered. In other words, transformational leaders cannot influence their workers behavior by overlooking their Psychological empowerment. So, individuals with high psychological empowerment will not only perceived their leaders behavior well but also show more innovative performance than individuals with low psychological empowerment (Thomas and Velthouse, 1990; Pieterse et al., 2010; Spreitzer, 1995). For current study, third hypothesis is that "Psychological Empowerment will moderate between perceived transformational leadership style and innovative work behavior by escalating their positive relationship when psychological empowerment is high".

Methodology

Sample

The sample for this particular study comprises of workers from IT sections \ Sections/Departments of Government sector located in Islamabad, Rawalpindi and Peshawar. The sample of (N=400) was selected by using Purposive sampling technique. The age range of participant was 25-50 (M=34.39, SD=7.32) years.

Data Collection Procedure

The researcher approached various Gov. Sector IT institutes. After receiving permission, researcher personally contacted only those IT workers involved in innovative activities (programming, software development) and holding Master's or BS Hons degree at least. A set of questionnaires with instruction were distributed after obtaining their informed consent and developing rapport with the participants. During the data collection process, the researcher encouraged the participants to provide a true response that would describe them well. Nevertheless, the researcher clearly told them that incomplete response would be eliminated. Furthermore, the researcher informed the participants that all knowledge would only be used for research purposes. In the end, they were thanked for their participation.

Measurements and Scales

Independent Variable:

The current study undertakes perceived transformational leadership style as independent variable. In order to measure perceived transformational leadership style MLQ-5X (Bass & Avolio, 1997) was used. It is 20 items scale rated on 5-point ratings scale. The Cronbach alpha for the scale is .89. Empirical studies provided a strong evidence for validity (Avolio et al., 1999).

Dependent Variable:

Innovative work behavior (IWB) is being undertaken as the main dependent variable. Innovative work behavior (IWB) was measures through 9 items scale developed by Janssen (2000), by using 5 point likert

scale. The Cronbach's alpha for scale is 0.89. Previous researches on innovative work behaviour provided a strong support for its validity (Janssen, 2000).

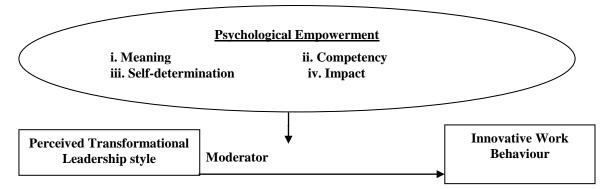


Figure 5. Conceptual model of psychological empowerment as moderator between the relationship of TRF and IWB.

Moderating Variable:

A moderator is a variable that plays the role of catalyst in the relationship between independent and dependent variables by either strengthening or weakening it. For current study, psychological empowerment is undertaken as moderator. Psychological empowerment was measured by the 12 items scale rated on (5) point 'Likert' scale' and Cronbach alpha for the scale is 0.82 (Spreitzer, 1995b).

Results

All the results of the study were computed on SPSS version.22. To fulfill the assumption of the study Cronbach's Alpha Coefficients of Reliability, Correlational matrix and Multiple and hierarchical regression analyses. Moreover, process macro by Andrew F. Hayes was used to compute the proposed analyses.

Table 1: Psychometric properties of study variables (N=400)

M	SD	Items	A	Potential	Actual	Skew
73.33	12.00	20	.88	1-5	3.29-3.89	32
34.42	5.57	9	.88	1-5	3.64-3.96	55
44.8	10.56	12	.81	1-5	3.55-4.36	26
	73.33 34.42	73.33 12.00 34.42 5.57	73.33 12.00 20 34.42 5.57 9	73.33 12.00 20 .88 34.42 5.57 9 .88	73.33 12.00 20 .88 1-5 34.42 5.57 9 .88 1-5	73.33 12.00 20 .88 1-5 3.29-3.89 34.42 5.57 9 .88 1-5 3.64-3.96

Results in Table 1 indicate that scales have satisfactory alpha values which indicate that scales are internally consistent for present study.

Table2: Inter Scales Correlations analysis of TRF, IWB & PE scale (N=400)

Variables	TRF	IWB	PE	
TRF		.40**	.36**	
IWB			.65**	
PE				

Table 2 results shows that there was significant positive relationship between transformational leadership styles, innovative work behavior and psychological empowerment

Table 3: Multiple Regression Analysis of the criteria on innovative work behavior (N = 400)

Innovative work behavior			
Predictor	ΔR^2	В	
Age	.098	.18	
Education		.21	
Work experience		1.17	
TRF	.21	.46***	
PE	.39	.31***	
Total R ²	.69		

Note. TRF = Transformational leadership; PE= psychological empowerment; IWB = innovative work behavior;

p < .05. **p < .01. ***p < .001.

Table 3 demonstrates the results of multiple regression analysis (control variable and predictors) Predicting IWB. The table indicates that overall 69% of the variance in IWB can be designated to TRF constructs (R^2 =.21). Overall the model is significant {F (8, 391) = 153.61, p <.001} and among the predictors, control variables [(β = -.24, t =.48, p <.62), (β = -.10, t =.36, p <.75), & (β = 1.4, t = 2.8, p <.01)], TRF(β =.36, t = 8.09, p <.001), moderator(PE) (β =.31, t = 7.03, p <.001). Results indicate TRF and PE found to be significant positive predictors of IWB.

Table4: Moderating Role of Perceived psychological Empowerment in Relationship between transformational leadership styles and innovative work behaviour (N = 400)

8	0	IWB	
Model	Predictor	ΔR^2	В
Step 1	TRF	.214	.46***
Step 2	PE	.087	.31***
	TRF		.36***
Step 3	PE		.28***
	TRF		.34***
	$PE \times TRF$. 039	.20***
	Total R ²	.34	

Note. TRF = transformational Leadership; IWB= Innovative work behavior; PE= psychological empowerment

*p < .05. **p < .01. ***p < .001.

Table 4displays the results of moderating role of psychological empowerment in the relationship between transformational leadership styles and innovative work behavior. The first step is statistically significant $\{\Delta R^2 = .214, F(1, 399) = 108.46, p < .001\}$ comprising of TRF, which is significantly predicting IWB in

positive direction (β =.46, t = 10.41, p <.001). Second step of model 1 is also found to be significant {F (2, 398) = 85.56, p <.001} where TRF (β =.36, t = 8.09, p <.001) and PE (β =.31, t = 7.03, p <.001) are positively predicting IWB. Step 2 explains significant unique variance { ΔR^2 =.087, ΔF (1, 397) =49.46, p <.001}. Step 3 presents interaction of TRF and PE. Overall step is found to be significant {F (3, 396) =68.09, p <.001} and product of TRF and PE predicts IWB significantly (β =.20, t = 4.84, p <.001). Interaction effect contributes additional significant variance { ΔR^2 =.039, ΔF (1, 396) =23.47, p <.001}.

Table 5: Moderating Role of Perceived psychological empowerment dimensions in Relationship between transformational leadership styles and innovative work behavior (N = 400)

	Innovative work Behavior			
Model 1	Predictor	ΔR^2	В	
Step 1	TRF	.21	.46***	
Step 2	PE (M) TRF	.016	.16* .45***	
Step 3	PE (M) \times TRF Total R ²	.04 .27***	.18*	
Model 2				
Step 1	TRS	.21	.46***	
Step 2	PE(C)	198 JE 198	.29***	
68	TRS	.07	.35***	
Step 3	$PE(C) \times TRS$.03	.15*	
Don 60	Total R ²	.31***		
Model 3				
Step 1	TRS	.21	.46***	
Step 2	PE (SD) TRF	05	.25*** .38***	
Step3	$PE(SD) \times TRS$.02	.15***	
Cal	Total R ²	.28***		
Model4	EG (0):			
Step1	TRS	.21	.46***	
Step2	PE(IM)	.16	.13***	
	TRS		.42***	
Step3	$PE(IM) \times TRS$.04	.21***	
	Total R ²	.41***		

^{*}*p* <.05. ***p* <.01. ****p* <.001.

Table 5 summarizes the results for moderating role of dimensions of psychological empowerment in relationship between transformational leadership styles and innovative work behavior. Model 1 describes moderating effect of Meaning (M) dimension of PE in relationship of TRF and IWB. The first step is statistically significant $\{\Delta R^2 = .214, F(1, 399) = 108.46, p < .001\}$ comprising of TRF, which is significantly predicting IWB in positive direction ($\beta = .46, t = 10.41, p < .001$). Second step of model 1 is also found to be significant $\{F(2, 397) = 55.39, p < .001\}$ where TRF ($\beta = .45, t = 10.18, p < .001$) and PE (M) ($\beta = .16, t = 2.12, p < .05$) are positively predicting IWB. Step 2 explains significant unique variance $\{\Delta R^2 = .016, \Delta F(1, 397) = 8.26, p < .01\}$. Step 3 presents interaction of TRF and PE (M). Overall step is found to be significant $\{F(3, 396) = 47.047, p < .01\}$ and product of TRF and PE(M) predicts significantly ($\beta = .18, t = 2.70, p < .05$). Interaction effect contributes additional significant variance $\{\Delta R^2 = .04, \Delta F(1, 396) = 25.64, p < .05\}$. In below Figure 2 explains the moderation analysis with its significant interaction effect

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Model 2 describes moderating effect of competence (C)dimension of PE in relationship of TRF and IWB. The first step is statistically significant $\{\Delta R^2 = .214, F(1, 399) = 108.46, p < .001\}$ comprising of TRF, which is significantly predicting IWB in positive direction ($\beta = .46, t = 10.41, p < .001$). Second step of model 1 is also found to be significant $\{F(2, 397) = 80.28, p < .001\}$ where TRF ($\beta = .35, t = 7.79, p < .001$) and PE (C) ($\beta = .29, t = 6.41, p < .001$) are positively predicting iwb. Step 2 explains significant unique variance $\{\Delta R^2 = .07, \Delta F(1, 397) = 41.16, p < .001\}$. Step 3 presents interaction of TRF and PE (C). Overall step is found to be significant $\{F(3, 396) = 54.23, p < .001\}$ and product of TRF and PE(C) predicts significantly ($\beta = .15, t = 5.70, p < .05$). Interaction effect contributes additional significant variance $\{\Delta R^2 = .03, \Delta F(1, 396) = 12.11, p < .01\}$.

Model 3 describes moderating effect of self-determination (SD) dimension of PE in relationship of TRF and IWB. The first step is statistically significant $\{\Delta R^2 = .214, F(1, 399) = 108.46, p < .001\}$ comprising of TRF, which is significantly predicting IWB in positive direction ($\beta = .46, t = 10.41, p < .001$). Second step of model 1 is also found to be significant $\{F(2, 397) = 74.72, p < .001\}$ where TRF ($\beta = .38, t = 8.68, p < .001$) and PE (SD) ($\beta = .25, t = 5.69, p < .001$) are positively predicting IWB. Step 2 explains significant unique variance $\{\Delta R^2 = .05, \Delta F(1, 397) = 32.43, p < .001\}$. Step 3 presents interaction of TRF and PE (SD). Overall step is found to be significant $\{F(3, 396) = 55.25, p < .001\}$ and product of TRF and PE(SD) predicts significantly ($\beta = .15, t = 3.48, p < .001$). Interaction effect contributes additional significant variance $\{\Delta R^2 = .02, \Delta F(1, 396) = 12.11, p < .001\}$.

Table 5 also reveals model 4 that is computed to find out interaction effect of (TRF) and impact (IM) dimension of PE relationship of TRF and IWB. Step 1 yields significant results $\{\Delta R^2 = .214, F(1, 399) = 108.46, p < .001\}$ where TRF is positively predicting IWB($\beta = .46, t = 10.41, p < .001$). In step 2 PE (IM) and TRF both has been entered and step exhibits significant findings $\{F(2, 398) = 59.41, p < .001\}$. Beta values indicate that PE (IM)is also positive ($\beta = 13, t = 2.87, p < .01$), whereas TRF is positively ($\beta = .42, t = 9.34, p < .001$) predicting IWB. This step significantly demonstrates additional variance $\{\Delta R^2 = .16, \Delta F(1, 398) = 8.35, p < .001\}$. Finally step 3 demonstrates the interaction effect of PE (IM)and TRF on outcome variable and this step has also been found to be statistically significant $\{F(3, 396) = 50.61, p < .001\}$ and the interaction of PE (IM) and TRF significantly predicts IWB $\beta = .21, t = 5.06, p < .001\}$. Finally this interactive effect added significant variance in step 3 $\{\Delta R^2 = .04, \Delta F(1, 396) = 25.64, p < .001\}$.

Discussion and Conclusion

The study was conducted for exploring the moderating role PE on the relationship between independent variable (TRF) and dependent variable (IWB) among IT workers. In order to achieve this purpose, several statistical analyses were carried out.

Table 1 shows the psychometric properties of the scales. Results alpha coefficients of all scales are greater than.80.. Results of correlation analysis revealed a significant positive relationship among TRF,IWB and PE .(see table 2)Previous researches on the association of TRF and employees innovative work behavior confirmed the notion (Oke et al., 2009; Jung et al., 2003; Basu & Green, 1997). They argued that transformational leaders directly motivate innovative behavior in subordinate by using their five components. Previous findings provide a strong support to this notion (Reuvers et al., 2008; Shamir et al., 1993; Gumusluoglu & Ilsev, 2009; Mumford et al., 2002). Khan et al., (2012) studied the topic "Leadership Styles as Innovative Work Behavior Predictors." They select a sample of 100 bank managers with age range between "30-55". The results of the regression analysis showed that the transformational and transactional leadership style predicted IWB in a positive direction while the leadership of Laissez-Faire predicted IWB in a negative way. So, our hypothesis 1 & 2are proved significantly.

Multiple regression analysis also exposed that perceived transformational leadership (TRF) and its dimensions directly predicted IWB in the expected direction. Table 3&4 explains the direction of relationship among predictors especially moderators and outcome variable. Results are consistent with the

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findings of previous studies. For example, Afsar et al., (2014) found that psychological empowerment significantly mediates the relationship between TRF and IWB and there was a strong positive relationship between psychological empowerment and IWB (Asfar & Umrani, 2019). Table5 Results revealed that PE and its dimensions significantly moderated between perceived TRF and IWB. According to Spreitzer (1995), psychologically empowered workers see themselves as qualified and able to meaningfully affect their work environment and careers, demonstrate constructive actions and function independently. Whereas less psychologically empowered followers considered themselves to be less capable and unable to take initiative. Previous studies result also suggested a positive relationship between psychological empowerment and innovative work behavior (Choi et al., 2016;). So our hypothesis that Psychological Empowerment will moderate between perceived transformational leadership style and innovative work behavior by escalating their positive relationship when psychological empowerment is high" was also right.

Conclusions

The findings of the study provides evidence for testing the proposed conceptual model that demonstrated the moderating role of the PE in relation to perceived TRF and IWB among Pakistani IT workers. The proposed model was based on the literature review arguing the moderating role of the individual factor in the perceived TRF and IWB's positive relation. Study results indicated that TRF predicts the IWB significantly in the desired direction. Among the TRF dimension, IWB had not been predicted by individualized consideration.

All individual factors (psychological influence and its dimensions) were studied as a central moderator of the main relationship between independent variables (TRF) and IWB. Results of the study indicated that PE and its sub-dimensions significantly moderated between perceived styles of transformational leadership and innovative work behavior by reinforcing the IWB TRF positive.

Practical /Theoretical implications of Study

There are few theoretical and practical implications of study are:

- 1. This study enables us to understand the how employee's perception of their leaders behavior and relation effect their work behavior.
- 2. Psychological empowerment should be viewed as prerequisite condition for the IWB. Therefore leader should encourage the psychological empowerment among workers
- 3. The findings of the research highlights the importance for developing a training programs that can stimulate supervisors and managers to enhance their abilities as transformational leaders.

Limitations and Future Directions

The current research can be a valuable addition to existing literature. However, there are some caveats that are essential for future research to address.

First limitation is related to its cross-sectional nature. So it is impossible to determine pattern of relationship between variables in terms of causality. In addition, current survey research may be subject to severe threats from extraneous and confounding variables. Future study should therefore integrate longitudinal research design in such a way that it can capture the causal inferences of association between the variables being studied. Another limitation is the use of self-report measures because it may affect the relationship among the variables studied. Additionally, self-report measures promote the effect of social desirability among respondents. It is therefore suggested that future researchers should use tools or techniques in conjunction with the self-report (e.g. supervisor / leader rating). Third constraint is that only transformational style of leadership is taken as an independent variable. Certain leadership styles (e.g., transactional leadership style, ethical leadership, servant leadership) are also recommended for future study.

The fourth constraint involves controlled variables. Only few variables were taken as controlled variables, i.e., age, education and work experience. For future study it is recommended that variables such as gender, professional position, form of business, time with leader, unit of work, marital status and nature of job contract. Fifth limitation is related to the sample size taken from government sector. Future research should therefore be done in other public and private sector such as banking, hospitality, health, telecommunications, education and small and medium-sized enterprises. Sixth limitation is the moderating effects of individual factor as it was taken independently. Therefore, the interaction influence of other variables should be investigated for future researchers. In addition, it is also suggested that the mediating and moderating role of individual variables in future studies should also be examined.

For the first time in Pakistan, this study is being launched which has extensively explored the role of psychological empowerment on perceived transformation leadership style in deciding innovative work behavior among Pakistani IT workers. There are some implications of the study as follow: .An important contribution is that the study not only supported the value of leadership in making an organization successful and sustainable, but also by shedding light on the significance of transformational leadership style in stimulating employee creative behaviour. This study also stressed that TRF's effective role depends on the number of factors. Thus, it is suggested that leaders take actions that increase the likelihood of employee engagement and motivation towards them and organization as well. For example: i) They should give freedom of choice during the task completion process. ii) They should allow them to participate in the process of departmental policy and agenda-related decision-making. iii) They should facilitate the working environment that isn't properly controlled or structured. iv) Workers should be encouraged to improve their skills and knowledge through training or higher education. The study's imperative contribution concerns organization. The organization should foster leadership styles that are focused on more flexible, less authoritative and valued center, participatory and most important employees. The organization should provide a more controllable, encouraging, motivational and less structural environment. It should encourage older, more experienced, and highly educated staff.

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